Geo-Environmental

DESK STUDY REPORT

for the land at

EAST STREET, RUSPER,

HORSHAM, RH12 4RB.

on behalf of

DEVINE HOMES PLC

Report:	**DESK STUDY REPORT**
Site:	**EAST STREET, RUSPER, HORSHAM, RH12 4RB.**
Client:	**DEVINE HOMES PLC**
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1.0 INTRODUCTION

Geo-Environmental Services Limited (Geo-Environmental) was instructed by Devine Homes (the Client) to undertake a Phase 1 land contamination assessment of the geotechnical and geo-environmental factors pertaining to the proposed development of land at East Street, Rusper, RH12 4RB (herein referred to as 'the site'). The site's location is presented in Figure 1.

1.1 Proposed Development

The proposed development is understood to comprise the residential development with associated open space, earthworks, drainage and all other associated infrastructure. No development plan had been provided.

1.2 Objectives

The investigation was to comprise a desk study of geotechnical and geo-environmental factors pertaining to the site, including a review of available historical maps, site walkover and an examination of other available sources of readily available geo-environmental information.

A Preliminary Risk Assessment (PRA) was to be undertaken as part of the desk study in accordance with Land Contamination Risk Management (LCRM). The objective of the risk assessment was to evaluate plausible contamination linkages with respect to the proposed development, adjacent land uses, and the wider environment, in the context of planning, immediate liabilities under the Environmental Protection Act 1990, and risks posed to Controlled Waters under the Water Resources Act 1991.

1.3 Standards

Where practicable, the desk study was undertaken in accordance with the following documents and guidance:

- National Planning Policy Framework – December 2023;
- Land Contamination Risk Management (LCRM), Environment Agency, updated July 2023;
- Model Procedures for the Management of Contaminated Land, CLR11, DEFRA and Environment Agency 2004 (withdrawn 2020);
- Environment Agency Guidance on Requirements for Land Contamination Reports, Version 1 dated July 2005;
- BS10175:2011+A2:2017 - Investigation of Potentially Contaminated Sites - Code of Practice, BSI 2017;
- BS5930: 2015+A1:2020 - Code of Practice for Site Investigations, BSI 2020;
- EN ISO 14688 Geotechnical Investigation and Testing Part 1-2002 and Part 2-2004;
- BS1377: 1990 - Soils for Civil Engineering Purposes, BSI1990;
- NHBC Standards Chapter 4.1 Land Quality - Managing Ground Conditions;
- NHBC Standards Chapter 4.2 Building Near Trees;
- CIRIA C665 – Assessing risks posed by hazardous ground gases to buildings (2007);
- NHBC N94 - Hazardous Ground Gas - An essential guide for housebuilders, May 2023
- BS8485:2015+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings;
- Department of Environment - Industry Profiles (1995 - 1996).

1.4 Conditions

The desk study data obtained for the site is assumed to be factually correct and up to date at the point of their acquisition. No liability is taken for any omissions or inaccuracies in the data acquired. It should also be noted that changes to the desk study data may occur following the production of this report, Geo-Environmental accepts no liability where this subsequently affects the assessment presented herein.

The information collected from the desk study and site walkover has been used to provide an interpretation of the geotechnical and environmental conditions pertaining to the site. The recommendations and opinions expressed in this report are based on the data obtained. Geo-Environmental takes no responsibility for conditions that have either not been revealed in the available records or that occur between or under points of any physical investigation. Whilst every effort has been made to interpret the conditions, such information is only indicative and liability cannot be accepted for its accuracy.

It must be noted that in particular the concentrations and levels of mobile liquid and gaseous materials are likely to vary with time. The results obtained may therefore only be representative of the conditions at the time of sampling. The absence of asbestos within soil samples analysed does not guarantee the absence of asbestos within buildings, within or bonded to concrete, as discrete burials, or within the soil mass elsewhere within a site. This report must not be taken as, or assumed to imply, any guarantee that a site is free of hazardous or potentially contaminative materials.

Information contained in this report is intended for the use of the Client, and Geo-Environmental can take no responsibility for the use of this information by any party for uses other than that described in this report. Geo-Environmental makes no warranty or representation whatsoever expressed or implied with respect to the use of this information by any third party. Geo-Environmental does not indemnify the Client or any third parties against any dispute or claim arising from any finding or other result of this investigation report or any consequential losses.

This report remains the property of Geo-Environmental and the Client has no rights to, or reliance upon this document or supporting documents until such time as payment has been received in full for all invoices for works undertaken in connection with this report.

Assessment criteria or other parameters developed for the evaluation of contamination on this site are based on a number of assumptions regarding exposure and toxicology. Exposure to contaminants and levels of adverse effects may therefore vary. Whilst reasonable care and expertise has been employed in the development of such criteria, no liability is accepted in this respect. Other criteria or guidance on the development of assessment criteria may be published in the future and no liability is accepted in this respect.

2.0 DESK STUDY

The findings of the Phase I desk study are presented in the following section. A copy of the historical maps and other information obtained as part of the desk study are presented in Appendix A. Comments made in the following section regarding possible ground conditions on the site are based purely on the desk study and associated site walkover.

2.1 Site Description

At the time of the site walkover (January 2025), the site comprised an irregularly shaped open field. The field appeared to be in use for grazing, but no animals were on site at the time of the site walkover. A metal trough and circular metal feeder were located in the south-eastern corner of the field adjacent to the site access gate.

The surface across the site comprised grass, with moss and grass surface in the south-eastern corner of the site. The site was notably wet and soft underfoot in the south-eastern corner and the south-western corners of the site.

Two stockpiles of material were located close to the western end of the southern site boundary and appeared to comprise parts of an old building. One stockpile comprised sheets of potential asbestos containing material (ACM), wood and glass. The other stockpile comprised brick, concrete, ceramic, some wood and fragments of roof felt sheets.

A number of small mounds of ashes were noted to the south of the wire fencing along the southern boundary of the site. No evidence of a fire was noted in the area.

At the time of the site walkover, vegetation clearance and tree removal were underway along the southern boundary of the site, adjacent to East Street.

Three rectangular concrete service covers were located in an E-W line through the central-western portion of the site. The covers did not have any signage and were unable to be lifted for inspection. Overhead electrical cables ran roughly NE-SW to the east of the access gate in the south-eastern corner of the site.

In general, the site sloped downwards to the south and south-east.

The site boundary comprised semi-mature to mature trees with wooden and wire fencing in all directions. The site was bounded by residential land to the west and south-west and agricultural land to the north, east and south.

The site was accessed via a locked gate in the south-eastern corner of the site. A shared hardstanding access road/driveway off East Street was located to the east of the access gate.

A photographic record from the site walkover is presented in Appendix B.

2.2 Geology

With reference to British Geological Survey (BGS) mapping, the geology of the site was anticipated to comprise the Weald Clay Formation. No superficial deposits were mapped on the site. Given the previous agricultural land use and surrounding developed land in proximity to areas of the site there remains the possibility that there may be areas of reworked, disturbed or Made Ground across the site.

BS5930:2015+A1:2020 defines **Made Ground** as anthropogenic ground in which the material has been placed without engineering control and/or manufactured by man in some way, such as through crushing or washing, or arising from an industrial process. Great variations in material type, thickness and degree of compaction invariably

occur and there can be deleterious or harmful matter, as well as potentially methanogenic organic material. In addition, where identified it is not uncommon for asbestos to be present within Made Ground soils.

The **Weald Clay** consists of shales and mudstones with occasional thin beds of siltstones, sandstone, shelly limestone and clay ironstone. When fresh, the beds are normally dark grey weathering to mottled yellow and brown near the surface or at outcrop. Bands of red clay occur within the bed, usually in association with the sandstone.

2.3 Hydrogeology

With reference to the Groundsure dataset, the bedrock Weald Clay was classified as Unproductive Stata.

Unproductive Strata are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

The site was not recorded as being within a Source Protection Zone.

One groundwater abstractions was identified within a radius of 1km of the site boundary.

- 923m SE, Status: Historical, Licence Number: 28/39/32/0039, Details: Spray Irrigation, Version Start Date: 01/04/2008

The site was identified as being located within a Water Frameworks Directive Groundwater Body catchment for the Baldhorns Brook with an overall rating of poor (as of 2019)

The Groundsure dataset did not identify any discharge consents to land/soakaway within a radius of 500m.

The site was indicated to be between negligible to moderate risk of groundwater flooding across the site.

2.4 Hydrology

With reference to the historical maps provided as part of the Groundsure dataset, the closest surface water feature was located c. 15m east of site and comprised a feature marked as an unnamed pond.

Surface flooding was indicated a negligible risk across the site for flooding to occur at surface.

The site was also identified as being located in a Water Framework Directive (WFD) surface water body catchment area for the Baldhorns Brook source. With the River Baldhorns Brook located 596m SW of the site with an overall rating under the WFD of Poor (as of 2019).

The Groundsure dataset identified two discharge consents to controlled waters within a radius of 500m from the site, the details of these are given in Table 2.1.

Location	Address	Type	Receiving Water	Status
281m N	Ghyll Manor Hotel, Rusper, Sussex	Sewage Discharges – Final/Treated Effluent – Not Water Company	Ditch Trib of Rusperhouse Gill	Transferred from COPA 1974 Issued date: 04/03/1986 Revocation date: -
281m N	Ghyll Manor Hotel, Rusper, Sussex	Miscellaneous Discharges – Surface Water	Rusperhouse Gill	Revoked – Unspecified Issued date: 04/03/1986 Revocation date:04/10/1995

Table 2.1 Summary of discharge consents to controlled water within 500m

No surface water abstractions were identified within a radius of 2km of the site boundary. No pollution incidents were noted within 500m of the site

Of these discharge consents and lack of pollution incidents identified. It is considered the type of and dates of these discharges together with their distances from site are such that these are unlikely to have resulted in a detrimental impact on the subject site.

The highest risk for surface water flooding on site was for a 1 in 1000 year return period was negligible. This was also the highest risk within 50m. The site was not recorded within an area at risk of flooding from rivers and the sea, or from benefiting from flood defences or flood storage area. No historical flood events were recorded within 250m of the site.

2.5 Sensitive Land Uses

A search was made of environmentally sensitive areas, including areas of green belt, scenic or natural beauty, parks, reserves, nitrate zones, protected conservation and scientific areas.

Two Nitrate Vulnerable Zones (NVZ) were identified within 1km of the site.

- 54m W – River Arun (u/s Pallingham) NVZ; for Surface Water; Existing
- 1768m S – River Arun (u/s Pallingham) NVZ; for Surface Water; Existing

Seven areas of designated ancient woodland as detailed below were located within 500m of the site. These are detailed in Table 2.2 below.

Location	Name	Woodland Type
188m SE	Unknown	Ancient and Semi-Natural Woodland
268m NE	Unknown	Ancient and Semi-Natural Woodland
316m SE	Unknown	Ancient and Semi-Natural Woodland
354m S	Hand Copse	Ancient and Semi-Natural Woodland
370m W	Unknown	Ancient and Semi-Natural Woodland
374m E	Unknown	Ancient and Semi-Natural Woodland
496m S	Kiln Copse	Ancient and Semi-Natural Woodland

Table 2.2 Summary of ancient woodland within 500m

No areas of outstanding natural beaty were identified within 1km.

A Site of Special Scientific Interest (SSSI) Impact Risk Zone was identified on site requiring consultation with Natural England for any new developments that require a public water supply (via abstraction) in order to assess impacts of groundwater abstraction on Arun Valley APS/SAC/RAMSAR. Consultation was also indicated to be required for various other types of applications not related to the proposed residential development of the site.

The site was indicated to be within a conservation area (Rusper, Horsham). However consulting the mapping it appears the site is adjacent to this area and not within it.

The site as also identified in an area which has been given an agricultural classification of Grade 4 – poor quality. Poor quality is defined as land with severe limitations which significantly affect the choice of crops and the level of yield.

2.6 Environmental Data

Searches of other various environmental databases were made as part of the desk study, including air pollution control sites, Part IIA contaminated land, Integrated Pollution Control (IPC) and Integrated Pollution Prevention and Control (IPPC) site, registered radioactive substances, Control of Major Accident Hazard (COMAH) sites, explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS) sites, planning permissions for sites involving hazardous substances, recent industrial land use entries and fuel station registers.

The Groundsure dataset identified 2No. recent industrial land use entries within 500m of the site, details of which are provided below in Table 2.3:

Location	Land use	Address	Activity	Category
128m W	Pump	West Sussex, RH12	Water Pumping Station	Industrial Feature
128m W	Telephone Exchange	West Sussex, RH12	Telecommunications Features	Infrastructure and Facilities

Table 2.3 Summary of recent industrial land use entries within 500m

No historical industrial land use entries were identified within 500m of the site. No records of historical or current tanks, garages or fuel stations were identified within 500m of the site.

The above land uses listed in this section are located a sufficient distance from the site and/or have a low contamination migration potential so as not to have a detrimental effect on the site and, as such, have not been considered further within the assessment.

2.7 Geotechnical Data

The site was recorded as being located in an area which might not be affected by past, current or future coal mining.

National databases for a number of geological hazards have been compiled by the BGS, and a summary of the hazard data pertaining to the site is presented in Table 2.4.

Hazard	Hazard Rating
Collapsible ground	Very Low
Compressible ground	Negligible
Ground dissolution	Negligible
Landslide	Very Low
Running sand	Negligible
Shrinking and swelling clay	Low
BritPits (BGS Recorded Mineral Sites)	None within 1km

Table 2.4 Summary of BGS Geological Hazards

No natural cavities were recorded within 500m of the site.

2.8 Landfill and Ground Workings

A search of BGS recorded landfill sites, IPC registered waste sites, licensed waste management facilities, local authority recorded landfill sites, other registered landfill sites, waste transfer stations, and other waste treatment or disposal sites was undertaken as part of the desk study. Such sites may form an artificial source of ground gases, such as carbon dioxide and methane, where wastes are buried or disposed of to landfill.

No historical or licensed waste sites were identified within 500m of the site boundary.

One waste exemption was identified within 500m of the site, details of which are provided in Table 2.5 below.

Location	Site	Category	Sub-category	Description
228m S	Not Specified, Reference: WEX357633	Using waste exemption	On a farm	Use of waste in construction

Table 2.5 Summary of Waste Exemptions within 500m of site

Thirty-Four surface ground workings were recorded within 250m of the site. Details of which are provided in Table 2.6 below:

Location	Site	Years Mapped
15m E	Pond	1920
15m E	Pond	1895
19m E	Ponds	1958
20m E	Ponds	1909
20m E	Ponds	1896
23m NW	Pond	1961
24m NW	Pond	1920
24m NW	Pond	1895
24m NW	Pond	1909
24m NW	Pond	1896
26m NW	Pond	1991
26m NW	Pond	1977
26m NW	Pond	1968
31m NW	Pond	1875
140m NW	Pond	1920
140m NW	Pond	1895
140m NW	Pond	1875
141m NW	Pond	1909
141m NW	Pond	1896
141m NW	Pond	1991
141m NW	Pond	1977
162m W	Grave Yard	1875
207m SE	Pool	1991
218m SE	Ponds	1909
228m SE	Pond	1920
230m NW	Pond	1875
234m NW	Pond	1920
234m NW	Pond	1895
236m NW	Pond	1991
236m NW	Pond	1977
245m NE	Pond	1914
246m NE	Pond	1914
247m NE	Pond	1968
248m NE	Pond	1920

Table 2.6 Summary of Surface Ground Workings

2.9 Radon

The Groundsure data report indicated that the site lies within a lower probability radon area (where <1% of homes are estimated to be at or above the Action Level). No radon protection measures are reportedly necessary in the construction of new dwellings or extensions.

2.10 Unexploded Ordnance (UXO)

An initial assessment for Unexploded Ordnance (UXO) risk was undertaken and based on accessing Zetica's on-line screening tool (accessed 27/01/2025). This indicated the site to be within a 'low risk' area. A copy of the initial assessment is presented in Appendix C.

2.11 Geochemistry

Data obtained as part of the Groundsure Report provides details on the estimated soil chemistry for natural soils in the vicinity of the site. The estimated quality of natural soils beneath the subject site is presented in Table 2.7.

Determinand	Estimated Concentration (mg/kg)
Arsenic	25-35
Cadmium	1.8
Chromium	60-90
Lead	100 (60 Bioaccessible)
Nickel	15-30

Table 2.7 Summary of Site Geochemistry

The natural background concentrations were below respective published Suitable for Use Levels (S4ULs) and Category 4 Screening Levels (C4SLs) for the protection of human health under a residential land use with plant uptake.

However, these values are not necessarily representative of the site's soil chemistry, nor do they account for a site's historical uses, nor the presence or condition of any Made Ground soils. Furthermore, some S4ULs and C4SLs are dependent on soil organic matter content. Therefore, concentrations of specific determinands and the utilised S4ULs/C4SLs cannot be determined without site specific investigation and analysis.

2.12 Historical Data

A summary of the apparent site history dating back to 1874 is presented in Table 2.8 and has been determined through examination of historical maps obtained as part of the desk study.

Date (scale)	On Site	Off Site
1875 (2,500 & 10,560)	The site comprised part of a large field, with a small subdivided area attached to a residential building on the south-western corner. A small building was noted in the northeast corner of the subdivided area.	The site was generally surrounded by open fields. The village of Rusper was located to the west of the site. Rusperhouse Farm, Gardiners Farm, Highams Farm, Chloes Farm, Venters Farm and Dialpost Farm were located c.250m northwest, c.300m southwest, c.750m northwest, c.800 east and northeast and southwest respectively. St, Mary Magdalens Church was located c.400m west and a National School c. 250m southwest. Ponds were located c.15m east and c.35m north. An area labelled as Normans was

Date (scale)	On Site	Off Site
		located c.150m southeast.
1896 (10,560)	No significant changes noted.	A smithy was noted c.150m northwest. Parks Croft was noted c.400m southwest. No other significant changes noted.
1897 (2,500)	No significant changes noted.	No significant changes noted.
1898 (2,500)	No significant changes noted.	No significant changes noted.
1911 (2,500)	No significant changes noted.	The National School was relabelled to a school. Small scale residential development had continued around the village of Rusper particularly to the south c.200m southwest. An area called Millfields was located c.250m south. Rusperhouse farm was no longer noted.
1914 (2,500 & 10,560)	No significant changes noted. Incomplete Mapping.	An area labelled as Normanhurst was shown c.400m east which appeared to be a residential development. The smithy was no longer labelled.
1920 (10,560)	Incomplete Mapping. No significant changes noted.	Incomplete mapping. No significant changes noted.
1961 (10,560)	No significant changes noted.	A nursery was located c.800m southeast adjacent to a Vineries.
1968 (10,560)	Incomplete mapping. No significant changes noted.	No significant changes noted.
1974 (2,500)	An area of woodland was shown along the southern boundary of the site area.	Normans to the southwest was shown to contain a tennis court and a swimming pool. Extensive residential development had occurred between c.100m and c.300m southwest with smaller scale development surrounding Rusper to the northwest. Millfield's was labelled as Millfield's Farm. Ghyll Manor was labelled c.250m northwest.
1978 (10,000)	No significant changes noted.	Further residential development was shown to have taken place between c.250m and c.750m southwest. The vineries were no longer noted. A football ground was shown c.400m northwest.
1991 (10,000)	No significant changes noted.	Small scale development had continued around the village of Rusper since the previous mapping.
1993 (2,500)	No significant changes noted.	No significant changes noted.
2001 (10,000)	No significant changes noted.	A telephone exchange was noted c.150m west. No other significant changes noted.
2003 (1,250)	No significant changes noted.	No significant changes noted.
2010 (10,000)	No significant changes noted.	The school was shown to have been extended or rebuilt. Additional residential development had occurred c.600m southwest.
2025 (10,000)	No significant changes noted.	Continuing small scale residential development were observed around Rusper until the present day.

Table 2.8 Summary of Site History

The site was shown from the historical mapping to comprise open fields throughout the course of the historical

mapping. This appeared to be the commensurate with the site at the time of the site walkover in January 2025.

The surrounding area initially comprised open fields, woods with occasional, sparse development and some roads around Rusper, with gradual residential development occurring to the south and west of the site.

A smithy was shown c.100m northwest of the site area from 1896 till 1914 where it was no longer labelled. Three ponds were noted throughout the mapping c.35m north and c.15 and c.18m east.

2.13 Previous Ground Investigations

Geo-Environmental has not been provided with any previous reports relating to investigation works undertaken on the site.

2.14 Asbestos

A stockpile of potential Asbestos Containing Materials (ACM) was identified on the site during the site walkover undertaken in January 2025, asbestos identification should be undertaken to ascertain if the materials contain asbestos. Images of the material are displayed in Appendix B.

As at all sites, consideration for the potential for asbestos to be present within the shallow soils or entrained within or below any concrete on the site should be given when designing any site investigations, therefore asbestos identification should be included within the suite of testing of contaminants on site. The absence of asbestos in soil samples analysed is not a guarantee of the absence of asbestos elsewhere on a site.

2.15 Potential Contamination

The site was shown by historical mapping to have comprised predominantly open fields over the mapping period and during the site walkover in August 2024.

A review of the land uses covered by the National House Building Council (NHBC), Environment Agency (EA) and Chartered Institute of Environmental Health (CIEH) publication 'Guidance for the Safe Development of Housing on Land Affected by Contamination' (2008), which provides a summary of industrial profiles (1995 - 1996) published by the former Department of the Environment (DoE) (now part of the Department for Environment, Food and Rural Affairs [DEFRA]) has been undertaken. However, no specific profiles relating to the previous and current land use of the site or surrounding uses have been identified.

The potential contaminants associated with the site former and current land use as agricultural land surrounding land uses identified include:

- Limited areas of Made Ground may be present associated as a result of the development of the adjoining areas. Made Ground or shallow soils may contain contaminants of concern, including metals, non-metals, inorganic contaminants, organic contaminants (including such as poly-aromatic hydrocarbons (PAH), petroleum hydrocarbons/oils) and asbestos (potentially introduced in any Made Ground and within the stockpile of potential ACM located during the site walkover).
- Pesticides may have been used at or adjacent to the site.
- In addition, it is possible that the surrounding land uses may have resulted in the deposition of airborne contaminants, on the surface and shallow soils on site including heavy metals, organic pollutants such as polyromantic hydrocarbons (PAH), petroleum hydrocarbons/oils, inorganic compounds.

2.16 Ground Gas Summary

The desk study for the site has not identified any potential sources of ground gases on the subject site itself. However, if Made Ground was subsequently identified and contained a significant amount of organic matter or organic contamination, it could have the potential to represent a source of ground gases/vapours.

Ground gas monitoring would only be recommended if a source of organic rich Made Ground or organic contamination was encountered on the site.

2.17 Climate Change

Climate change is a factor for consideration under LCRM. Current climate models are showing an increase in extreme weather patterns, with extended periods of warm dry weather and/or extreme wet weather and flooding.

The effect of extreme and/or extended dry weather and extreme wet weather and flooding should be considered further as part of the proposed works. Extended periods of low flow or reduced rainfall would reduce dilution and potential for mobilisation of any mobile contaminants present. Extended periods of heavy rainfall or prolonged rainfall and flooding which would increase the volumes and duration of saturated soils at the site and increase the potential for leaching of contaminants and contaminant migration. However, the risks associated which such periods would only apply where contamination has been identified/is present which would be considered as part of the wider contamination assessment of the site.

3.0 PRELIMINARY ASSESSMENT

Based on the findings of the desk study, the following sections summarise the anticipated geotechnical and environmental factors likely to impact the site.

3.1 Geotechnical Risk Assessment

3.1.1 Potential Geotechnical Issues

The following factors that might impact the geotechnical condition of the site were identified as part of the desk study:

- The possible presence of Made Ground which if encountered may affect the foundation design and construction.
- The presence of laterally and vertically variable strata and the impact these could have on further construction.
- The suitability of shallow soils as a bearing stratum for conventional foundations.
- Consideration of the volume change potential of any cohesive soils and the affect this could have on foundations.
- The possible presence of aggressive ground conditions (sulphates) which may affect the foundation design and construction.
- The possible presence of perched and shallow groundwater beneath the site and implications for excavation stability and constructability of foundations and other in-ground elements.
- The presence of any trees or hedgerows on the site, which may have a significant impact on foundation design and construction if/where shrinkable soils are present.
- The suitability of the shallow soils for the use of soakaways on the site as part of the proposed development.

3.2 Preliminary Environmental Conceptual Site Model & Risk Assessment

3.2.1 Methodology

A Preliminary Risk Assessment (PRA) and Conceptual Site Model (CSM) has been prepared in accordance with Land Contamination Risk Management (LCRM) based on information obtained as part of the desk study. Possible risks associated with potential sources of contamination and sensitive receptors identified have been assessed following a source-pathway-receptor (SPR) approach in accordance with current UK protocols. The Conceptual Site Model is shown in Figure 2.

A risk may only exist where a plausible SPR linkage is present, and where the quantity or concentration of a contaminant is sufficient so as to cause harm. Under the statutory definition, "Contamination" may only strictly exist where contaminants pose a risk of harm to a receptor. Risk may be defined as a function of the likelihood and severity of any adverse effects arising from contamination. The risk classification has been assessed in accordance with CIRIA C552 (Rudland et al., 2001). A summary of how the risks is derived and their definitions are presented in Tables 3.1 & 3.2 below.

		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 Likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

Table 3.1 Risk Ratings Matrix

Risk Rating	Definitions
Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not already undertaken) and remediation are likely to be required.
High risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not already undertaken) is required and remediation works may be necessary in the short term and are likely over the longer term.
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild.
Moderate to low risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is unlikely that any such harm would be severe, or if any harm were to occur it is probable that the harm would be relatively mild.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Table 3.2 Risk Ratings Definition

3.2.2 Summary of Plausible Sources

Possible sources of contamination identified or discounted as part of the desk study are summarised in Table 3.3.

Source	Description	Comments
Shallow soils and any Made Ground across the site potentially impacted by aerial deposition.	General chemical quality of the near surface soils and any Made Ground.	Possible elevated concentrations of metals, organic contaminants (including PAH and TPH), inorganic contaminants and asbestos. Potential for pesticides (Pesticides could be ruled out if there was certainty of no historic or current use).
Naturally occurring aggressive ground conditions	Naturally occurring compounds in the ground which could damage buried concrete.	Possible elevated sulphate concentrations.
Ground gases/vapours	Possible presence of Made Ground beneath the site. This is only considered a viable source of ground gas if significant proportions of organic material are present.	Methane, carbon dioxide, depleted oxygen, trace gases.

Table 3.3 Possible Sources of Contamination

3.2.3 Summary of Plausible Pathways

The plausible pathways are summarised in Table 3.4. These pathways are based on the proposed residential use.

Pathway	Description
Direct Contact	Ingestion of soil particles, inhalation of soil derived dust (including tracked back dust), dermal contact. Bioaccumulation and home grown produce consumption.
Inhalation	Inhalation of soil dust both inside and outside of buildings.
	Inhalation of ground gas/vapours within buildings.
Vertical & Lateral Migration	Contaminant movement both vertically through leaching/gravity and horizontally along preferential pathways, e.g. services trenches, more permeable bedded strata or within groundwater.
Shallow Groundwater	Shallow groundwater or perched water may be present and, if encountered, could result in the vertical and lateral migration of contaminants.
Chemical Attack	Attack of buried plastics and concrete by aggressive ground conditions.
Flooding	Discounted – the site was indicated to be located outside of any current indicative tidal and fluvial flood plain.

Table 3.4 Possible Contaminant Pathways

3.2.4 Summary of Plausible Receptors

Potential receptors associated with the site and its development, identified or otherwise discounted, are summarised in Table 3.5.

Receptor	Description	Comments
End Users	Future users of the residential dwellings.	The development will likely comprise residential dwellings with associated infrastructure. Soft landscaping associated constituting gardens and Open Space are proposed.
Adjacent Land Users	Sensitive land uses identified within the immediate vicinity.	Adjacent land uses are a mixture of residential use, roads and open fields.
Built Environment	Buried concrete for foundations and plastics for potable water supply pipes (if required) may be laid in contact with contaminated soils.	Aggressive ground conditions and limited areas/depths of Made Ground may be present beneath the site.
Groundwater	Controlled Waters contained within the aquifer(s) beneath the site.	The site lies on Unproductive Strata. The site is located outside of any SPZ.
Surface Water	Controlled Waters within lakes, rivers, ponds, etc., or coastal waters.	The closest significant surface water receptor was located c.15m east.
Ecological Receptors	Sensitive areas of ecological significance.	No sensitive ecological receptors identified – this is not considered further in the assessment.

Table 3.5 Possible Receptors of Contamination

Site workers involved in the preparation and construction of the development have not been considered in this assessment as the principal contractor is duty bound under the current CDM Regulations to undertake their own risk assessments with respect to their employees.

Whilst the above sources and receptors have been identified, Table 3.6 summarises the identified plausible contamination linkages and a qualitative assessment of the risks based on the desk study research.

Potential Source/Media	Potential Receptors	Possible Pathways	Probability	Consequence	Risk & Justification
Shallow soils and any Made Ground across the site potentially impacted by aerial deposition	End Users	Direct contact and inhalation of soil derived dust	Low Likelihood	Mild	**Low** The site is proposed to comprise residential dwellings alongside associated infrastructure. Future occupiers may come into direct contact with soils where/if soft landscaping is present. Where soft landscaping is proposed it will be completed with uncontaminated soils in the near surface root zone which will reduce the risk.
	Adjacent Land Users	Direct contact and inhalation of soil derived dust	Unlikely	Minor	**Very Low** Adjacent site users are unlikely to come into contact with the soils at the site. Extensive impact from this source is not anticipated.
	Soft Landscaping	Root uptake	Unlikely	Mild	**Very Low** Soft landscaping in any proposed development. However, no clear evidence of harm to existing vegetation was observed and extensive impact from this source is not anticipated.
	Water Supply Pipes	Direct contact	Low Likelihood	Minor	**Very Low** Water supply pipes may come into contact with impacted soils depending upon depth of installation and extent of any soil impact.
	Buildings and Infrastructure	Direct contact	Unlikely	Minor	**Very Low** Foundations and utilities may be placed within potentially aggressive soils (e.g. sulphate). However, extensive impact from this source is not anticipated.
	Groundwater	Vertical Migration	Unlikely	Minor	**Very Low** The site lies on Unproductive Strata (Weald Clay) and is outside of any Source Protection Zones. However, significant potentially mobile contamination is not anticipated in relation to this source.

Potential Source/Media	Potential Receptors	Possible Pathways	Probability	Consequence	Risk & Justification
	Surface Water	Lateral migration within saturated and unsaturated zones	Unlikely	Minor	**Very Low** A surface water feature is present 15m east of the site. However, significant potentially mobile contamination is not anticipated in relation to this source.
Naturally occurring aggressive ground conditions	End users	Direct contact and inhalation / ingestion of soil derived dust	Unlikely	Minor	**Very Low** No naturally occurring potential sources which could harm human health have been identified. The consequence is likely to be minor.
	Adjacent land users	Direct contact	Unlikely	Minor	**Very Low** No potential sources which could harm human health have been identified. The consequence is likely to be minor.
	Water supply pipes	Direct contact	Unlikely	Minor	**Very Low** No potential sources which could harm human health have been identified. The consequence is likely to be minor.
	Buildings and Infrastructure	Direct contact	Unlikely	Minor	**Very Low** Foundations may be placed within soils which may be an aggressive environment for concrete. However, the consequence is anticipated to be minor.
Ground gases and vapours from any Made Ground	End Users	Inhalation	Low Likelihood	Mild	**Low** Future occupiers may inhale potential ground gases produced by this source. Extensive or deep Made Ground with sufficient organic content for significant ground gas generation is not anticipated on site.
	Buildings and infrastructure	Gas accumulation of flammable gases	Low Likelihood	Mild	**Low** Extensive putrescible material sufficient for significant methane production is not anticipated at the site.

Potential Source/Media	Potential Receptors	Possible Pathways	Probability	Consequence	Risk & Justification
	Adjacent land users	Inhalation	Low	Minor	**Very Low** The potential sources of ground gases beneath the site are commensurate with those in the surrounding area. Adjacent land users may be at risk from off-site ground gases. However, this was beyond the remit of this investigation.
Radon	End Users	Inhalation	Unlikely	Medium	**Low** Future occupiers may inhale potential ground gases produced by this source. However, BGS mapping shows the site to lie within an area where <1% of houses may be affected.
	Buildings and Infrastructure	Gas Accumulation	Unlikely	Medium	**Low** Radon is denser than atmospheric air and will accumulate in the lowest available room. However, BGS mapping shows the site to lie within an area where <1% of houses may be affected.

Table 3.6 Plausible Contamination Linkages

3.3 Preliminary Risk Assessment Summary

The Preliminary Risk Assessment (PRA) and Conceptual Site Model (CSM) developed from the information gathered as part of the desk study process have identified several plausible contamination linkages that exist in relation to the proposed development of the site and the preliminary risk rating for the vast majority of contamination linkages have been classified as low or very low.

The potential contamination linkages established within this desk study are not considered to prevent development on the subject site and the risk with respect to land contamination is considered to be low to very low.

In order to progress this assessment in line with the National Planning Policy Framework, to provide further characterisation of the site and refinement of the PRA and CSM, it is recommended that intrusive investigation and associated testing is undertaken to confirm the findings of the desk study report and to provide a robust risk assessment for the site and proposed development. As such, it is recommended that geochemical and geotechnical investigation be carried out on the site to include analysis of soil samples for the range of potential contaminants identified within the desk study.

While gross contamination is not expected as a result of the previous land uses identified, should contamination be present on site, this should also be considered in the context of potential climate change, such as increase or more frequent rainfall events and/or increase in dry, potentially dusty conditions on the site.

3.4 Preliminary Geotechnical Assessment Summary

The underlying geology is anticipated to comprise the Weald Clay Formation. It is possible that conventional strip or pad foundations could be suitable for the proposed development where natural ground is encountered at ground level. However, where foundations are required in any areas of Made Ground, or desiccated soils or root zones a deeper or piled foundation solution may be required. Shallow groundwater and/or unstable soils could also impact the viability of conventional foundations.

The development should also take into account the presence of trees and/or desiccation at the site if/where shrinkable soils are present. Localised deepening of foundations may be required in the vicinity of trees and piled foundations may be required in proximity to trees (subject to tree type and ground conditions).

It is unlikely but possible that soakaways may function on this site, although this would be subject to testing to inform design, the absence of shallow groundwater and the absence of gross contamination within soils and groundwater beneath the site. It may also be necessary (subject to testing) to utilise on-site storage and attenuation of peak storm flow, through systems such as porous paving and cellular storage crates.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The desk study has shown the subject site itself historically to comprise predominantly agricultural land uses. There is a limited potential for Made Ground to be present in some areas of the site.

The proposed development is understood to comprise the construction of residential dwellings, with private gardens, soft landscaping, access roads and associated infrastructure.

In general, a maximum risk rating of low/to very low has been assigned in relation to potential areas if limited Made Ground is identified. Very low or low risk ratings have been classified related to the general shallow soils across the site, and naturally occurring aggressive ground conditions at the site.

The risk assessment has identified the risk of contamination as being low or very low, as such the site is considered suitable for the proposed development having regard to the risks arising from likely ground conditions identified as part of this Phase 1 Land Contamination Assessment.

It is possible that conventional foundations would be suitable for parts of the proposed development, although any design should account for the actual ground conditions beneath the site, the potential presence of shallow groundwater, unstable soils, shrinkable soils, as well as the presence of trees on site and/or desiccation of the shallow soils.

4.2 Recommendations

At this stage and based on the findings of the desk study and preliminary risk assessment, the following scope of works is recommended for the intrusive investigation on the site.

- Intrusive investigation works should be carried out in order to clarify the geotechnical and geo-environmental issues pertaining to redevelopment of the site.
- Soil sampling and analysis should be undertaken to inform subsequent geotechnical and geo-environmental risk assessment.
- Laboratory analysis, on soil samples recovered from the exploratory holes for a range of geotechnical parameters to support foundation and pavement design.
- Laboratory analysis on soil samples recovered from the exploratory holes, for an analytical suite to include the potential contaminants identified within the desk study and encountered during any intrusive investigation. The suite should include commonly occurring metals, non-metals, asbestos, TPH, and PAH. Testing for pesticides should also be undertaken.
- Groundwater monitoring over a winter period may be required to inform the emerging drainage strategy for the site. A winter period is typically defined as early October to the end of the following March or early April.

It may be necessary to undertake remediation/risk mitigation measures on this site to break contamination linkages and thus protect key receptors such as human health, controlled waters, built environment, soft landscaping and the like. The requirement and extent of any such remediation cannot be determined until such time as an intrusive investigation and associated testing has been completed.

FIGURES

Legend

Site Boundary

0 25 m 50 m

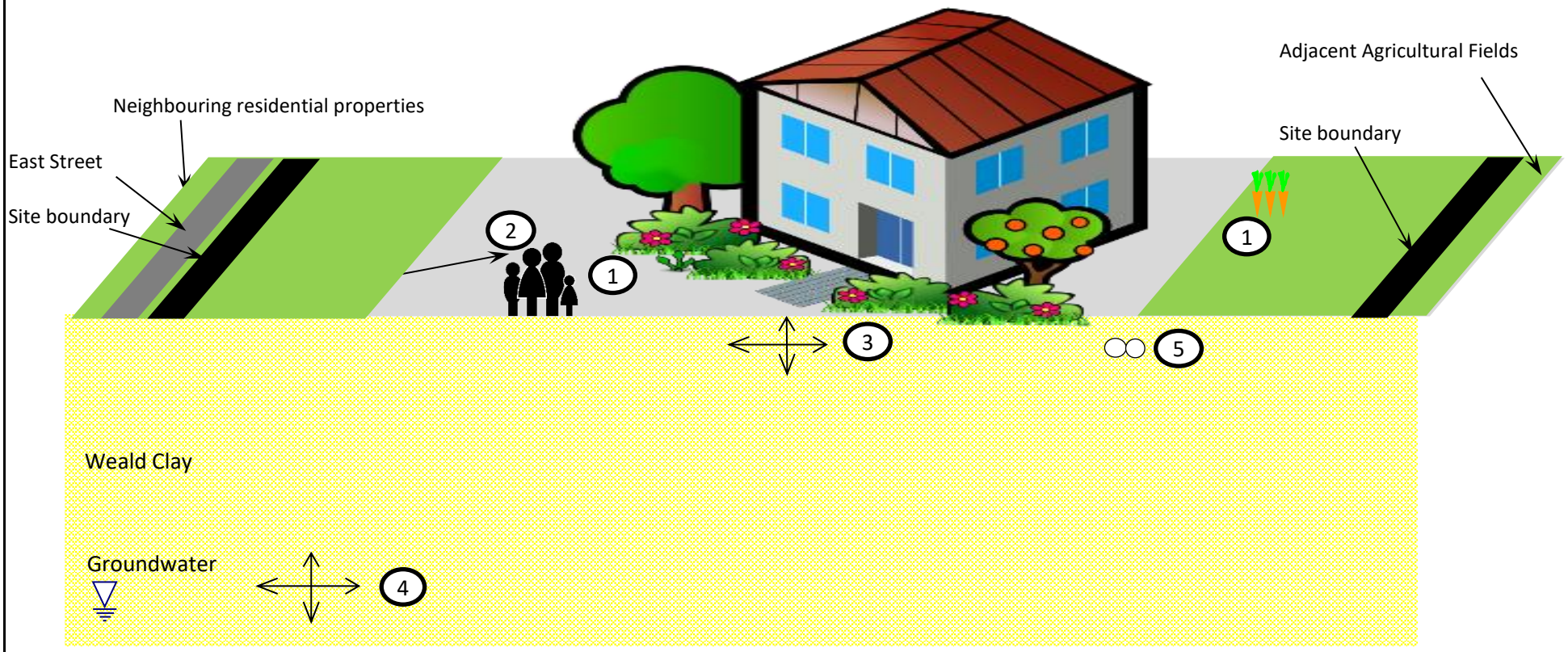
© Mapbox

Geo-Environmental

Produced by **Datanest.earth**

Title: Site Location Plan		
Client: Devine Homes PLC		Size: A4
Project: East Street, Rusper	Drawn: JH	Figure No.: 1
Date: 23-01-2025	Checked: GE	
Proj No: GE22977	Scale: 1:2500	Version: Final

Possible Pollutant Linkages:
1. Direct contact with contaminated soils, ingestion of contaminated soilsbiaccumulation in gardens
2. Inhaltion of soil dusts indoor and outdoor, and inhaltion of gases/vapours within buildings
3. Vertical and lateral migration through permeable strata
4. Shallow groundwater vertical and lateral migration



Project:	East Street, Rusper			**Title**	Conceptual Site Model (Proposed Development)
Client:	Devine Homes			**Geo-Environmental Services Ltd**	
Ref No:	GE22977	**Revision:**	0	**Unit 7 Danworth Farm, Cuckfield Road**	
Drawn:	JH	**Date:**	27/01/2025	**Hurstpierpoint, West Sussex BN6 9GL**	
Figure:	2	**Scale:**	Not To Scale	**+44(0)1273 832972 www.gesl.net**	Geo-Environmental

Geo-Environmental

APPENDIX A

Desk Study Information

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

East Street, Rusper

Order Details

Date: 15/01/2025

Your ref: GE22977 / PO-8160

Our Ref: GS-8XX-NU7-6L2-IGO

Site Details

Location: 520772 137273

Area: 0.91 ha

Authority: Horsham District Council ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	0	8	5	-
16 >	1.2 >	Historical tanks >	0	0	0	1	-
17	1.3	Historical energy features	0	0	0	0	-
17	1.4	Historical petrol stations	0	0	0	0	-
17 >	1.5 >	Historical garages >	0	0	1	0	-
18	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
19 >	2.1 >	Historical industrial land uses >	0	0	10	7	-
20 >	2.2 >	Historical tanks >	0	0	0	1	-
21	2.3	Historical energy features	0	0	0	0	-
21	2.4	Historical petrol stations	0	0	0	0	-
21 >	2.5 >	Historical garages >	0	0	2	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
22	3.1	Active or recent landfill	0	0	0	0	-
22	3.2	Historical landfill (BGS records)	0	0	0	0	-
23	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
23	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
23	3.5	Historical waste sites	0	0	0	0	-
23	3.6	Licensed waste sites	0	0	0	0	-
23 >	3.7 >	Waste exemptions >	0	0	1	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
25 >	4.1 >	Recent industrial land uses >	0	0	2	-	-
26	4.2	Current or recent petrol stations	0	0	0	0	-
26	4.3	Electricity cables	0	0	0	0	-
26	4.4	Gas pipelines	0	0	0	0	-
26	4.5	Sites determined as Contaminated Land	0	0	0	0	-

26	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
27	4.7	Regulated explosive sites	0	0	0	0	-
27	4.8	Hazardous substance storage/usage	0	0	0	0	-
27	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
27	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
27	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
28	4.12	Radioactive Substance Authorisations	0	0	0	0	-
28 >	**4.13 >**	**Licensed Discharges to controlled waters >**	0	0	0	2	-
28	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
29	4.15	Pollutant release to public sewer	0	0	0	0	-
29	4.16	List 1 Dangerous Substances	0	0	0	0	-
29	4.17	List 2 Dangerous Substances	0	0	0	0	-
29	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
29	4.19	Pollution inventory substances	0	0	0	0	-
30	4.20	Pollution inventory waste transfers	0	0	0	0	-
30	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
31	5.1	Superficial aquifer	None (within 500m)				
32 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
34 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
35	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
35	5.5	Groundwater vulnerability- local information	None (within 0m)				
36 >	**5.6 >**	**Groundwater abstractions >**	0	0	0	0	2
37	5.7	Surface water abstractions	0	0	0	0	0
37	5.8	Potable abstractions	0	0	0	0	0
38	5.9	Source Protection Zones	0	0	0	0	-
38	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m
39	6.1	Water Network (OS MasterMap)	0	0	0	-	-

39 >	6.2 >	Surface water features >	0	1	1	-	-
40 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
40 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
41	6.5	WFD Groundwater bodies	0	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
42	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
42	7.2	Historical Flood Events	0	0	0	-	-
42	7.3	Flood Defences	0	0	0	-	-
43	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
43	7.5	Flood Storage Areas	0	0	0	-	-
44	7.6	Flood Zone 2	None (within 50m)				
44	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
45	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding >					
46 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
47	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
48	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
48	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
48	10.4	Special Protection Areas (SPA)	0	0	0	0	0
48	10.5	National Nature Reserves (NNR)	0	0	0	0	0
49	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
49 >	10.7 >	Designated Ancient Woodland >	0	0	1	6	39
51	10.8	Biosphere Reserves	0	0	0	0	0
51	10.9	Forest Parks	0	0	0	0	0
51	10.10	Marine Conservation Zones	0	0	0	0	0
51	10.11	Green Belt	0	0	0	0	0
52	10.12	Proposed Ramsar sites	0	0	0	0	0

52	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
52	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
52	10.15	Nitrate Sensitive Areas	0	0	0	0	0
53 >	10.16 >	Nitrate Vulnerable Zones >	0	0	1	0	1
54 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
55	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
56	11.1	World Heritage Sites	0	0	0	-	-
57	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
57	11.3	National Parks	0	0	0	-	-
57 >	11.4 >	Listed Buildings >	0	0	9	-	-
58 >	11.5 >	Conservation Areas >	1	0	0	-	-
58	11.6	Scheduled Ancient Monuments	0	0	0	-	-
58	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 4 (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 >	0	0	1	-	-
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 >	1	3	14	-	-
64	13.2	Habitat Networks	0	0	0	-	-
64	13.3	Open Mosaic Habitat	0	0	0	-	-
65	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
66 >	14.1 >	10k Availability >	Identified (within 500m)				
67 >	14.2 >	Artificial and made ground (10k) >	0	0	0	1	-
68 >	14.3 >	Superficial geology (10k) >	0	0	0	1	-

69	14.4	Landslip (10k)	0	0	0	0	-
70 >	14.5 >	Bedrock geology (10k) >	1	0	2	2	-
71	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
72 >	15.1 >	50k Availability >	Identified (within 500m)				
73	15.2	Artificial and made ground (50k)	0	0	0	0	-
73	15.3	Artificial ground permeability (50k)	0	0	-	-	-
74	15.4	Superficial geology (50k)	0	0	0	0	-
74	15.5	Superficial permeability (50k)	None (within 50m)				
74	15.6	Landslip (50k)	0	0	0	0	-
74	15.7	Landslip permeability (50k)	None (within 50m)				
75 >	15.8 >	Bedrock geology (50k) >	1	1	0	2	-
76 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
76	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
77 >	16.1 >	BGS Boreholes >	0	0	2	-	-
Page	Section	Natural ground subsidence >					
78 >	17.1 >	Shrink swell clays >	Low (within 50m)				
79 >	17.2 >	Running sands >	Negligible (within 50m)				
80 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
81 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
82 >	17.5 >	Landslides >	Very low (within 50m)				
83 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
85	18.1	BritPits	0	0	0	0	-
86 >	18.2 >	Surface ground workings >	0	14	20	-	-
87	18.3	Underground workings	0	0	0	0	0
87	18.4	Underground mining extents	0	0	0	0	-
88	18.5	Historical Mineral Planning Areas	0	0	0	0	-

88 >	18.6 >	Non-coal mining >	1	0	0	0	1
88	18.7	JPB mining areas	None (within 0m)				
89	18.8	The Coal Authority non-coal mining	0	0	0	0	-
89	18.9	Researched mining	0	0	0	0	-
89	18.10	Mining record office plans	0	0	0	0	-
89	18.11	BGS mine plans	0	0	0	0	-
90	18.12	Coal mining	None (within 0m)				
90	18.13	Brine areas	None (within 0m)				
90	18.14	Gypsum areas	None (within 0m)				
90	18.15	Tin mining	None (within 0m)				
90	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
91	19.1	Natural cavities	0	0	0	0	-
91	19.2	Mining cavities	0	0	0	0	0
91	19.3	Reported recent incidents	0	0	0	0	-
91	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
93 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
95 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	1	-	-	-
95	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
95	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
96	22.1	Underground railways (London)	0	0	0	-	-
96	22.2	Underground railways (Non-London)	0	0	0	-	-
96	22.3	Railway tunnels	0	0	0	-	-
96	22.4	Historical railway and tunnel features	0	0	0	-	-
96	22.5	Royal Mail tunnels	0	0	0	-	-
97	22.6	Historical railways	0	0	0	-	-

97	22.7	Railways	0	0	0	-	-
97	22.8	Crossrail 2	0	0	0	0	-
97	22.9	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 24/04/2021

Site Area: 0.91ha

Recent site history - 2018 aerial photograph

Capture Date: 08/05/2018

Site Area: 0.91ha

Recent site history - 2012 aerial photograph

Capture Date: 31/08/2012

Site Area: 0.91ha

Recent site history - 2005 aerial photograph

Capture Date: 28/08/2005

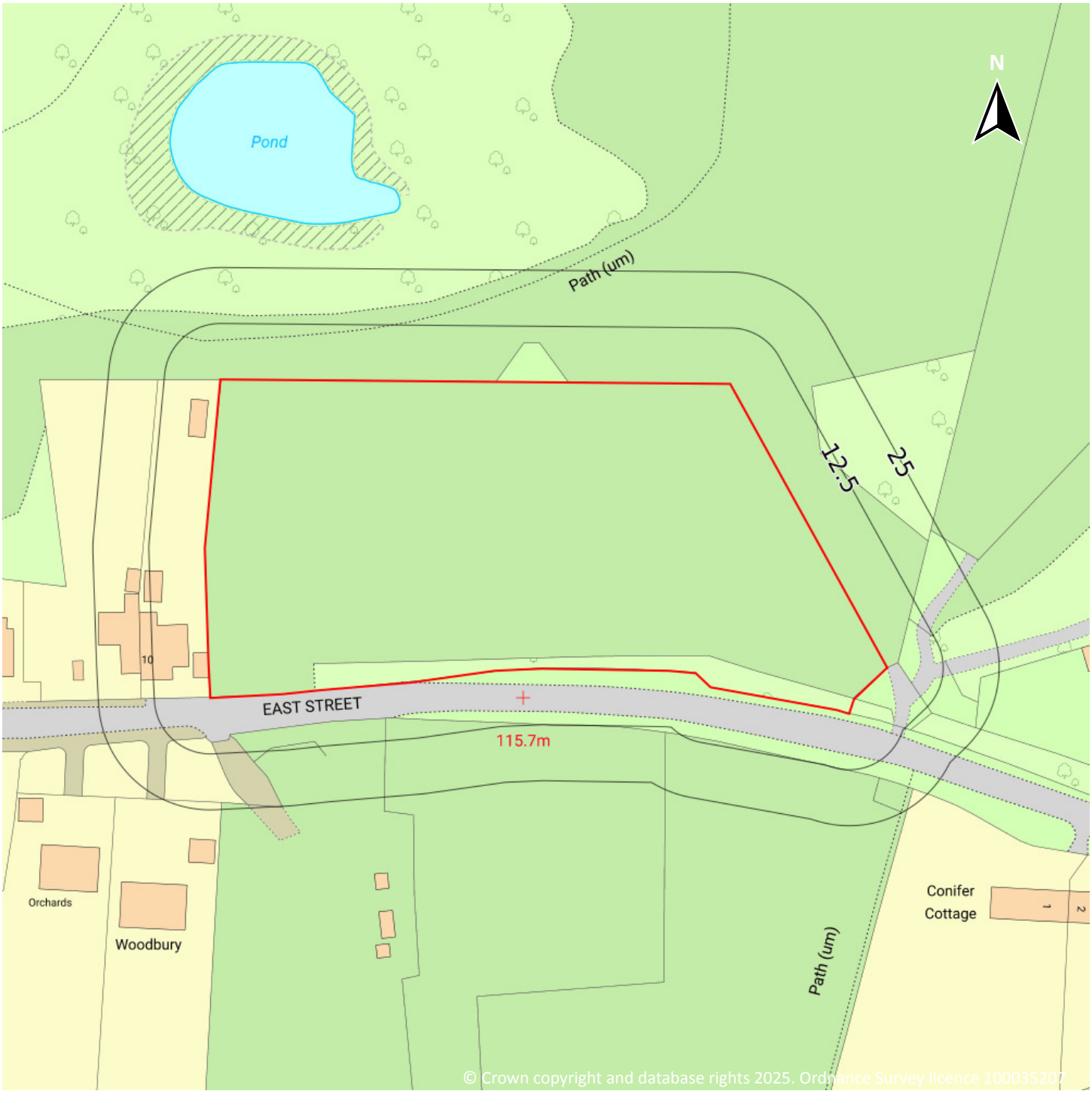
Site Area: 0.91ha

Recent site history - 1999 aerial photograph

Capture Date: 04/09/1999

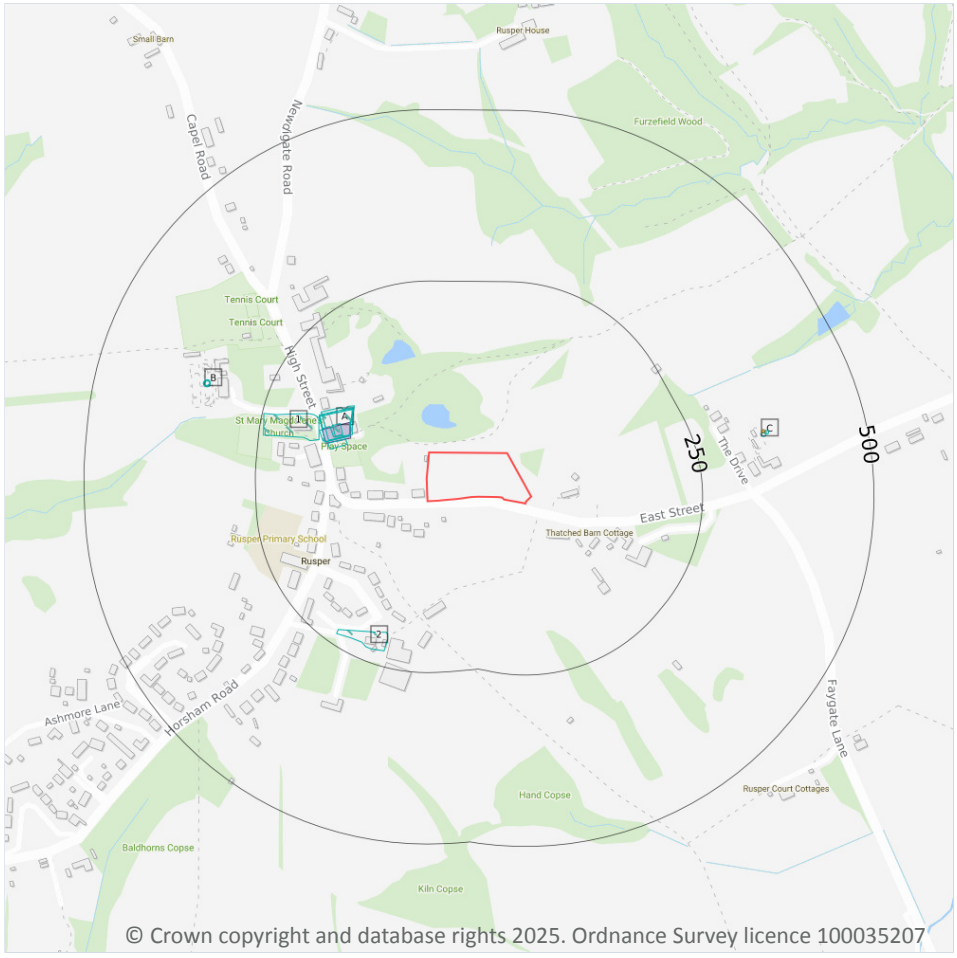
Site Area: 0.91ha

OS MasterMap site plan



Site Area: 0.91ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical garages

1.1 Historical industrial land uses

Records within 500m	13

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 15 >**

ID	Location	Land use	Dates present	Group ID
A	115m W	Smithy	1920	2294642

ID	Location	Land use	Dates present	Group ID
A	118m W	Smithy	1968	2312494
A	119m W	Smithy	1909	2238101
A	119m W	Smithy	1895 - 1896	2251982
A	120m W	Telephone Exchange	1977 - 1991	2317262
A	129m W	Smithy	1961	2278844
1	162m W	Grave Yard	1875	2165892
2	200m SW	Corn Windmill	1875	2166584
B	334m W	Tank	1961	2172187
B	335m W	Unspecified Tank	1895 - 1896	2306993
B	335m W	Unspecified Tank	1909 - 1920	2326239
C	348m E	Tank	1961	2172188
C	353m E	Unspecified Tank	1909	2191422

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**1**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original 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 15 >**

ID	Location	Land use	Dates present	Group ID
C	349m E	Unspecified Tank	1910	396363

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	1

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'.

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
A	116m W	Garage	1974 - 1993	84210

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical garages

2.1 Historical industrial land uses

Records within 500m	17

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 19 >**

ID	Location	Land Use	Date	Group ID
A	115m W	Smithy	1920	2294642
A	118m W	Smithy	1968	2312494
A	119m W	Smithy	1909	2238101

ID	Location	Land Use	Date	Group ID
A	119m W	Smithy	1896	2251982
A	120m W	Telephone Exchange	1991	2317262
A	120m W	Telephone Exchange	1977	2317262
A	122m W	Smithy	1895	2251982
A	129m W	Smithy	1961	2278844
1	162m W	Grave Yard	1875	2165892
2	200m SW	Corn Windmill	1875	2166584
B	334m W	Tank	1961	2172187
B	335m W	Unspecified Tank	1909	2326239
B	335m W	Unspecified Tank	1896	2306993
B	336m W	Unspecified Tank	1920	2326239
B	336m W	Unspecified Tank	1895	2306993
C	348m E	Tank	1961	2172188
C	353m E	Unspecified Tank	1909	2191422

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**1**

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

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
C	349m E	Unspecified Tank	1910	396363

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	2

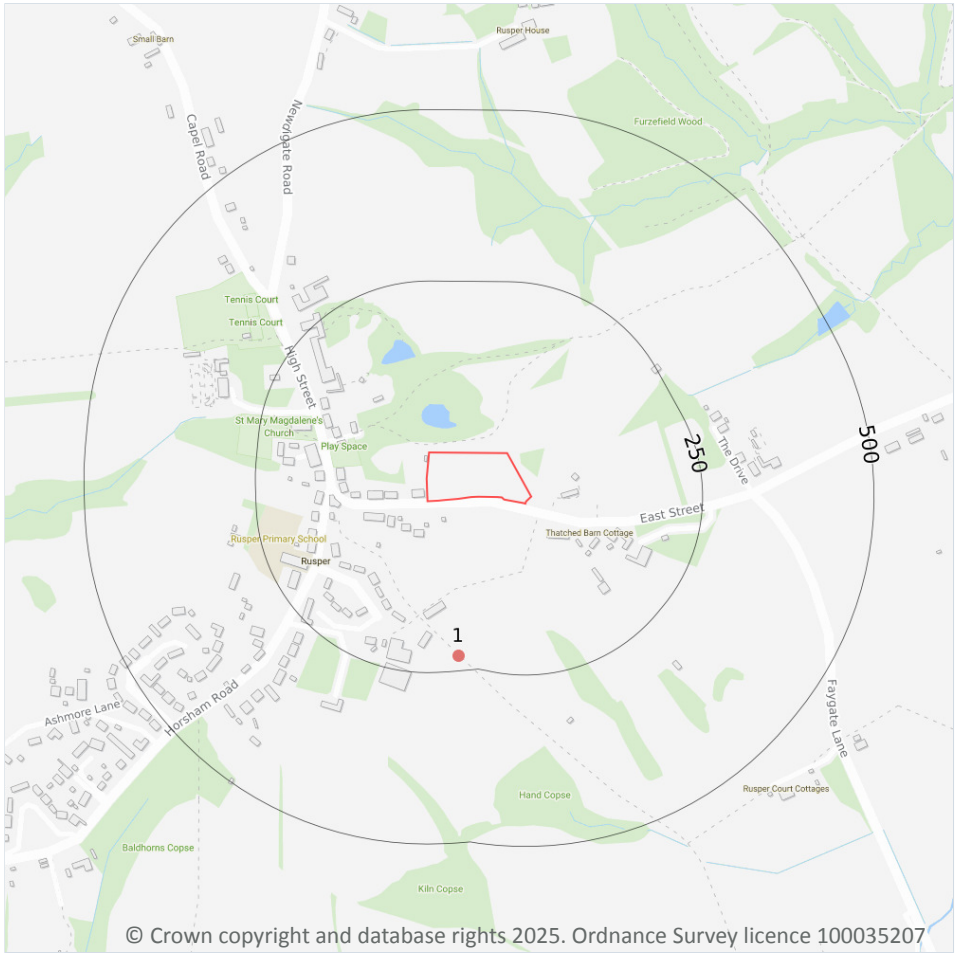
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
A	116m W	Garage	1974	84210
A	118m W	Garage	1993	84210

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	1

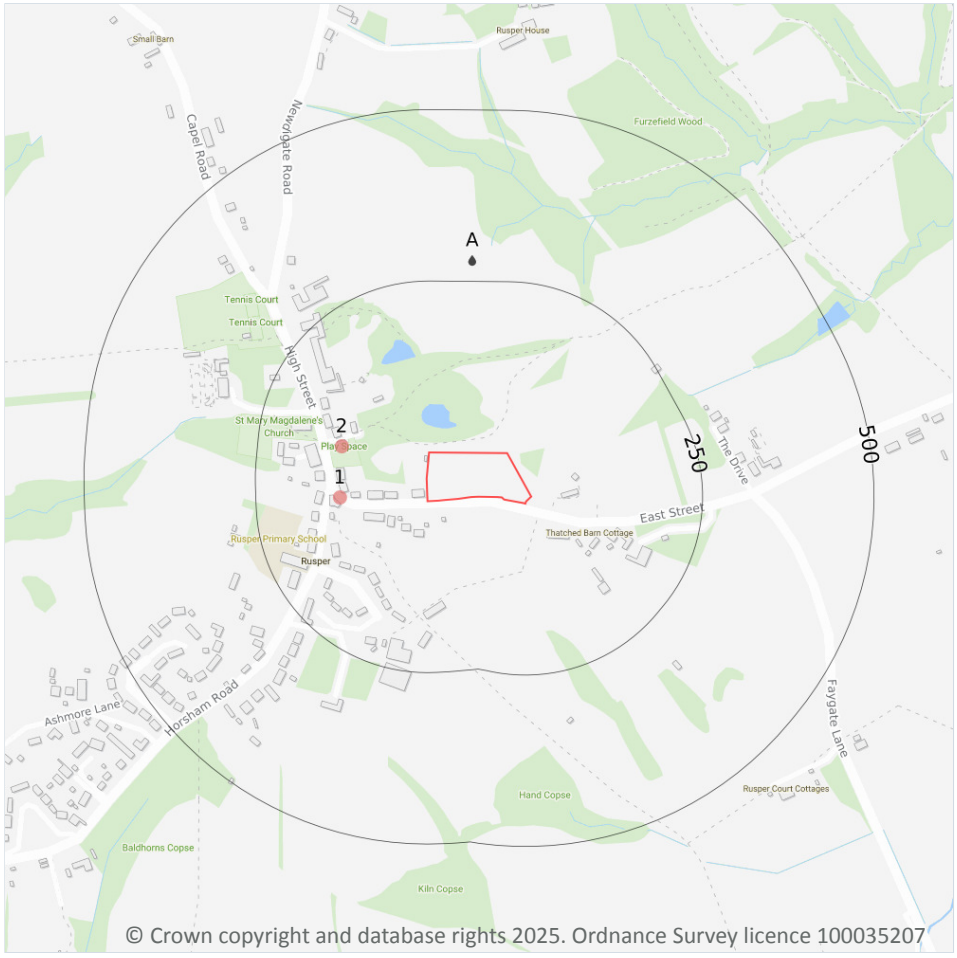
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 22 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	228m S	-	WEX357633	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



Site Outline

Search buffers in metres (m)

Recent industrial land uses

Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m	2

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 25 >**

ID	Location	Company	Address	Activity	Category
1	128m W	Pump	West Sussex, RH12	Water Pumping Stations	Industrial Features
2	128m W	Telephone Exchange	West Sussex, RH12	Telecommunications Features	Infrastructure and Facilities

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	2

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

Features are displayed on the Current industrial land use map on **page 25 >**

ID	Location	Address	Details	
A	281m N	GHYLLMANORH OTEL,RUSPER,S USSEX	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTWC.0680 Permit Version: 1 Receiving Water: DITCH TRIB OF RUSPERHOUSE GILL	Status: TRANSFERRED FROM COPA 1974 Issue date: 04/03/1986 Effective Date: 04/03/1986 Revocation Date: -
A	281m N	GHYLLMANORH OTEL,RUSPER,S USSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CTWC.0681 Permit Version: 1 Receiving Water: RUSPERHOUSEGILL	Status: REVOKED - UNSPECIFIED Issue date: 04/03/1986 Effective Date: 04/03/1986 Revocation Date: 04/10/1995

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	0

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

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer

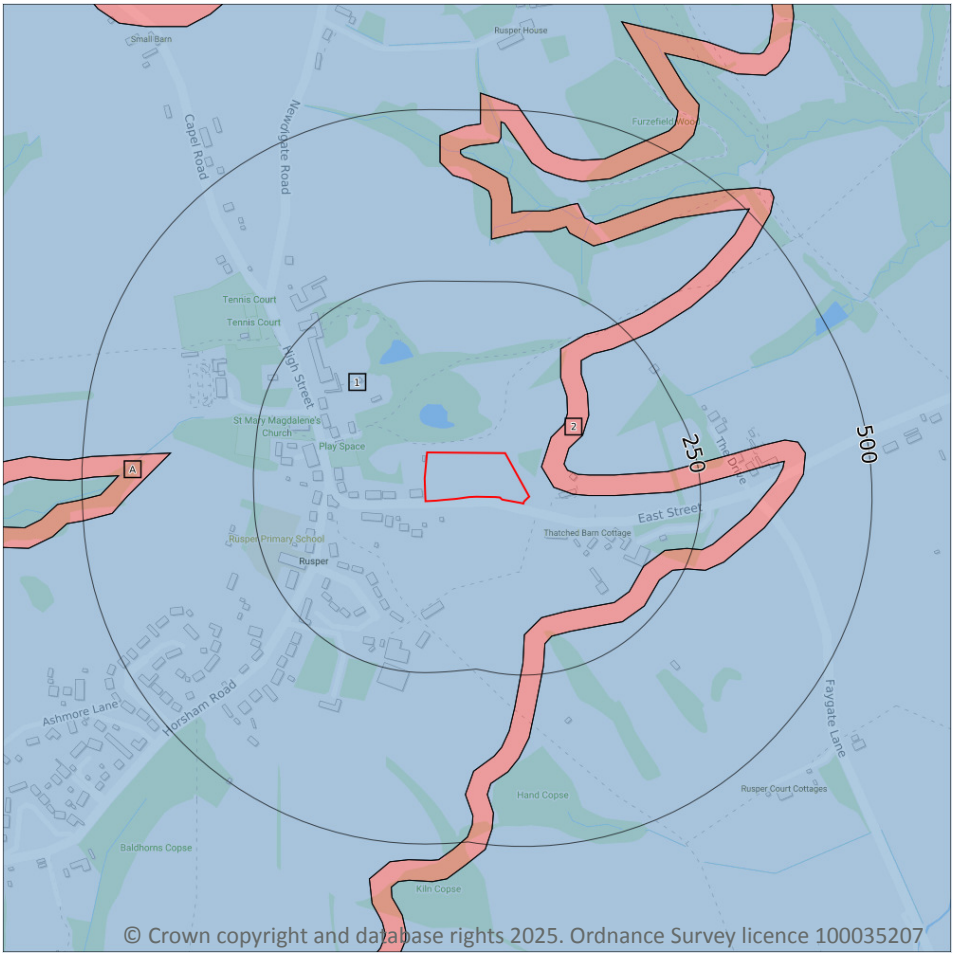
5.1 Superficial aquifer

Records within 500m	0

Aquifer status of groundwater held within superficial geology.

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	4

Aquifer status of groundwater held within bedrock geology.

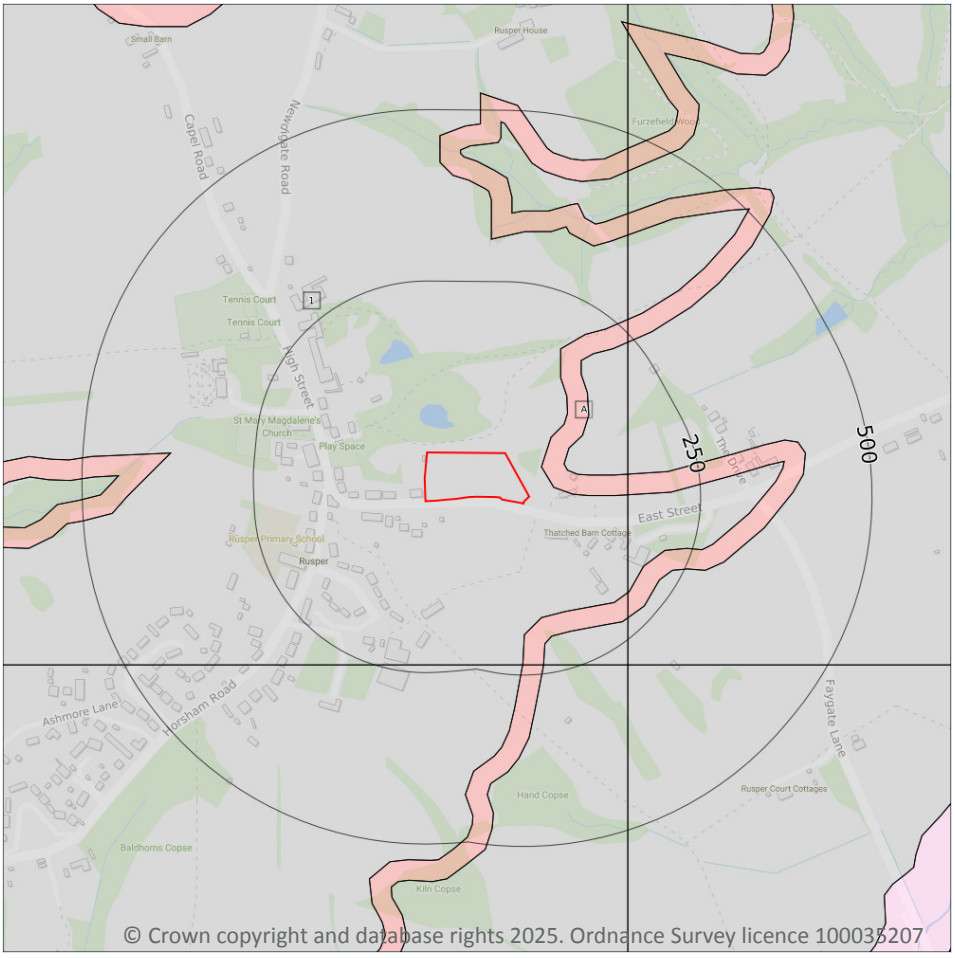
Features are displayed on the Bedrock aquifer map on **page 32 >**

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**
2	37m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
A	373m W	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
A	447m W	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 34 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Unproductive aquifer (may have productive aquifer beneath) Combined classification: Unproductive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: 40-70% Dilution value: 300-550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: Unproductive Aquifer type: Unproductive Flow mechanism: Well connected fractures**
A	37m E	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary 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.

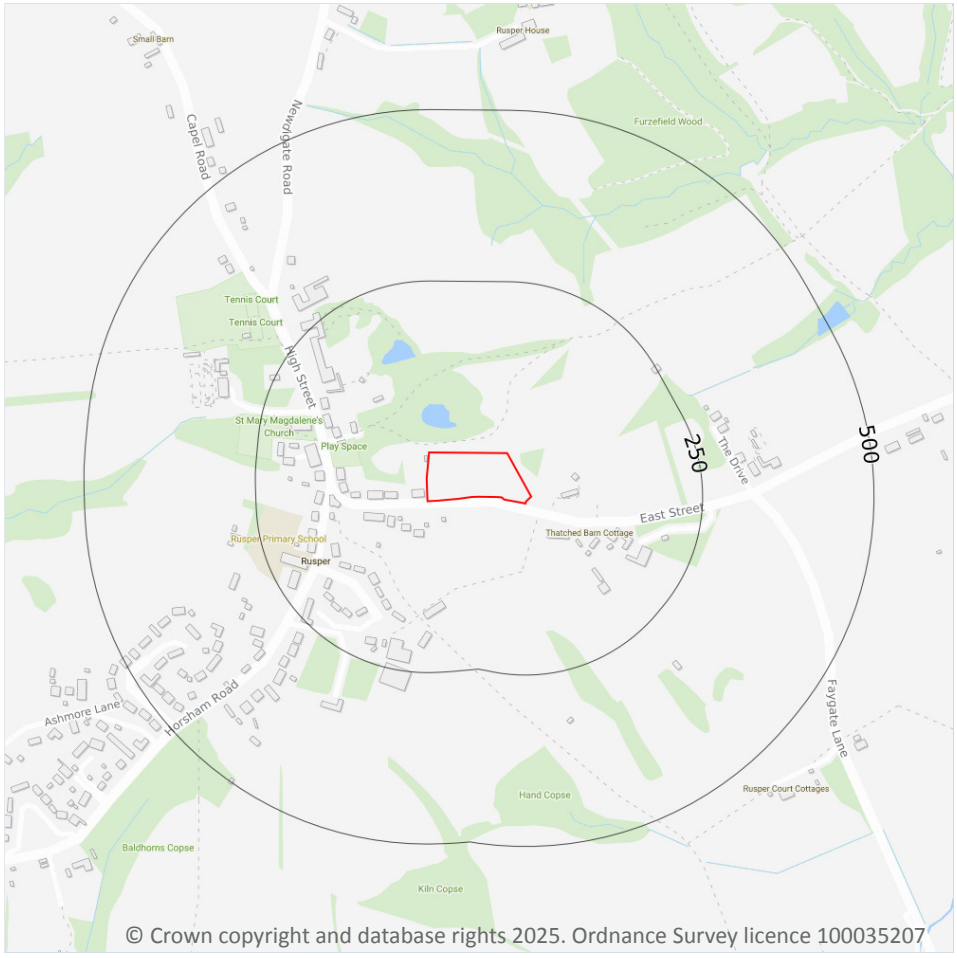
5.5 Groundwater vulnerability- local information

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



Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	2

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 36 >**

ID	Location	Details	
-	923m SE	Status: Historical Licence No: 28/39/32/0039 Details: Spray Irrigation - Spray Irrigation Definition Order Direct Source: THAMES GROUNDWATER Point: WEALD CLAY AT THE VINERIES, LAMBS GREEN, NEAR RUSPER, SUSSEX Data Type: Point Name: SHAW Easting: 521600 Northing: 136700	Annual Volume (m^3): 1591 Max Daily Volume (m^3): 22.73 Original Application No: - Original Start Date: 13/02/1967 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1550m N	Status: Historical Licence No: 28/39/32/0083 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: RUSPER GOLF COURSE BOREHOLE Data Type: Point Name: Kenward Farms Easting: 520280 Northing: 138800	Annual Volume (m^3): 15970 Max Daily Volume (m^3): 87.28 Original Application No: - Original Start Date: 26/05/1992 Expiry Date: - Issue No: 105 Version Start Date: 11/12/2020 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**0**

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

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

5.8 Potable abstractions

Records within 2000m	**0**

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

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

5.9 Source Protection Zones

Records within 500m	0

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology

Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	2

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 39 >**

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 39 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	**On site**	**River**	**Baldhorns Brook**	**GB106039017470**	**Mole Upper Trib**	**Mole**

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 39 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	596m SW	River	Baldhorns Brook	GB106039017470 ↗	Poor	Fail	Poor	2019

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

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

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

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding

8.1 Surface water flooding

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

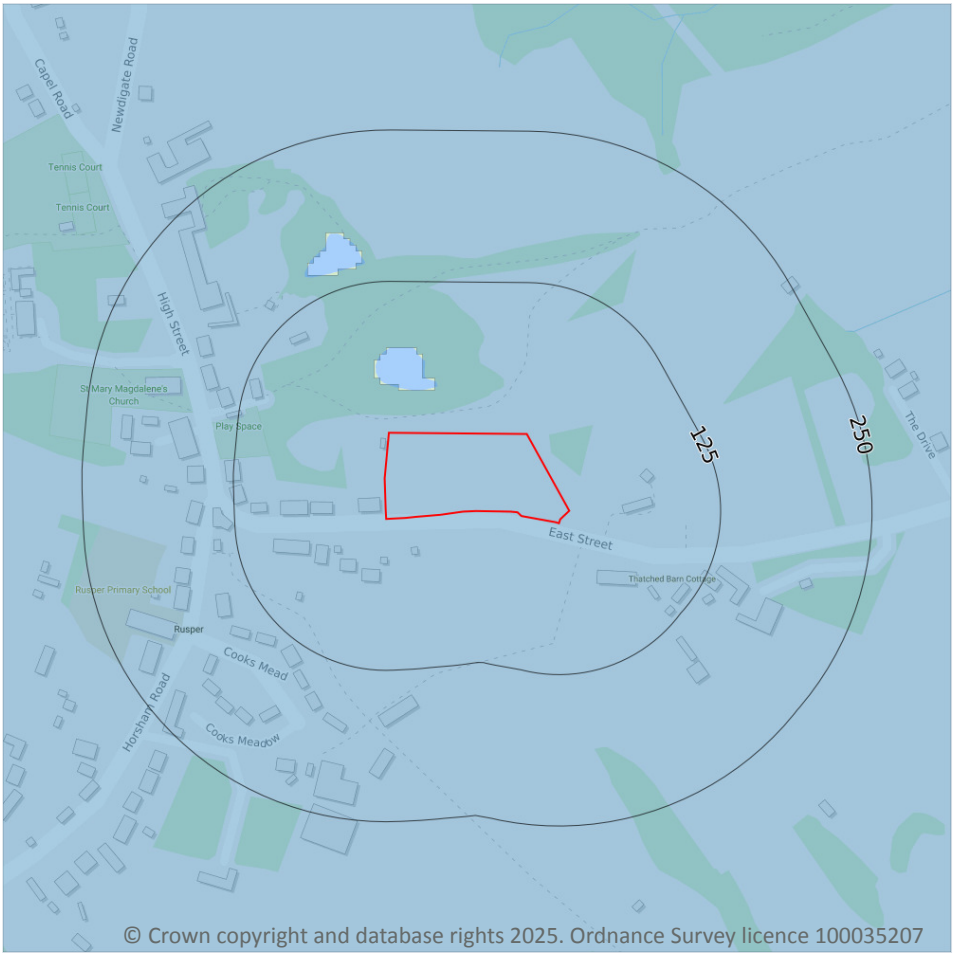
Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year 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.

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	Negligible
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

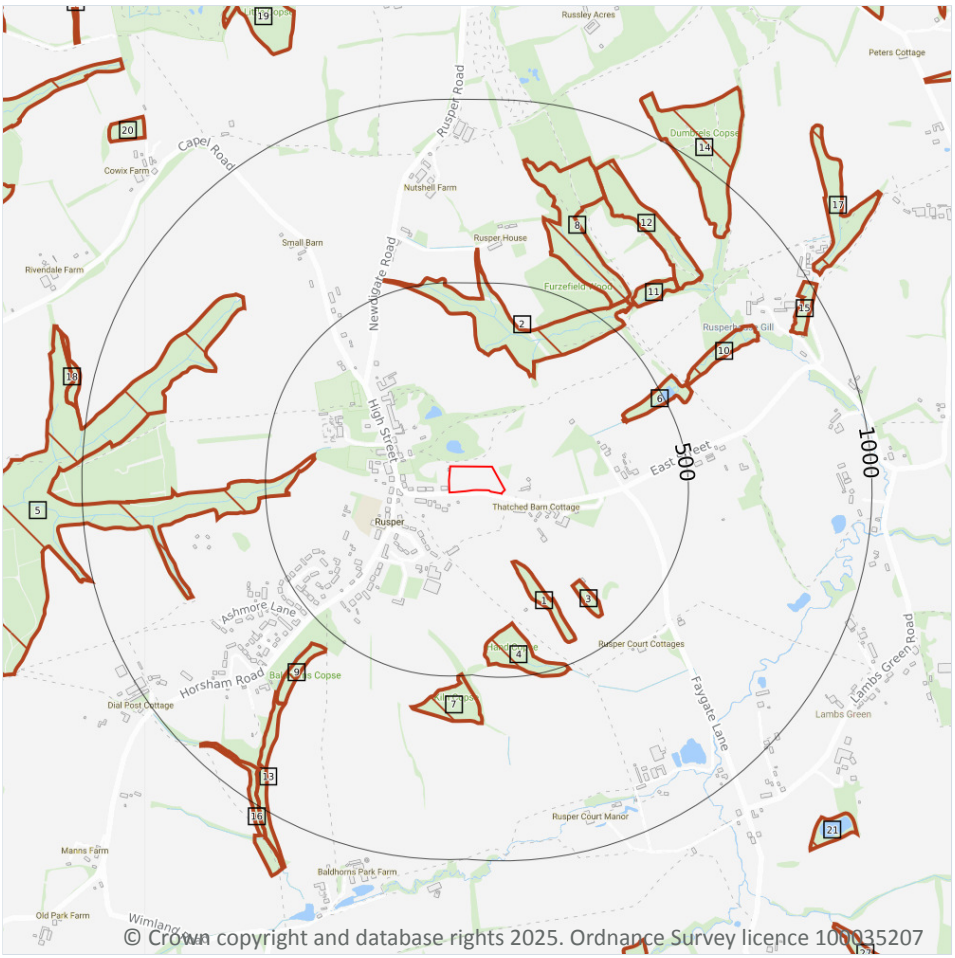
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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

Features are displayed on the Groundwater flooding map on **page 46 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	46

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

Features are displayed on the Environmental designations map on **page 47 >**

ID	Location	Name	Woodland Type
1	188m SE	Unknown	Ancient & Semi-Natural Woodland
2	268m NE	Unknown	Ancient & Semi-Natural Woodland
3	316m SE	Unknown	Ancient & Semi-Natural Woodland
4	354m S	Hand Copse	Ancient & Semi-Natural Woodland
5	370m W	Unknown	Ancient & Semi-Natural Woodland
6	374m E	Unknown	Ancient & Semi-Natural Woodland
7	496m S	Kiln Copse	Ancient & Semi-Natural Woodland
8	542m NE	Unknown	Ancient & Semi-Natural Woodland
9	544m SW	Unknown	Ancient & Semi-Natural Woodland
10	576m NE	Unknown	Ancient & Semi-Natural Woodland
11	590m NE	Unknown	Ancient & Semi-Natural Woodland
12	703m NE	Unknown	Ancient & Semi-Natural Woodland
13	718m SW	Unknown	Ancient & Semi-Natural Woodland
14	876m NE	Dumbrills Coppice	Ancient & Semi-Natural Woodland
15	891m NE	Unknown	Ancient & Semi-Natural Woodland
16	916m SW	Unknown	Ancient & Semi-Natural Woodland

ID	Location	Name	Woodland Type
17	1028m NE	Unknown	Ancient & Semi-Natural Woodland
18	1028m W	Unknown	Ancient & Semi-Natural Woodland
19	1219m NW	Unknown	Ancient & Semi-Natural Woodland
20	1223m NW	Unknown	Ancient & Semi-Natural Woodland
21	1239m SE	Unknown	Ancient & Semi-Natural Woodland
-	1256m N	Unknown	Ancient Replanted Woodland
-	1259m N	Unknown	Ancient & Semi-Natural Woodland
24	1274m S	Unknown	Ancient & Semi-Natural Woodland
25	1403m NW	Unknown	Ancient & Semi-Natural Woodland
-	1429m S	Unknown	Ancient & Semi-Natural Woodland
27	1482m SE	Unknown	Ancient & Semi-Natural Woodland
-	1525m N	Unknown	Ancient & Semi-Natural Woodland
29	1536m NW	Unknown	Ancient & Semi-Natural Woodland
-	1540m N	Unknown	Ancient & Semi-Natural Woodland
31	1553m NE	Unknown	Ancient & Semi-Natural Woodland
-	1576m S	Sloughbrook Gill	Ancient & Semi-Natural Woodland
-	1658m NW	Unknown	Ancient & Semi-Natural Woodland
-	1680m SE	Unknown	Ancient & Semi-Natural Woodland
-	1684m NW	Unknown	Ancient & Semi-Natural Woodland
36	1698m NW	Unknown	Ancient & Semi-Natural Woodland
-	1744m N	Unknown	Ancient Replanted Woodland
-	1745m SW	Unknown	Ancient & Semi-Natural Woodland
-	1808m SE	Unknown	Ancient & Semi-Natural Woodland
-	1852m NW	Unknown	Ancient & Semi-Natural Woodland
-	1888m S	Rusper Copse	Ancient & Semi-Natural Woodland
-	1903m SE	Upper Kilnwood Ghyll, Hither Pit Field, The Fourt*	Ancient & Semi-Natural Woodland
-	1924m NE	Unknown	Ancient & Semi-Natural Woodland
-	1929m N	Unknown	Ancient & Semi-Natural Woodland

ID	Location	Name	Woodland Type
-	1982m NW	Unknown	Ancient & Semi-Natural Woodland
-	1985m SW	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	0

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

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

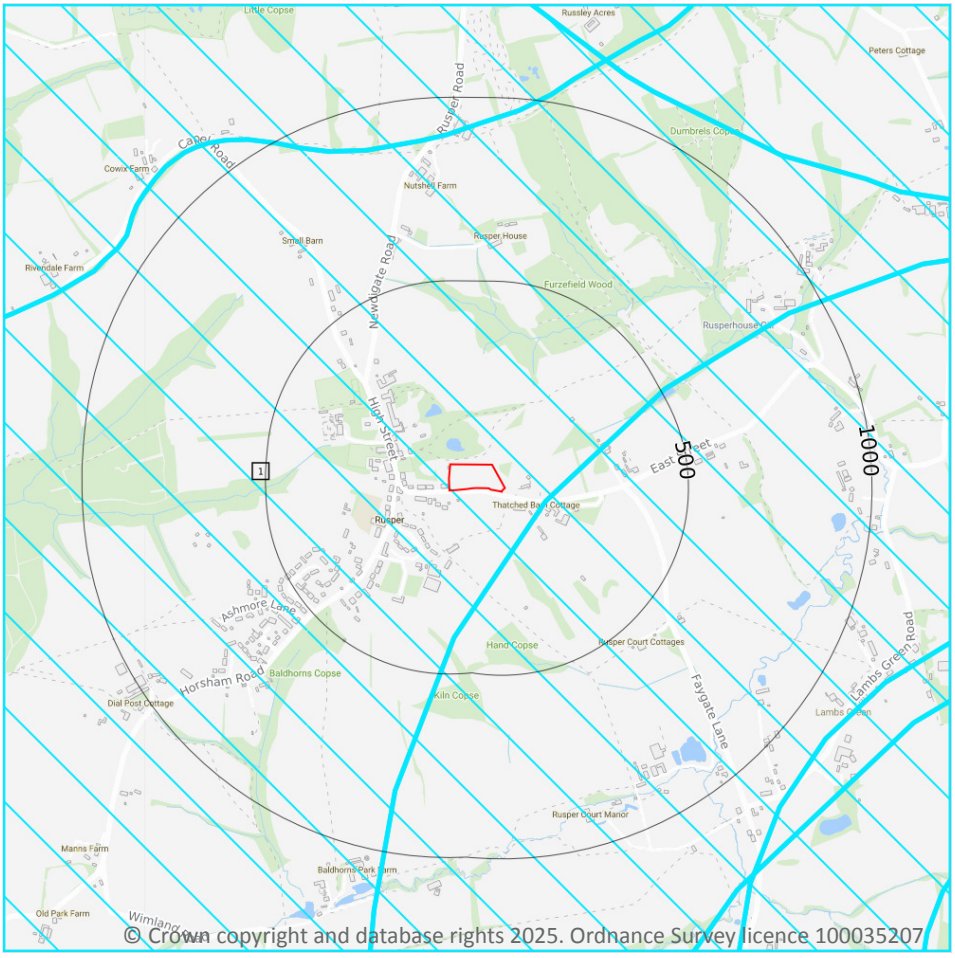
Records within 2000m	**2**

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

Location	Name	Type	NVZ ID	Status
54m W	River Arun (u/s Pallingham) NVZ	Surface Water	523	Existing
1768m SW	River Arun (u/s Pallingham) NVZ	Surface Water	523	Existing

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site	1

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

Features are displayed on the SSSI Impact Zones and Units map on **page 54 >**

ID	Location	Type of developments requiring consultation
1	**On site**	**Infrastructure - Airports, helipads and other aviation proposals.** **Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.** **Notes: SUSSEX NORTH WATER SUPPLY ZONE. All new development that requires a public water supply requires an HRA to assess the impacts of groundwater abstraction on Arun Valley SPA/SAC/Ramsar. LPAs to refer to Natural England's Statement and Advice Note.**

This data is sourced from Natural England.

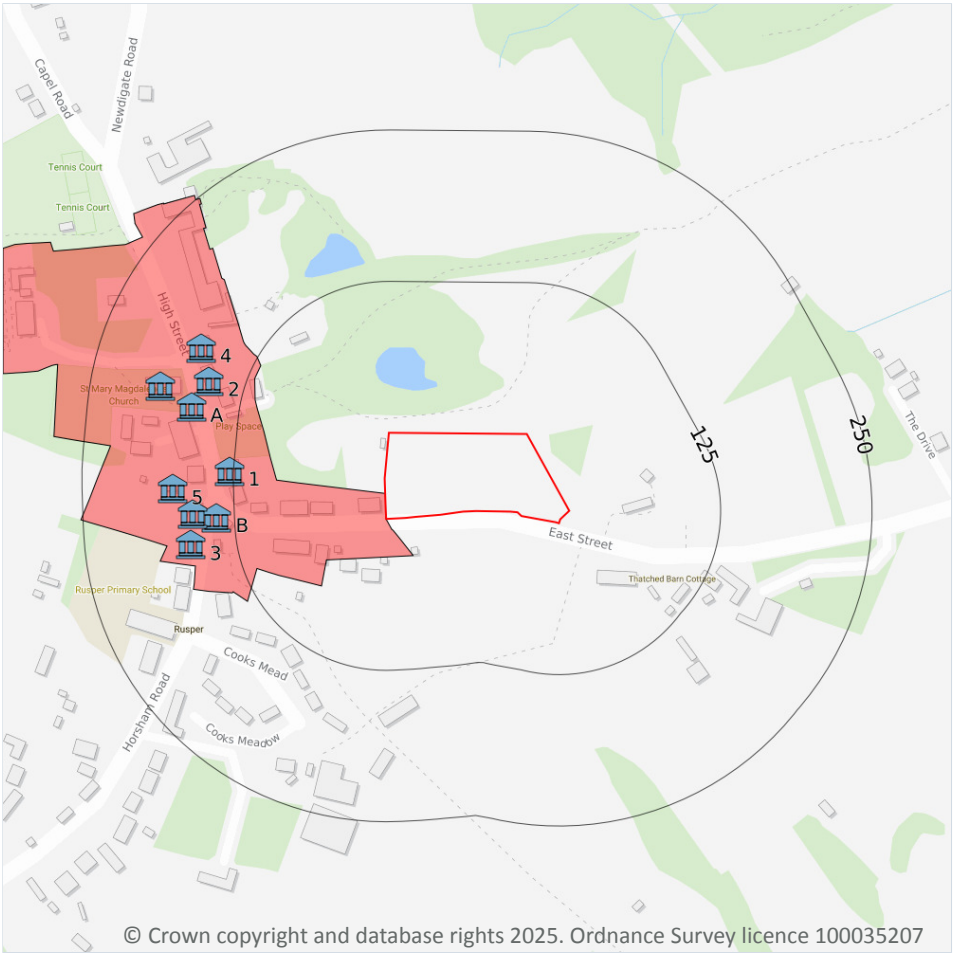
10.18 SSSI Units

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	9

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 56 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	128m W	1 And 2 Norman Cottages	II	1354207	28/11/1980
B	140m W	The Star Inn	II	1026951	28/11/1980
2	155m W	The Plough Inn	II	1285483	28/11/1980
B	160m W	Avery's	II	1026947	22/09/1959
3	163m W	Michealmas Cottage	II	1354206	28/11/1980
A	165m W	Rusper War Memorial	II	1436556	18/07/2016

ID	Location	Name	Grade	Reference Number	Listed date
4	170m NW	Ghyll Manor Cottage	II	1026950	22/09/1959
5	176m W	Outbuilding Adjoining Avery's On North West Side	II	1026948	28/11/1980
A	192m W	The Parish Church Of St Mary Magdalene	I	1026946	22/09/1959

This data is sourced from Historic England, 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 56 >**

ID	Location	Name	District	Date of designation
A	**On site**	**Rusper**	**Horsham**	**26/11/1976**

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

11.6 Scheduled Ancient Monuments

Records within 250m	**0**

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

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

11.7 Registered Parks and Gardens

Records within 250m	**0**

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

proposed development on the special character of the landscape.

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

12 Agricultural designations

Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m	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 4	**Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.**

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	1

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

Location	Reference	Scheme	Start Date	End date
216m NW	AG00531051	Entry Level Stewardship	01/10/2013	30/09/2018

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

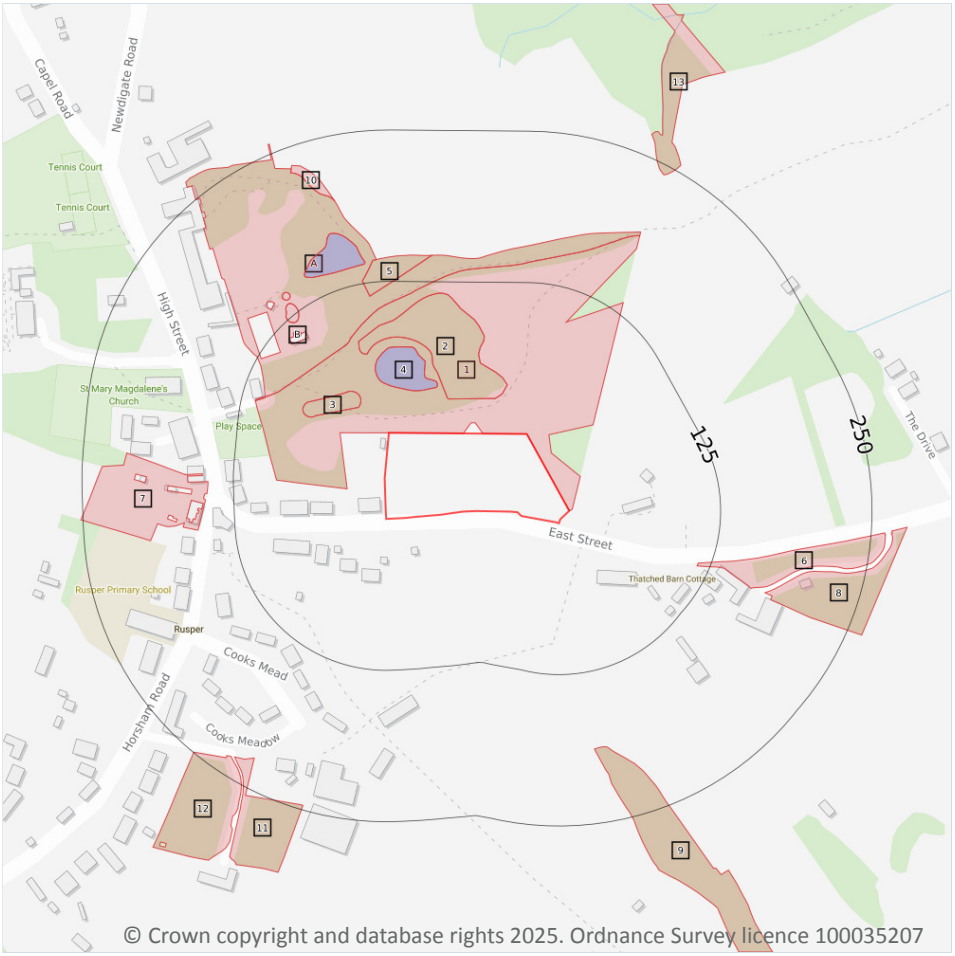
Records within 250m	1

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
210m NE	1639919	Countryside Stewardship (Middle Tier)	01/01/2024	31/12/2028

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	18

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

Features are displayed on the Habitat designations map on **page 63 >**

ID	Location	Main Habitat	Other habitats
1	**On site**	**No main habitat but additional habitats present**	**Additional: DWOOD (INV 50%)**
2	28m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	33m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	35m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
A	80m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	108m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
5	114m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	115m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	119m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	138m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	140m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	146m W	No main habitat but additional habitats present	Main habitat: DWOOD (INV > 50%)
8	175m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
9	188m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	197m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	226m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
12	234m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
13	242m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	**0**

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	**0**

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

This data is sourced from Natural England.

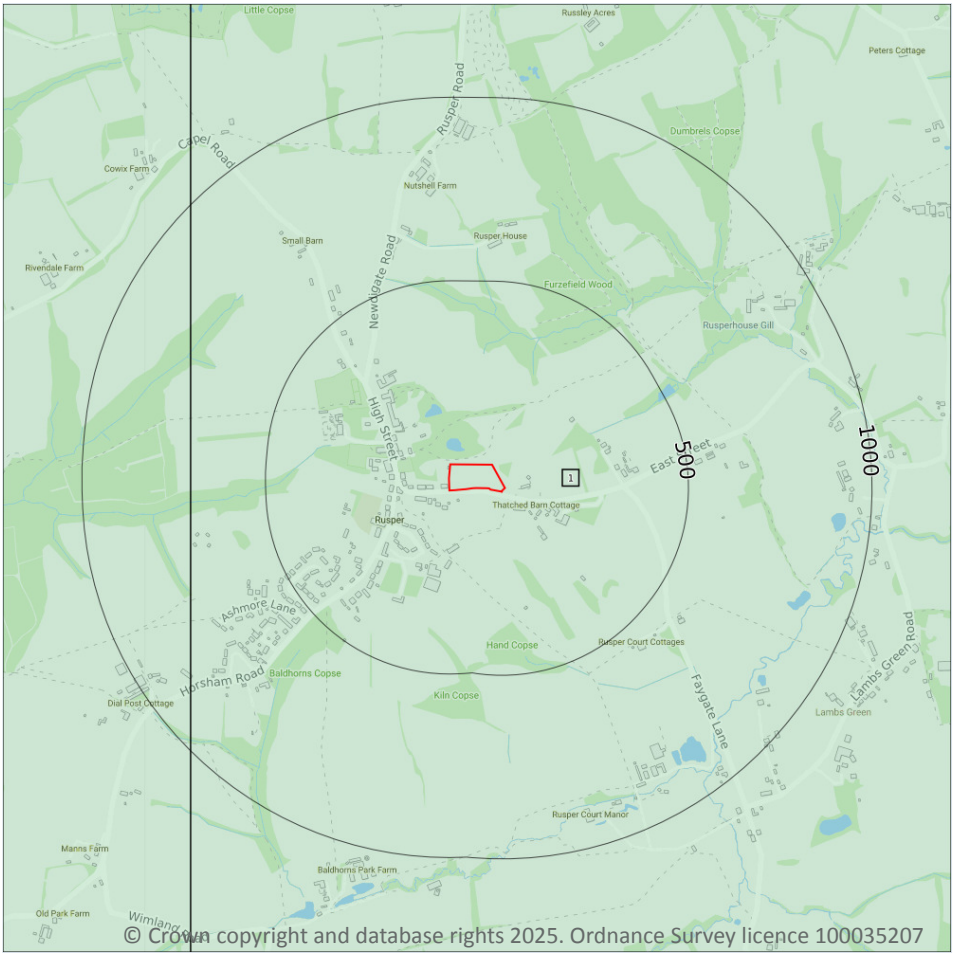
13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	1

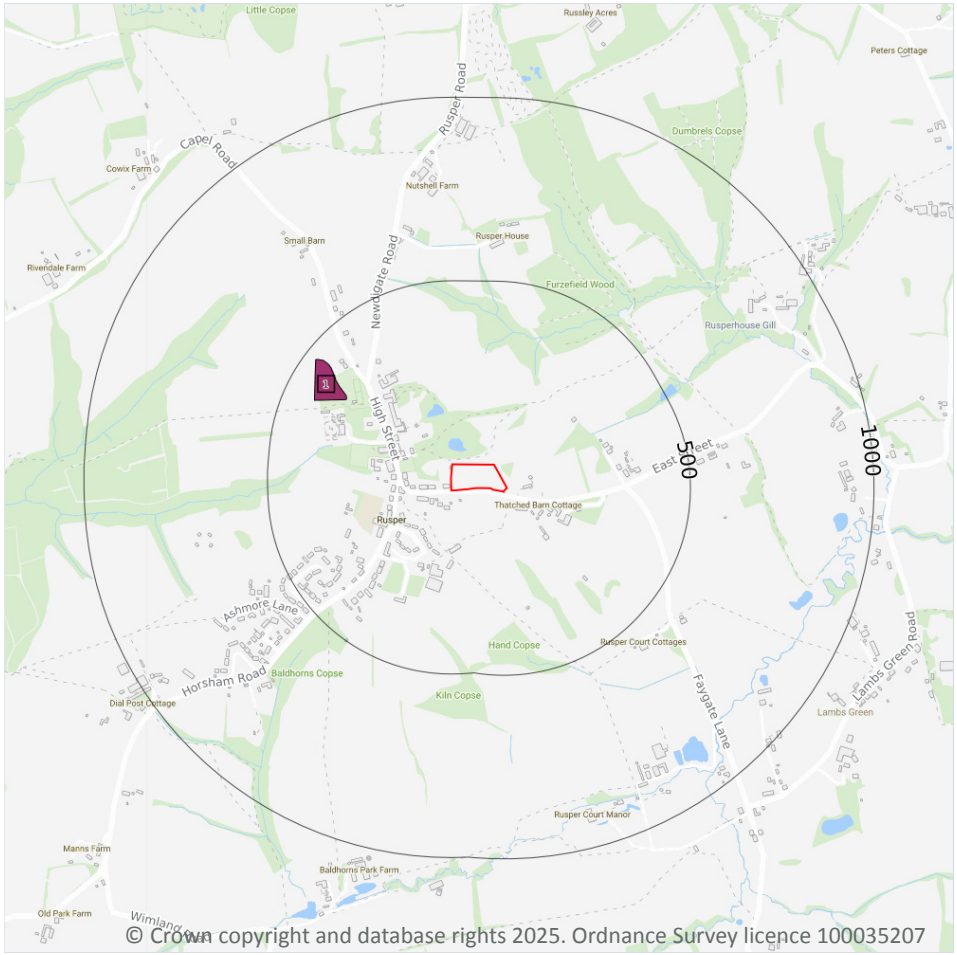
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 66 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**TQ23NW**

This data is sourced from the British Geological Survey.

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



Site Outline

Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m	1

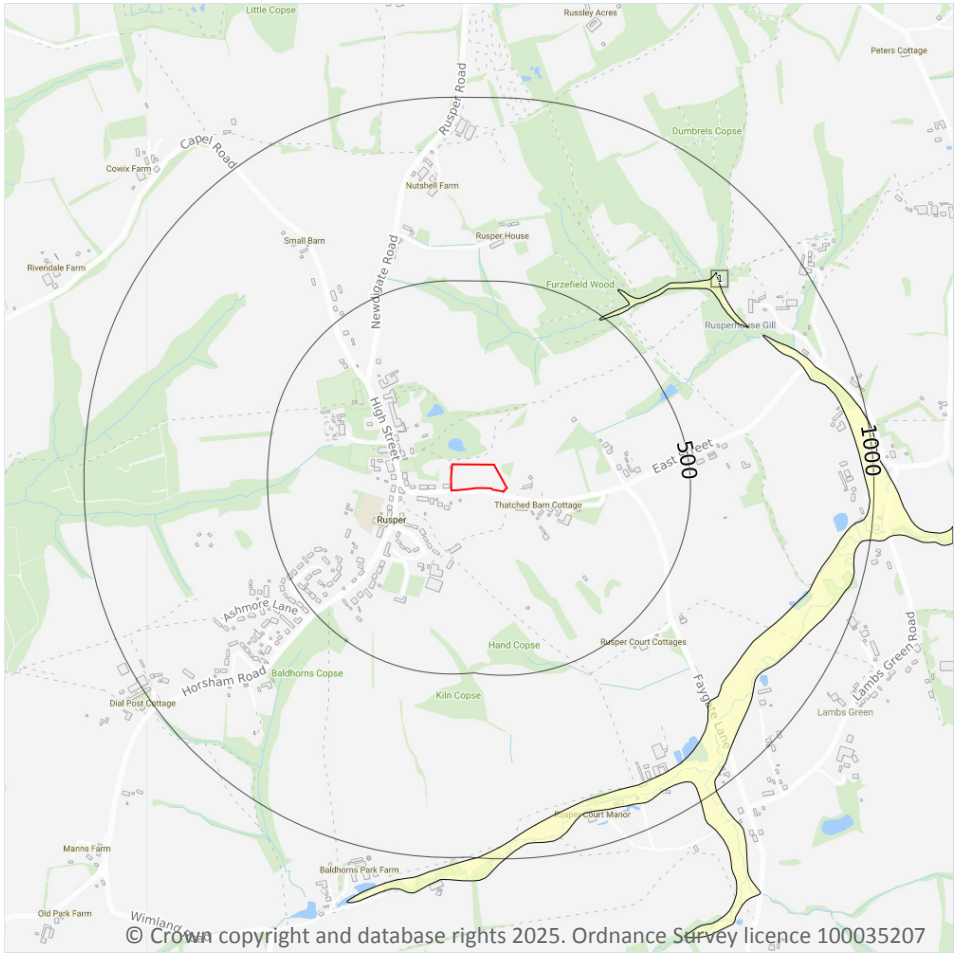
Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 67 >**

ID	Location	LEX Code	Description	Rock description
1	338m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m	1

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 68 >**

ID	Location	LEX Code	Description	Rock description
1	489m NE	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

This data is sourced from the British Geological Survey.

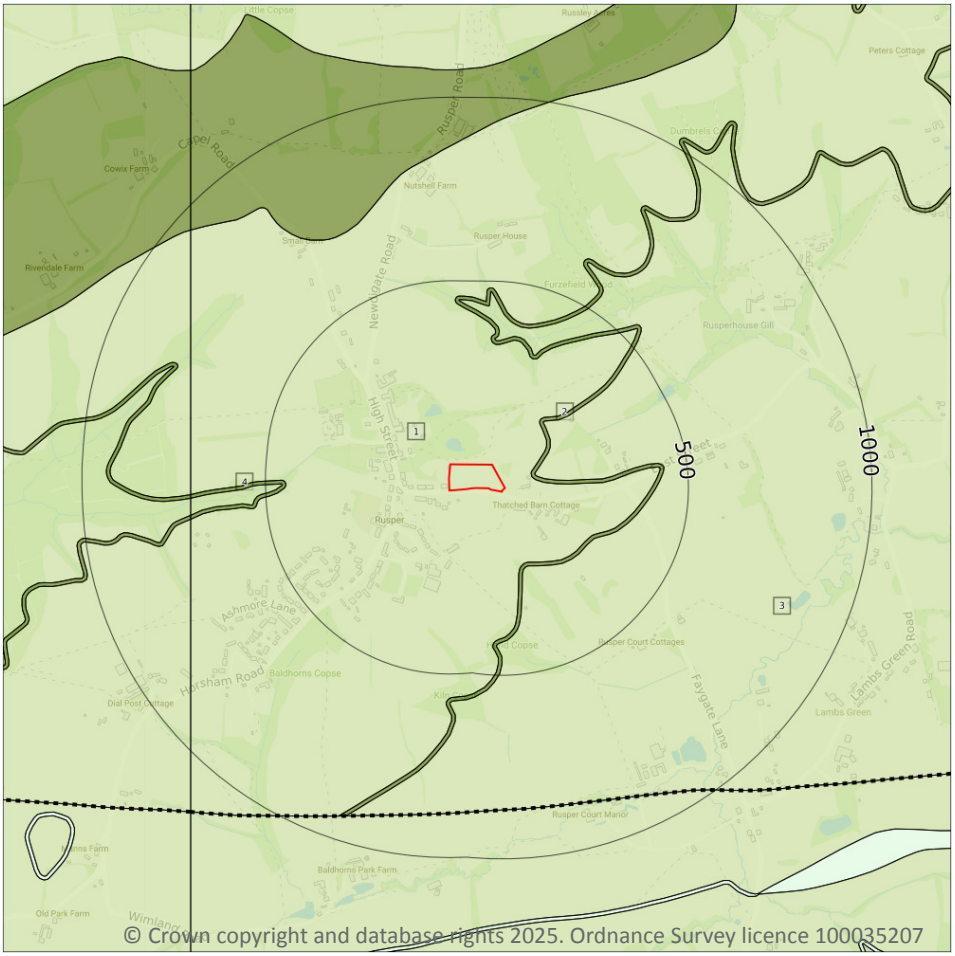
14.4 Landslip (10k)

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 **5**

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 70 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**WC-MDST**	**Weald Clay Formation - Mudstone**	**Barremian Age - Hauterivian Age**
2	80m E	WC-LMST	Weald Clay Formation - Limestone	Barremian Age - Hauterivian Age
3	90m E	WC-MDST	Weald Clay Formation - Mudstone	Barremian Age - Hauterivian Age
4	445m W	WC-LMST	Weald Clay Formation - Limestone	Barremian Age - Hauterivian Age

ID	Location	LEX Code	Description	Rock age
5	455m W	WC-MDST	Weald Clay Formation - Mudstone	Barremian Age - Hauterivian Age

This data is sourced from the British Geological Survey.

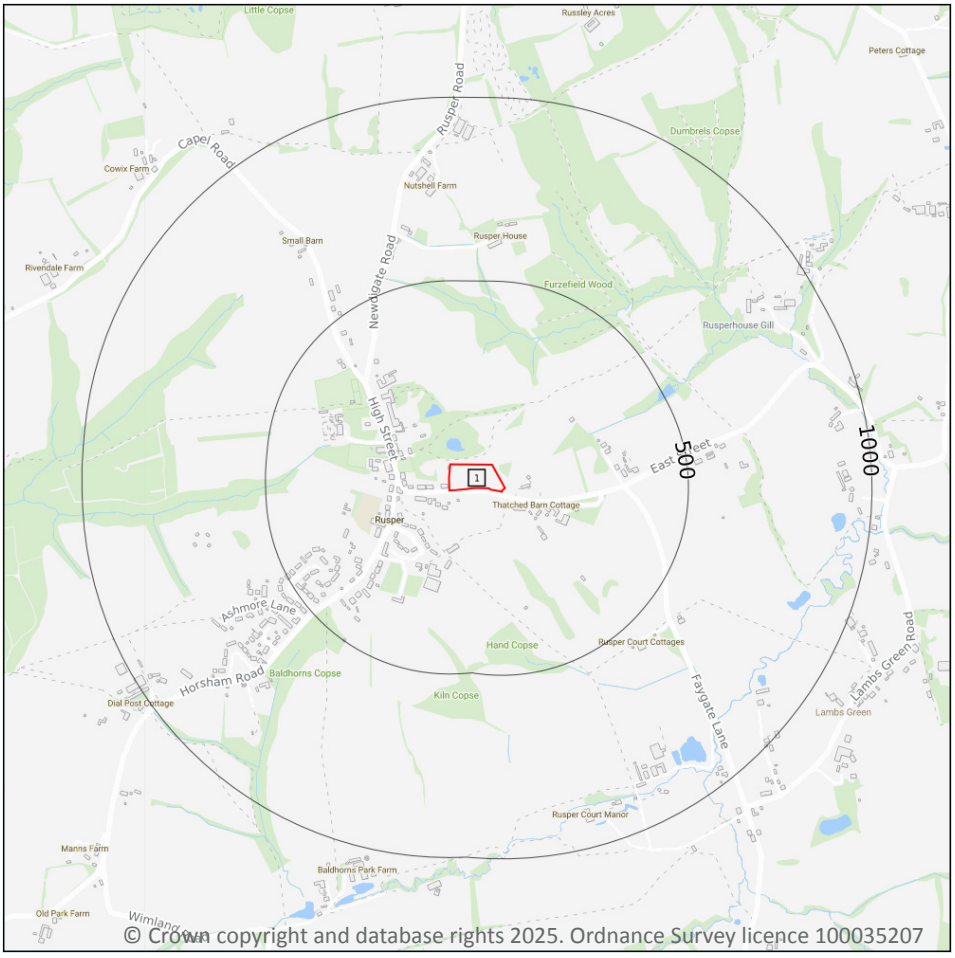
14.6 Bedrock faults and other linear features (10k)

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 72 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW302_horsham_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

15.4 Superficial geology (50k)

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

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

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.

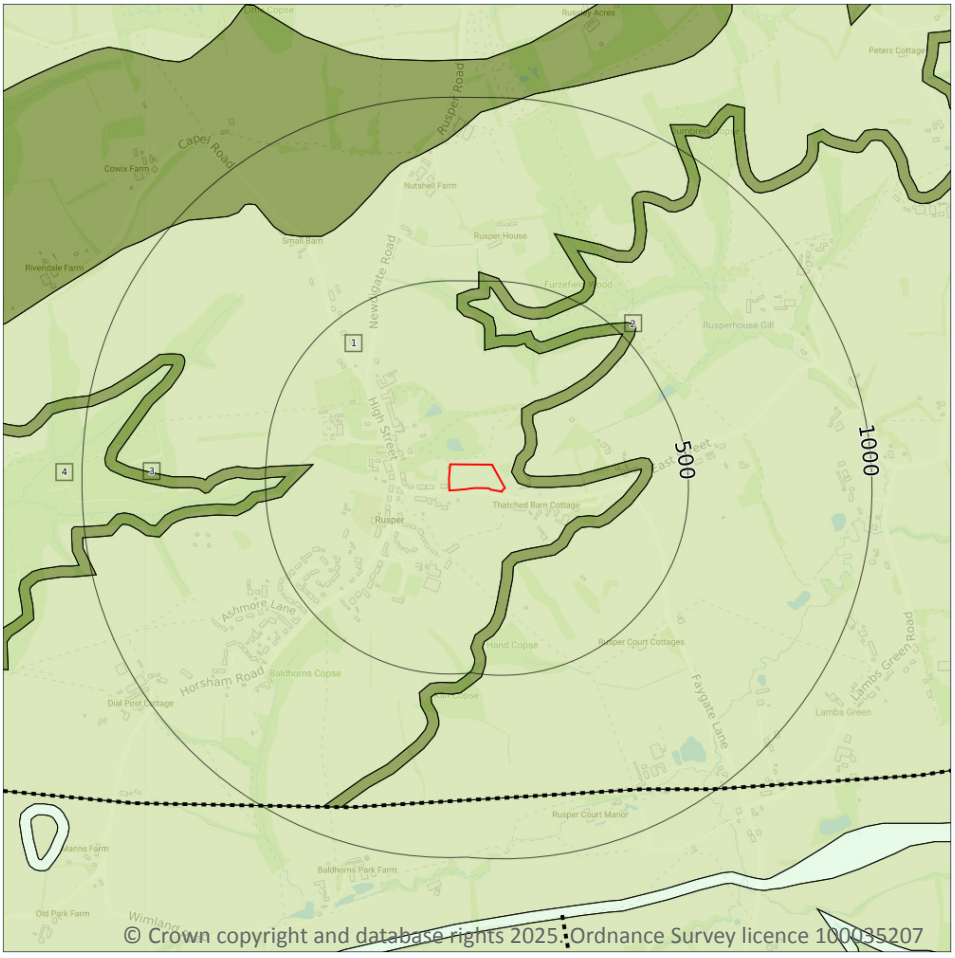
15.7 Landslip permeability (50k)

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 **4**

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 75 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**WC-MDST**	**WEALD CLAY FORMATION - MUDSTONE**	**HAUTERIVIAN**
2	37m E	WC-LMST	WEALD CLAY FORMATION - LIMESTONE	HAUTERIVIAN
3	373m W	WC-LMST	WEALD CLAY FORMATION - LIMESTONE	HAUTERIVIAN
4	447m W	WC-MDST	WEALD CLAY FORMATION - MUDSTONE	HAUTERIVIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**Low**	**Very Low**
37m E	Fracture	High	High

This data is sourced from the British Geological Survey.

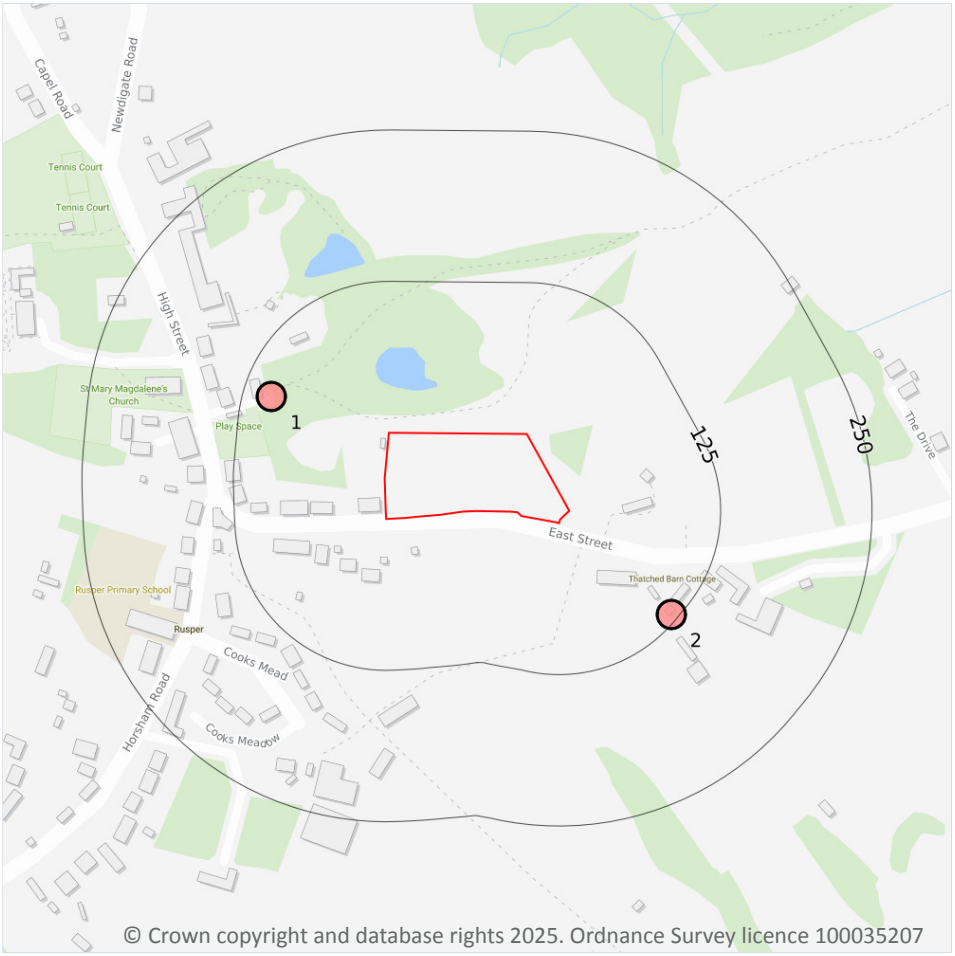
15.10 Bedrock faults and other linear features (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

16 Boreholes



Site Outline

Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m	2

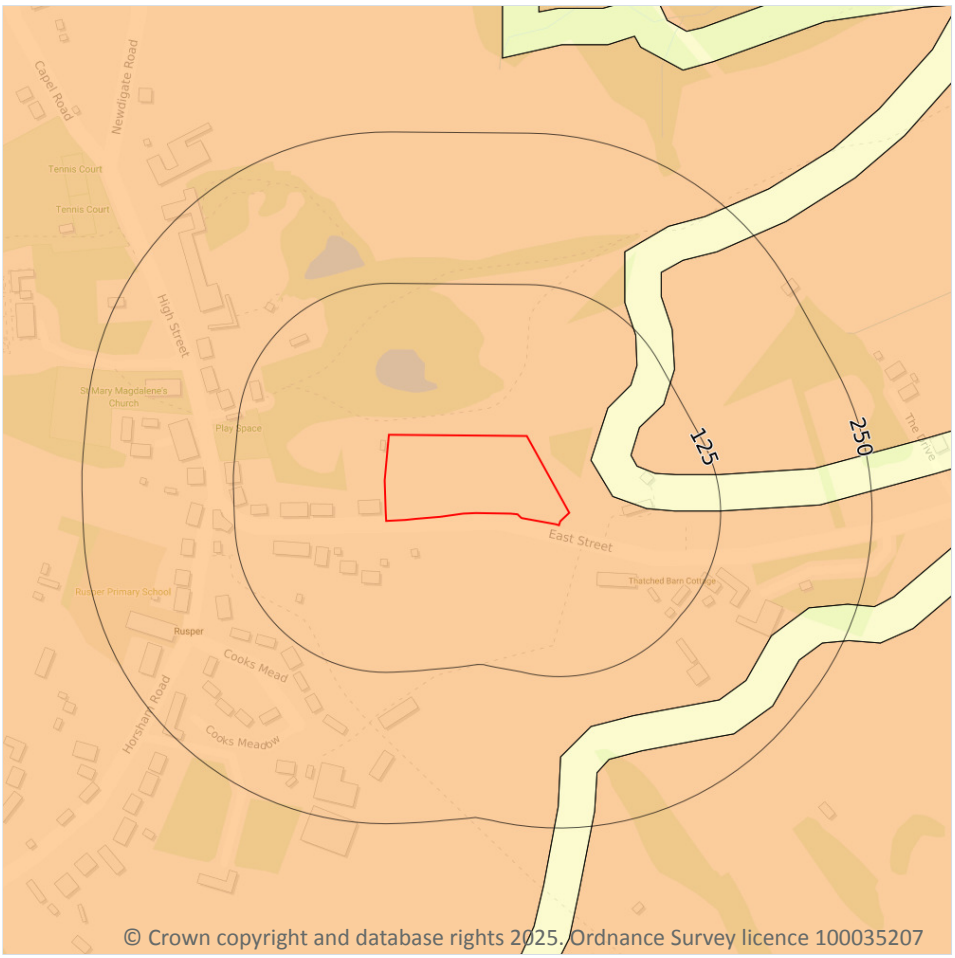
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several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

Features are displayed on the Boreholes map on **page 77 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	102m W	520610 137340	RASPER	70.41	N	584643 ↗
2	119m SE	520940 137160	NORMANS, RUSPER	76.2	N	584644 ↗

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	2

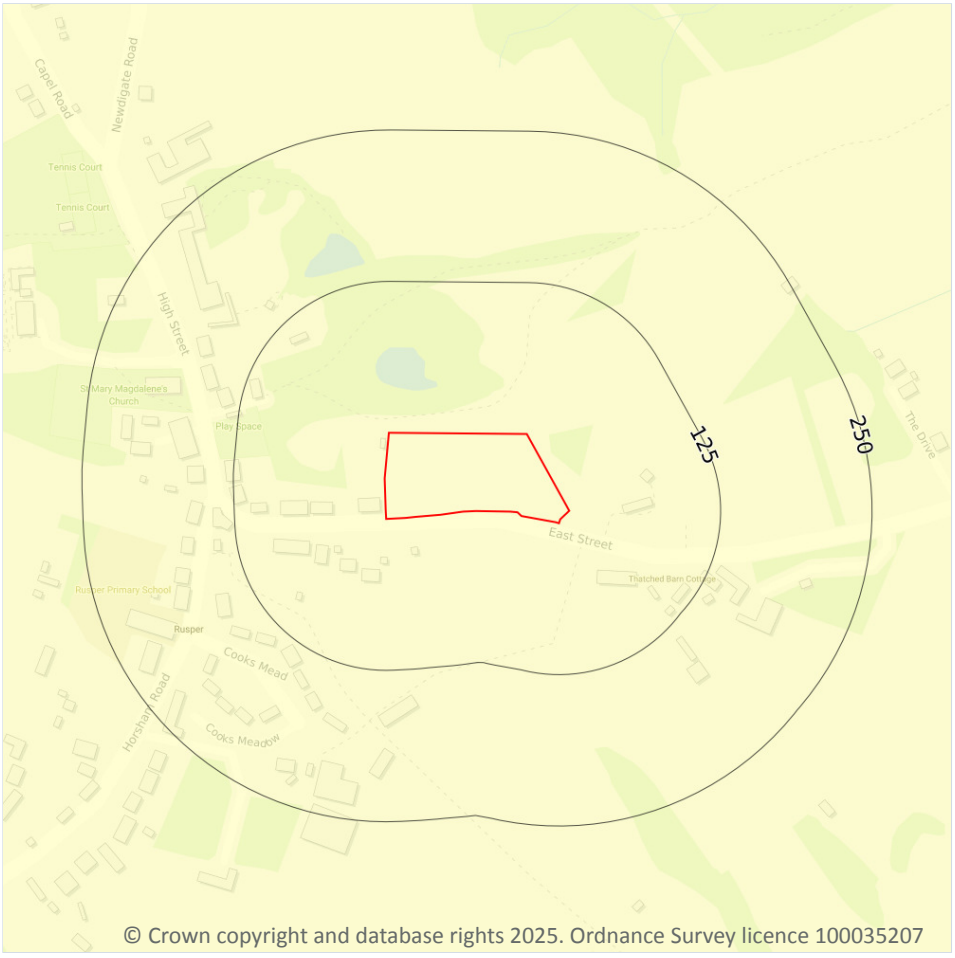
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 78 >**

Location	Hazard rating	Details
On site	**Low**	**Ground conditions predominantly medium plasticity.**
37m E	Negligible	Ground conditions predominantly non-plastic.

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

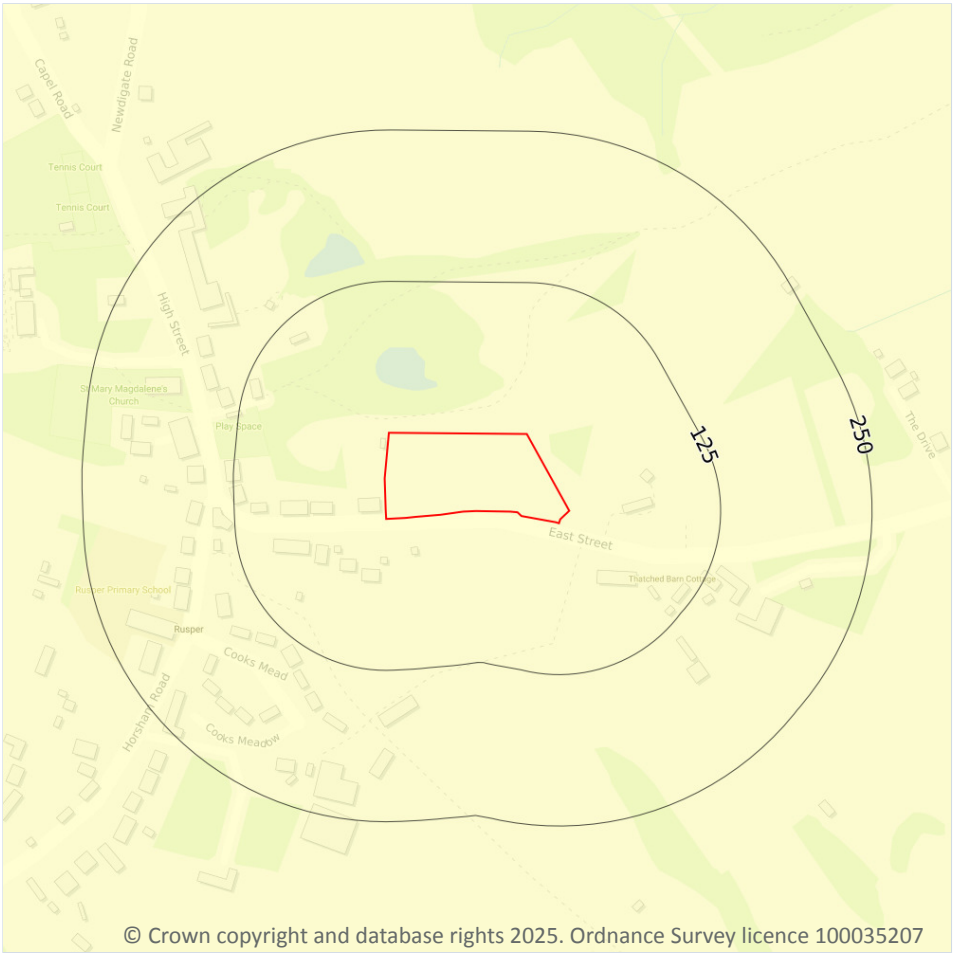
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 79 >**

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

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

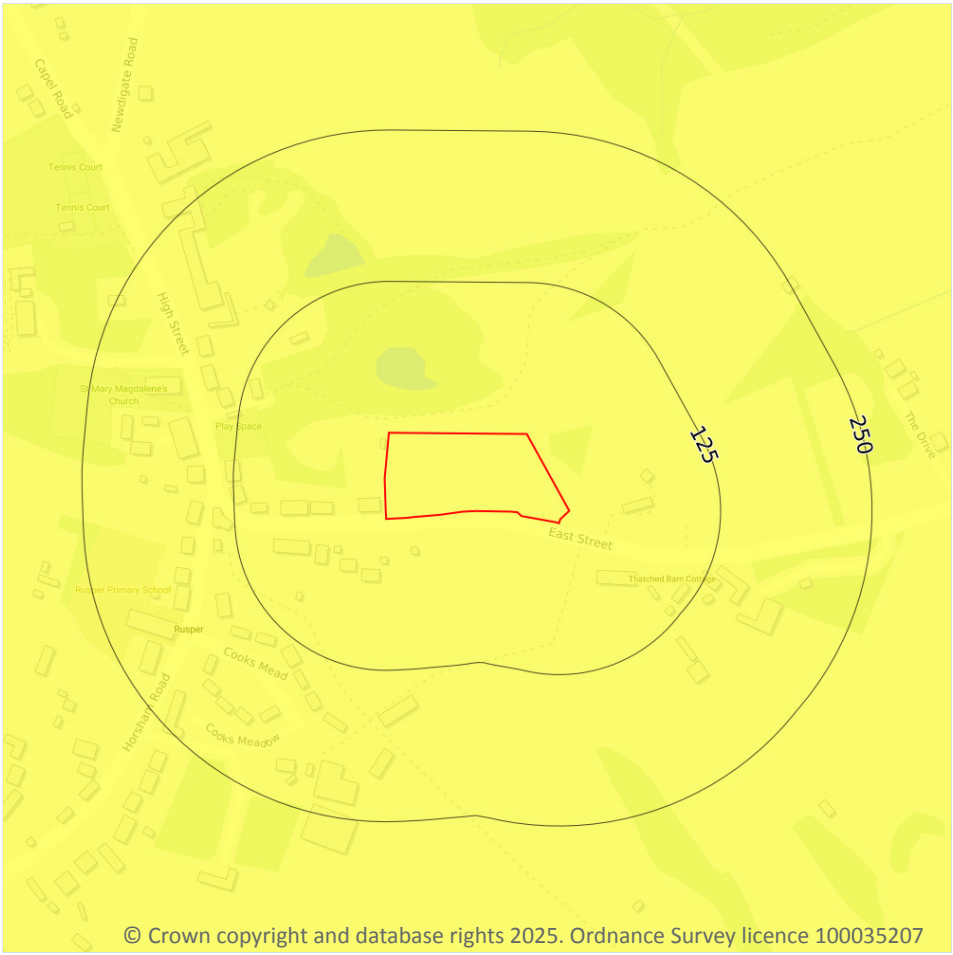
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

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

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

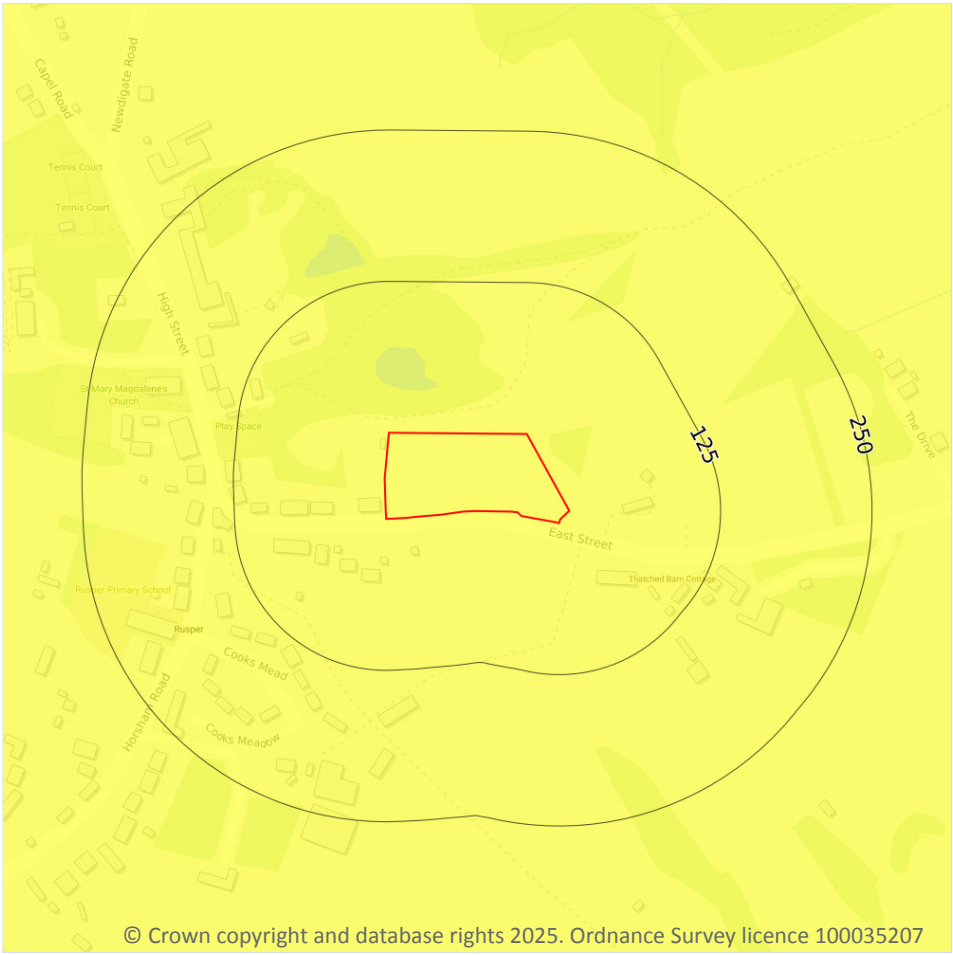
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 81 >**

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

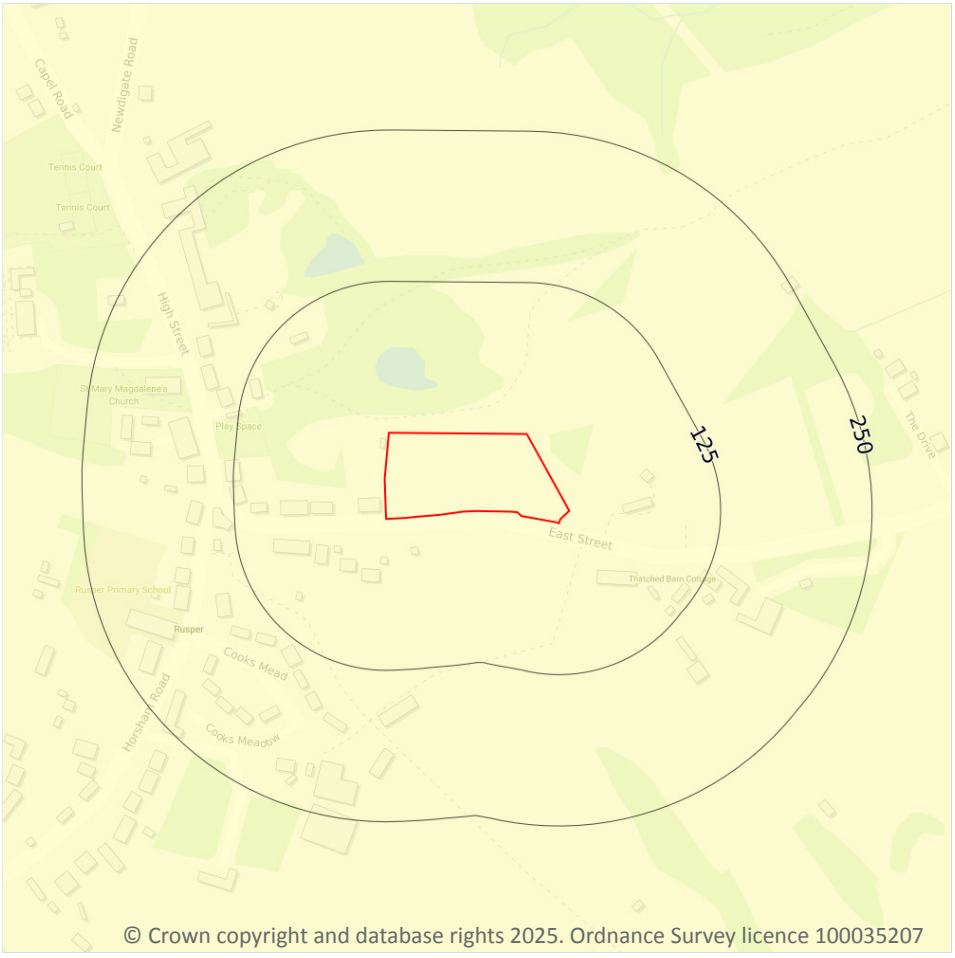
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 82 >**

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

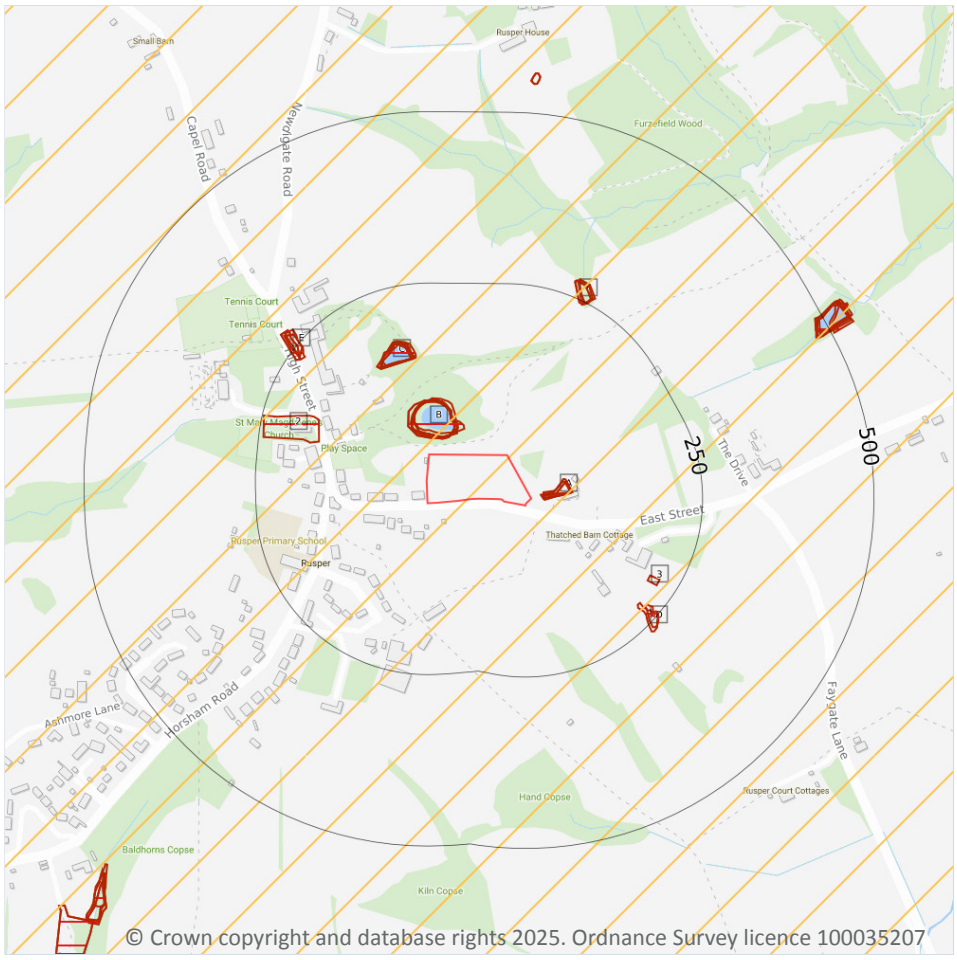
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

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

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 and ground workings



Site Outline

Search buffers in metres (m)

- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	34

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 and ground workings map on **page 85 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	15m E	Pond	1920	1:10560
A	15m E	Pond	1895	1:10560
A	19m E	Ponds	1968	1:10560
A	20m E	Ponds	1909	1:10560
A	20m E	Ponds	1896	1:10560
B	23m NW	Pond	1961	1:10560
B	24m NW	Pond	1920	1:10560
B	24m NW	Pond	1895	1:10560
B	24m NW	Pond	1909	1:10560
B	24m NW	Pond	1896	1:10560
B	26m NW	Pond	1991	1:10000
B	26m NW	Pond	1977	1:10000
B	26m NW	Pond	1968	1:10560
B	31m NW	Pond	1875	1:10560
C	140m NW	Pond	1920	1:10560
C	140m NW	Pond	1895	1:10560
C	140m NW	Pond	1875	1:10560
C	141m NW	Pond	1909	1:10560
C	141m NW	Pond	1896	1:10560
C	141m NW	Pond	1991	1:10000
C	141m NW	Pond	1977	1:10000
2	162m W	Grave Yard	1875	1:10560
3	207m SE	Pool	1991	1:10000

ID	Location	Land Use	Year of mapping	Mapping scale
D	218m SE	Ponds	1909	1:10560
D	228m SE	Pond	1920	1:10560
E	230m NW	Pond	1875	1:10560
E	234m NW	Pond	1920	1:10560
E	234m NW	Pond	1895	1:10560
E	236m NW	Pond	1991	1:10000
E	236m NW	Pond	1977	1:10000
F	245m NE	Pond	1914	1:10560
F	246m NE	Pond	1914	1:10560
F	247m NE	Pond	1968	1:10560
F	248m NE	Pond	1920	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	**0**

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

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	**0**

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	2

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

Features are displayed on the Mining and ground workings map on **page 85 >**

ID	Location	Name	Commodity	Class	Likelihood
1	**On site**	**Not available**	**Iron Ore**	**B**	**Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.**
-	704m W	Not available	Iron Ore	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

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

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	0

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

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

This data is sourced from Groundsure.

19.4 Historical incidents

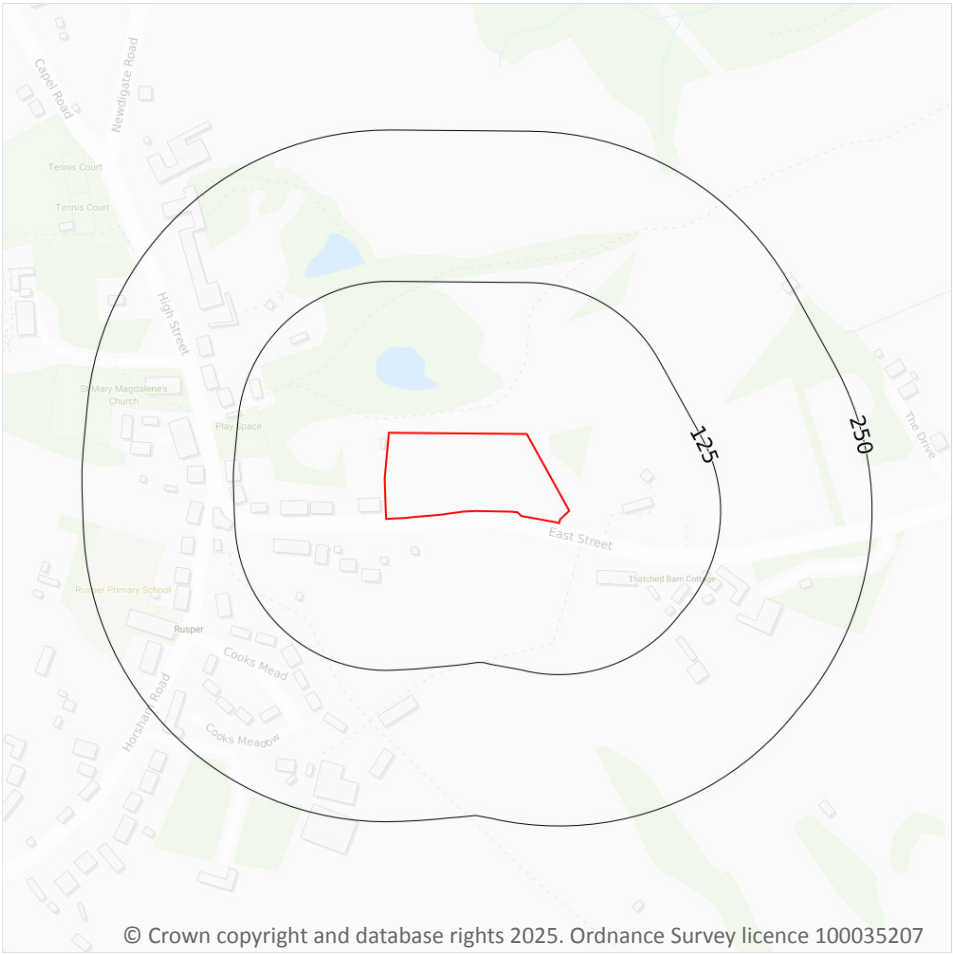
Records within 500m	0

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

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

This data is sourced from Groundsure.

20 Radon



Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

20.1 Radon

Records on site	1

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

Features are displayed on the Radon map on **page 93 >**

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

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

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	2

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 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	**25 - 35 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
37m E	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

Terms and conditions

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

Groundsure INSIGHTS

Site Details:

East Street, Rusper

Client Ref: GE22977 / PO-8160
Report Ref: GS-QDH-REA-PUI-2QX
Grid Ref: 520779, 137272

Map Name: County Series

Map date: **1874-1875**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1874
Revised 1874
Edition N/A
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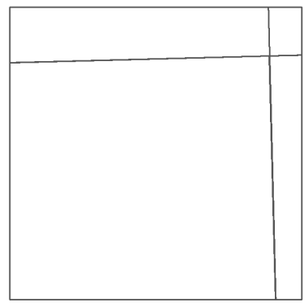

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Production date: 15 January 2025

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