

Siteguard Climate For lenders

HILL HOUSE, RED HILL ROAD, HADLEIGH, IP7 6BU

Professional opinion

Contaminated Land Moderate-High: Action Required page 9 >

Lenders liability assessment

Banking security

Is it likely that the property will represent acceptable banking security from a contaminated land perspective?

Further assessment required

Environmental liability

Is there a risk that the property value may be impacted due to contaminated land liability issues?

Potential

Consultant's guidance and recommendations inside.

Further Guidance



Flooding Negligible



Identified

page 6 >



Radon Passed



ClimateIndex[™] projects changes in physical and transition risks from:



Flooding



Ground stability



Coastal erosion

5 years



No risk predicted

30 years



No risk predicted

Please refer to page 4 > for details and guidance



Conveyancing Information Executive

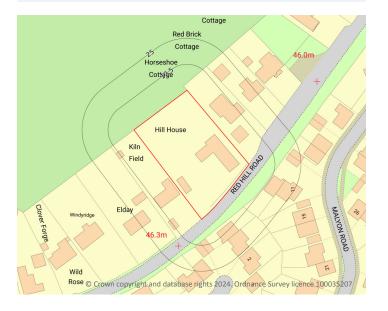
Ref: GS-40Q-JQ9-X1A-GT6 Your ref: 676

Grid ref: 603117 243678 **Date**: 15 February 2024





Site Plan



Useful contacts

Babergh District Council: http://www.babergh.gov.uk ↗ enquiries@babergh-south-suffolk.gov.uk 7 0300 123 4000

Environment Agency National Customer Contact Centre (NCCC): enquiries@environment-agency.gov.uk 7 03708 506 506

Guidance and recommendations

Current Use Open Space - Undeveloped

Residential **Proposed Use**

Redevelopment planned? (not refurbishment) Yes

Underground storage tanks? (e.g. fuel tanks, septic No

tanks)

Distance to surface water feature Less than 50m

Distance to residential properties **Adjacent**



Contaminated Land

Groundsure has identified activities that may have left a legacy of contamination within the ground if suitable remedial action has not been undertaken. These include: a landfill site, past contaminative land uses, a site with an Environmental Permit.

In addition, the client has informed Siteguard's Consultant that redevelopment works are proposed at the site. As such the study site has been identified as being of high risk due to the potential for contamination to be encountered during the redevelopment works.

As the property is to be redeveloped, consider contacting the Planning Department of the relevant Local Authority to clarify any conditions placed in the planning consent documentation regarding investigation/remediation of contamination on the site. Evidence that these conditions were/are being



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Siteguard Climate

complied with will also need to be obtained. Our experts will review any such conditions identified and, if appropriate, revise the report free of charge.



Flooding

National Planning Policy Framework (NPPF)

A site-specific flood risk assessment should be provided for all development in Flood Zones 2 and 3. In Flood Zone 1, an assessment should accompany all proposals involving: sites of 1 hectare or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a strategic flood risk assessment as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use. The NPPF states that the flood risk assessment should identify and assess the risks of all forms of flooding to and from the development and demonstrate how these flood risks will be managed so that the development remains safe throughout its lifetime, taking climate change into account. Those proposing developments should take advice from the emergency services when producing an evacuation plan for the development as part of the flood risk assessment.



Ground stability

The property is indicated to lie within an area that could be affected by natural ground subsidence, infilled land. You should consider the following:

Next steps for consideration:

- if a survey has been undertaken at the property that considers ground instability and no issues were found, no further action is required
- however, based on the findings of this report, the purchaser should be encouraged to consider potential instability in any future development or alteration of the ground including planting and removing trees, and regardless of the survey outcome
- if no survey has yet been undertaken, we recommend one is carried out by a suitably qualified and experienced person
- if ground instability issues have been or are subsequently identified in a survey we recommend following any advice given in the survey findings

Contact us with any questions at:

info@groundsure.com ↗

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ClimateIndex™

ClimateIndex™ physical and transition risks - Breakdown



Our ClimateIndex™ provides a climate score for your property, and projects changes in physical and transition risks from flooding, natural ground instability and coastal erosion. Climate change could have a significant medium to longer term impact on your property, which may be increasingly considered by your lender if you are arranging a mortgage. ClimateIndex™ provides ratings that indicate potential **physical risks** (loss and damage to property) and how these give rise to **transition risks** such as having a material impact on the ability to insure or mortgage the property in the medium to long term. In turn, this could affect the future resale value of the property.

You can see how these relate to the individual calculated risks in the breakdown below.



These ratings provide an overall illustration of the individual peril breakdowns below. For example, you may have three individual perils that have been flagged as presenting a moderate or high risk, and collectively they could generate a C rating due to the combined severity of risks present on the property site.

Surface water flooding	Negligible	Negligible
River flooding	Negligible	Negligible
Coastal flooding	Negligible	Negligible
Ground instability	Moderate	High
Coastal erosion - defended	Negligible	Negligible
Coastal erosion - undefended	Negligible	Negligible
Coastal erosion - complex cliffs	Negligible	Negligible





In 30 years time your property has a ClimateIndex™ rating of A: At present, climate change has very little to no impact on this property and no further actions are necessary at this time.

Over time, this property is susceptible to an increased risk of ground stability due to the impact of climate change. To protect your property against this risk, we recommend the following next steps:

- If no survey has been undertaken, consider commissioning a building survey carried out by a suitably qualified person which looks at ground instability, and how the conditions may become more extreme (more extreme wet and dry periods) with climate change;
- If the property has clay drainage pipes, consider replacing these with a modern equivalent;
- Seek specialist advice before any of the following: starting major building work; removing any mature trees that pre-date the construction of the property; or planting any new trees near the property. The safe planting distance is dependent on the tree species, foundation type and soil composition. A guide can be found here \nearrow ;
- Ensure foundations of new constructions or extensions are designed with shrink-swell clay soil conditions in mind, particularly how these could become more extreme with climate change;
- Ensure the property has adequate insurance covering subsidence. Premiums may be higher where subsidence has occurred, or the property is at an increased risk. We recommend speaking to an <u>insurance broker</u> *¬* for specialist advice.

Contact us with any questions at:

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See page 26 > for further details.





Siteguard Climate

Environmental summary





Flooding

No significant concerns have been identified as a result of the flood risk searches. No action required.

Further explanation of flood risk assessment can be seen in the Flood information on page 30 >.

River and Coastal Flooding
Groundwater Flooding
Surface Water Flooding
FloodScore™ insurance rating

Past Flooding

Flood Storage Areas

NPPF Flood Risk Assessment
required if site redeveloped?

Very Low Low Negligible

Very Low

Not identified Not identified

See overview



Ground stability

The property is assessed to have potential for natural or non-natural ground subsidence.

Please see <u>page 23</u> > for details of the identified issues.

Natural Ground Stability
Non-Natural Ground Stability

Moderate-High Identified



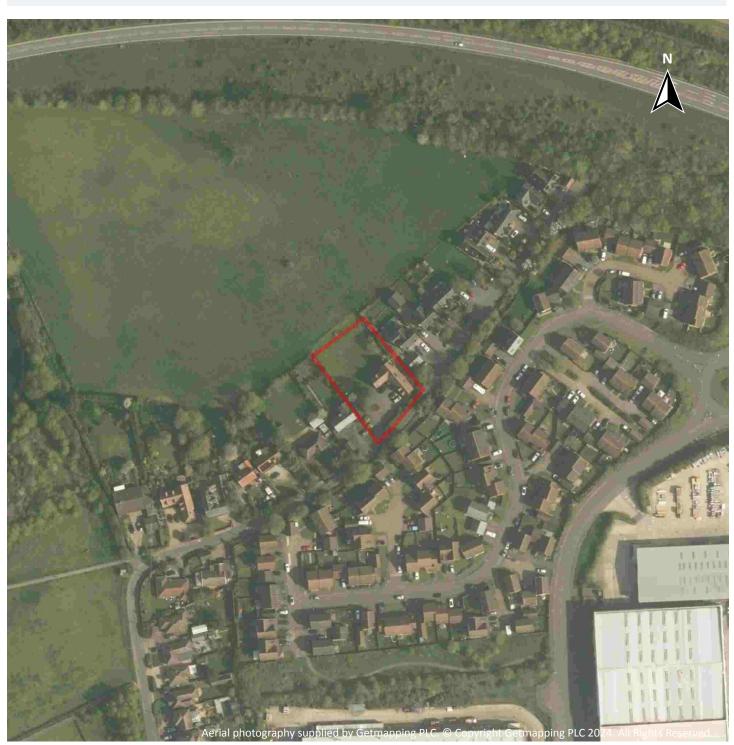
Radon

Local levels of radon are considered normal. However, if an underground room makes up part of the accommodation, the property should be tested regardless of radon Affected Area status. Not in a radon affected area



Recent aerial photograph





Capture Date: 05/04/2020

Site Area: 0.17ha





Contaminated land data summary



Past land use	On-Site	0-50m	50-250m
Former industrial land use (1:10,560 and 1:10,000 scale)	5	0	15
Former tanks	0	0	4
Former energy features	0	0	0
Former petrol stations	0	0	0
Former garages	0	0	0
Former military land	0	0	0
Waste and landfill	On-Site	0-50m	50-250m
Active or recent landfill	0	0	0
Former landfill (from Environment Agency Records)	1	0	0
Former landfill (from Local Authority and historical mapping records)	1	0	0
Waste site no longer in use	0	0	0
Active or recent licensed waste sites	1	0	0
	1	O	
Current and recent industrial	On-Site	0-50m	50-250m
Current and recent industrial	On-Site	0-50m	50-250m
Current and recent industrial Recent industrial land uses	On-Site	0-50m	50-250m
Current and recent industrial Recent industrial land uses Current or recent petrol stations	On-Site 0	0-50m 0	50-250m 11
Current and recent industrial Recent industrial land uses Current or recent petrol stations Historical licensed industrial activities	On-Site 0 0	0-50m 0 0	50-250m 11 0
Current and recent industrial Recent industrial land uses Current or recent petrol stations Historical licensed industrial activities Current or recent licensed industrial activities	On-Site 0 0 0	0-50m 0 0 0	50-250m 11 0 0
Current and recent industrial Recent industrial land uses Current or recent petrol stations Historical licensed industrial activities Current or recent licensed industrial activities Local Authority licensed pollutant release	On-Site 0 0 0 0 0	0-50m 0 0 0	50-250m 11 0 0 1
Current and recent industrial Recent industrial land uses Current or recent petrol stations Historical licensed industrial activities Current or recent licensed industrial activities Local Authority licensed pollutant release Pollutant release to surface waters	On-Site 0 0 0 0 0 0	0-50m 0 0 0 0	50-250m 11 0 0 1 1 0
Current and recent industrial Recent industrial land uses Current or recent petrol stations Historical licensed industrial activities Current or recent licensed industrial activities Local Authority licensed pollutant release Pollutant release to surface waters Pollutant release to public sewer	On-Site 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0 0	50-250m 11 0 0 1 0 0 1 0
Current and recent industrial Recent industrial land uses Current or recent petrol stations Historical licensed industrial activities Current or recent licensed industrial activities Local Authority licensed pollutant release Pollutant release to surface waters Pollutant release to public sewer Dangerous industrial substances (D.S.I. List 1)	On-Site 0 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0 0 0 0	50-250m 11 0 0 1 0 0 0 1 0 0
Current and recent industrial Recent industrial land uses Current or recent petrol stations Historical licensed industrial activities Current or recent licensed industrial activities Local Authority licensed pollutant release Pollutant release to surface waters Pollutant release to public sewer Dangerous industrial substances (D.S.I. List 1) Dangerous industrial substances (D.S.I. List 2)	On-Site 0 0 0 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0 0 0 0 0	50-250m 11 0 0 1 0 0 0 0 0 0 0
Current and recent industrial Recent industrial land uses Current or recent petrol stations Historical licensed industrial activities Current or recent licensed industrial activities Local Authority licensed pollutant release Pollutant release to surface waters Pollutant release to public sewer Dangerous industrial substances (D.S.I. List 1) Dangerous or explosive sites	On-Site 0 0 0 0 0 0 0 0 0 0 0 0	0-50m 0 0 0 0 0 0 0 0 0 0 0 0	50-250m 11 0 0 1 0 0 0 0 0 0 0 0



Contaminated land / Past land use





Former industrial land use (1:10,560 and 1:10,000 scale)

These historical land uses have been identified from 1:10,560 and 1:10,000 scale Ordnance Survey maps dated from the mid to late 1800s to recent times. They have the potential to have caused ground contamination. Please see the Environmental Summary to find out how these could impact the site.

Please see page 2 > for further advice.

Distance	Direction	Use	Date
0	on site	Brick Works	1884
0	on site	Unspecified Ground Workings	1884
0	on site	Brick Works	1902
0	on site	Disused Brick Works	1927
0	on site	Disused Brick Works	1938



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Distance	Direction	Use	Date
54 m	N	Unspecified Pit	1902
55 m	NE	Unspecified Pit	1884
59 m	NE	Unspecified Ground Workings	1927
59 m	NE	Unspecified Ground Workings	1927
59 m	NE	Unspecified Pits	1938
63 m	NE	Unspecified Ground Workings	1954
66 m	NE	Unspecified Pit	1971
107 m	N	Cuttings	1985
112 m	N	Unspecified Heap	1902
116 m	N	Unspecified Heap	1938
159 m	S	Unspecified Warehouse	1971
159 m	S	Unspecified Warehouse	1985
159 m	S	Industrial Estate	1985
174 m	SE	Unspecified Works	1985
209 m	SE	Unspecified Works	1971

This data is sourced from Ordnance Survey/Groundsure.

Former tanks

These tanks have been identified from high detailed historical Ordnance Survey maps dating from the mid-late 1800s to recent times. Tanks like this can sometimes store harmful waste, chemicals or oil, as well as more benign substances. Liquids stored in these tanks can leak when the tanks rust or become damaged over time, which could have caused contamination at this site.

Please see page 2 > for further advice.

Distance	Direction	Use	Date
70 m	N	Unspecified Tank	1884
112 m	N	Unspecified Tank	1968
244 m	S	Unspecified Tank	1974
244 m	S	Unspecified Tank	1985

This data is sourced from Ordnance Survey/Groundsure.





Contaminated land / Waste and landfill





Former landfill (from Local Authority and historical mapping records)

These are records of former areas of landfill. These areas of land may have been redeveloped for other uses since the landfill closed. Depending on the nature of the waste these landfill sites accepted, they may still pose a risk of contamination (including from landfill gases). Former landfill sites can also cause issues with ground instability.

Please see page 2 > for further advice.

Distance	Direction	Site Address	Source	Data Type
0	on site	Refuse Tip	1974 mapping	Polygon

This data is sourced from Ordnance Survey/Groundsure/Local Authorities.



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Former landfill (from Environment Agency Records)

These are records of former areas of landfill. These areas of land may have been redeveloped for other uses since the landfill closed. Depending on the nature of the waste these landfill sites accepted, they may still pose a risk of contamination (including from landfill gases). Former landfill sites can also cause issues with ground instability.

Please see page 2 > for further advice.

Distance	Direction	Details		
0	on site	Site Address: Hadleigh Refuse Tip, Redhill Road, Hadleigh, Suffolk Waste Licence: Yes Site Reference: 3500/0027 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 28/09/1982 Licence Surrendered: 01/01/1984 Licence Holder Address: Rattlesden, Bury St Edmunds, Suffolk	First Input: 31/12/1982 Last Input: 31/12/1984 Control Measures: -

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

Active or recent licensed waste sites

These are records of waste sites that are operated under licence. Waste operations require an environmental permit (from Environment Agency or Natural Resources Wales) if the business uses, recycles, treats, stores or disposes of waste or mining waste. The permit can be for activities at one site or for a mobile plant used at many sites. Depending on the nature of waste being accepted by these facilities, there could be risk of ground contamination. Some waste sites can also cause nuisance problems due to noise, dust and odour.

Please see page 2 > for further advice.

ID	Distance	Direction	Address	Туре	Size	Status
1	0	on site	Redhill Road, Hadleigh, Suffolk, IP7 6BU	Household, Commercial & Industrial Waste T Stn	Small	Surrendered

Contact us with any questions at:

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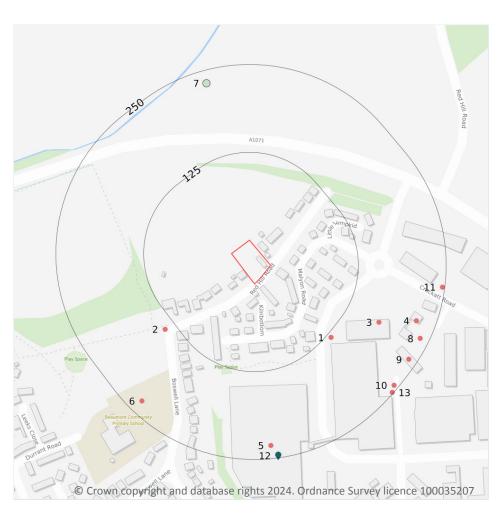
This data is sourced from the Environment Agency/Natural Resources Wales.

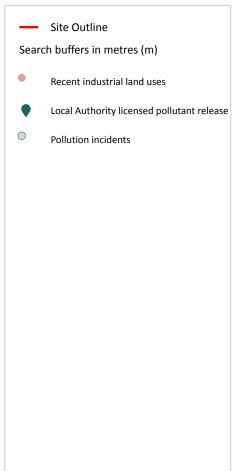




Contaminated land / Current and recent industrial







Recent industrial land uses

These records show details of businesses that have recently operated, or are currently operating in the area. Depending on the type of activities taking place, some of these businesses could present a risk of contamination.

Please see page 2 > for further advice.

ID	Distance	Direction	Company / Address	Activity	Category
1	131 m SE Electricity Sub Station - Suffolk, IP7		Electrical Features	Infrastructure and Facilities	
2	141 m	SW	Electricity Sub Station - Suffolk, IP7	Electrical Features	Infrastructure and Facilities
			Hirebase - 1, Crockatt Road, Lady Lane	Construction and Tool Hire	

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ID	Distance	Direction	Company / Address	Activity	Category
4	222 m	E	Clinical Mobility Solutions Ltd - Unit 9 Hadleigh Enterprise Park, Crockatt Road, Lady Lane Industrial Estate, Hadleigh, Suffolk, IP7 6RJ	Disability and Mobility Equipment	Consumer Products
5	231 m	S	Celotex - Unit F, Lady Lane Industrial Estate, Hadleigh, Suffolk, IP7 6BA	General Construction Supplies	Industrial Products
6	231 m	SW	Wind Turbine - Suffolk, IP7	Energy Production	Industrial Features
8	237 m	SE	Enterprise Park - Suffolk, IP7	Business Parks and Industrial Estates	Industrial Features
9	238 m	SE	Suffolk Automation - Unit 4 Hadleigh Enterprise Park, Crockatt Road, Hadleigh, Ipswich, Suffolk, IP7 6RJ	Electronic Equipment	Industrial Products
10	244 m	SE	Mast (Telecommunication) - Suffolk, IP7	Telecommunications Features	Infrastructure and Facilities
11	247 m	E	Electricity Sub Station - Suffolk, IP7	Electrical Features	Infrastructure and Facilities
13	248 m	SE	Pylon - Suffolk, IP7	n - Suffolk, IP7 Electrical Features	

This data is sourced from Ordnance Survey.

Local Authority licensed pollutant release

Industrial facilities that release pollutants to the environment (air, land or water) may be regulated by the Local Authority and hold a Part A(2) or Part B process authorisation or licence. These processes could include the burning of waste oils, paint spraying and petrol vapour recovery. There could be a risk of ground contamination if harmful materials associated with these processes are not stored and handled correctly.

Please see page 2 > for further advice.

ID	Distance	Direction	Address	Local Authority	Processes Undertaken	Permit Type	Details of Enforcement
12	247 m	S	Saint-Gobain Construction Products UK T/A Celotex Ltd, Lady Lane Industrial Estate, Hadleigh, Suffolk, IP7 6BA	Babergh District Council	Di-isocyanate Processes	Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authorities.







Pollution incidents

Environment Agency keep records of all major or significant pollution incidents that are known to have impacted the land, water or air. The location provided for these records may relate to the location of the incidents but may sometimes be recorded where the effects of the incident was reported.

Please see page 2 > for further advice.

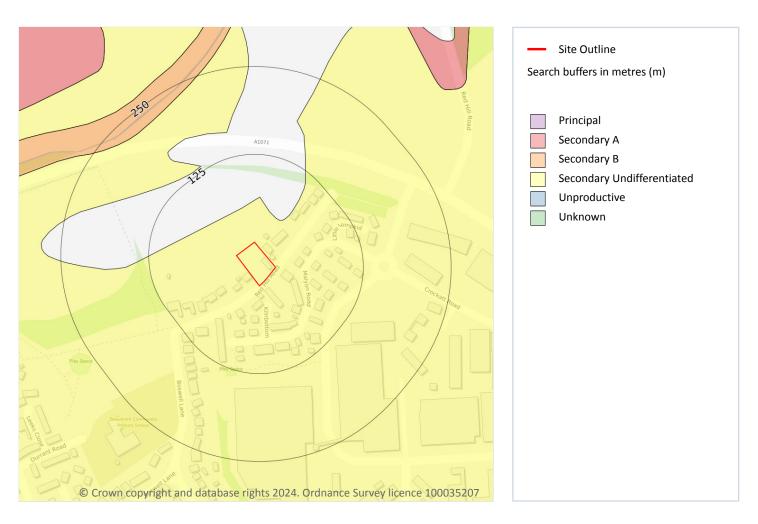
ID	Distance	Direction	Incident Date	Land Impact	Water Impact	Pollutant
7	232 m	N	06/06/200 1	Category 3 (Minor)	Category 4 (No Impact)	Construction and Demolition Materials and Wastes

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



Superficial hydrogeology





Aquifers within superficial geology

The Environment Agency/Natural Resources Wales and the British Geological Survey have assigned designations or types to the aquifers that exist within superficial geology. These designations reflect the importance of aquifers in terms of groundwater as a resource (eg drinking water supply) but also their role in supporting surface water flows and wetland ecosystems.

Principal - These are layers of rock or superficial deposits that usually provide a high level of water storage.

Secondary A - Permeable layers capable of supporting water supplies at a local rather than strategic scale.

Secondary B - Predominantly lower permeability layers which may store and yield limited amounts of groundwater.

Secondary Undifferentiated - Has been assigned in cases where it has not been possible to attribute either category A or B to a rock type.

Unproductive - These are rock layers with low permeability that have negligible significance for water supply.

Unknown - These are rock layers where it has not been possible to classify the water storage potential.



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Siteguard Climate

Distance	Direction	Designation
0	on site	Secondary Undifferentiated
223 m	NW	Secondary B

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

Superficial geology

Superficial deposits are the youngest natural geological deposits formed during the most recent period of geological time. They rest on older deposits or rocks referred to as bedrock. This information comes from the BGS 1:50,000 Digital Geological Map of Great Britain, where available.

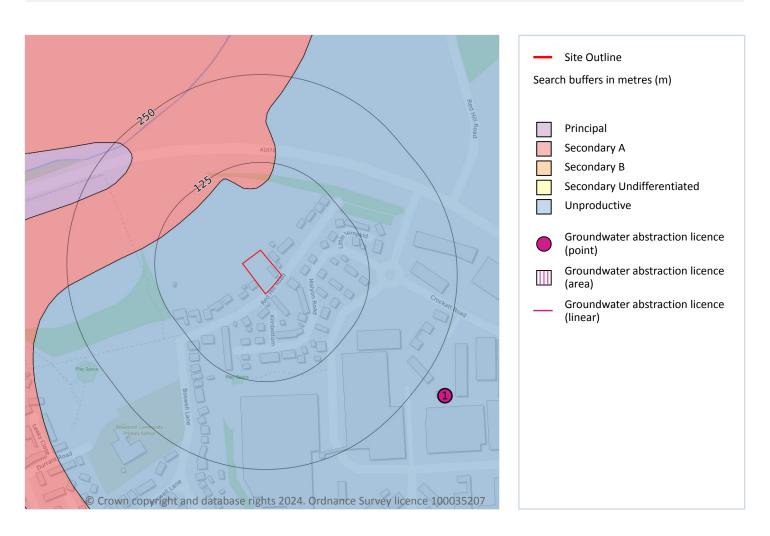
Description	BGS LEX Code	Rock Type
LOWESTOFT FORMATION	LOFT-DMTN	DIAMICTON

This data is sourced from British Geological Survey.



Bedrock hydrogeology





Aquifers within bedrock geology

The Environment Agency/Natural Resources Wales and the British Geological Survey have assigned designations or types to the aquifers that exist within bedrock geology. These designations reflect the importance of aquifers in terms of groundwater as a resource (eg drinking water supply) but also their role in supporting surface water flows and wetland ecosystems.

Principal - These are layers of rock or superficial deposits that usually provide a high level of water storage.

Secondary A - Permeable layers capable of supporting water supplies at a local rather than strategic scale.

Secondary B - Predominantly lower permeability layers which may store and yield limited amounts of groundwater.

Secondary Undifferentiated - Has been assigned in cases where it has not been possible to attribute either category A or B to a rock type.

Unproductive - These are rock layers with low permeability that have negligible significance for water supply.



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Siteguard Climate

Distance	Direction	Designation
0	on site	Unproductive
88 m	N	Secondary A
210 m	NW	Principal

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

Bedrock geology

Bedrock geology is a term used for the main mass of rocks forming the Earth and is present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water. This information comes from the BGS 1:50,000 Digital Geological Map of Great Britain, where available.

Description	BGS LEX Code	Rock Type
THAMES GROUP	THAM-XCZS	CLAY, SILT AND SAND

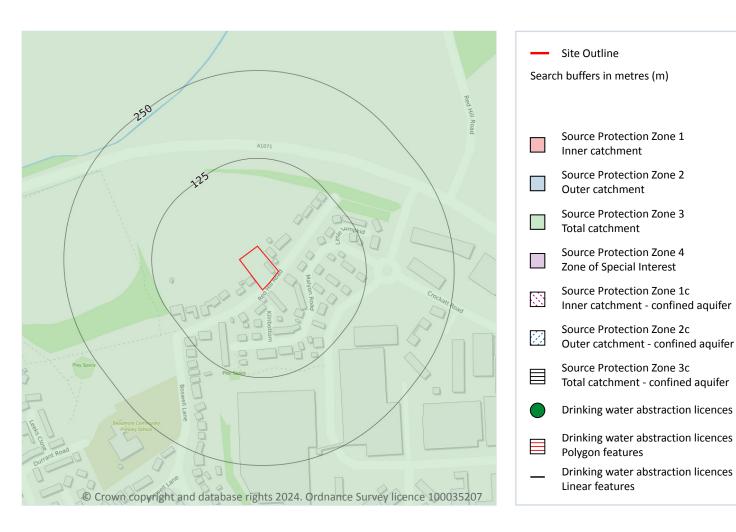
This data is sourced from British Geological Survey.

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Source Protection Zones and drinking water abstractions





Source Protection Zones

The Environment Agency / Natural Resources Wales has defined Source Protection Zones (SPZs) for groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk. There are three main zones (inner (SPZ 1), outer (SPZ 2) and total catchment (SPZ 3)) and a fourth zone of special interest.

Distance	Direction	Details
0	on site	Zone: 3 Description: Total catchment

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







Hydrology





Water courses from Ordnance Survey

These are water features such as ponds, lakes, rivers and streams that have been identified by Ordnance Survey. These features may be sensitive to contamination.

Distance	Direction	Details
51 m	N	Name: Type of water feature: Inland river not influenced by normal tidal action. Ground level: Not provided Permanence: Watercourse contains water year round (in normal circumstances)
235 m	NW	Name: Type of water feature: Inland river not influenced by normal tidal action. Ground level: On ground surface Permanence: Watercourse contains water year round (in normal circumstances)



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Siteguard Climate

Distance	Direction	Details
239 m	NW	Name: Type of water feature: Inland river not influenced by normal tidal action. Ground level: On ground surface Permanence: Watercourse contains water year round (in normal circumstances)

This data is sourced from Ordnance Survey.



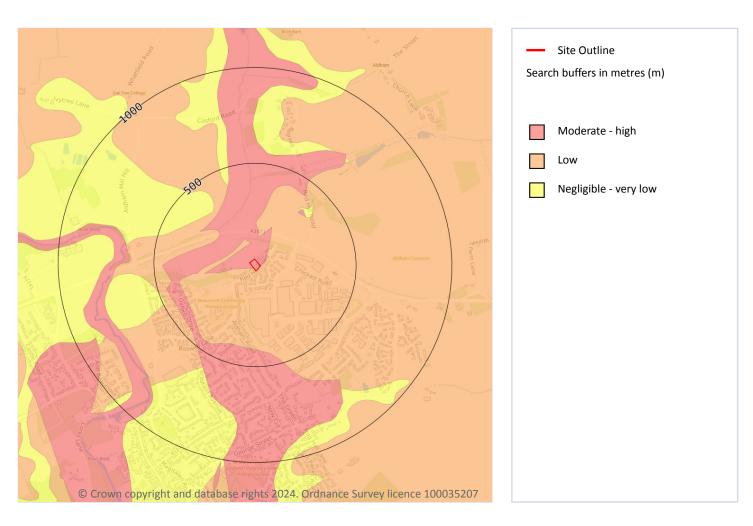
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Ground stability / Natural ground subsidence





Natural ground subsidence

The property, or an area within 50m of the property, has a moderate to high potential for natural ground subsidence. This rating is derived from the British Geological Survey's GeoSure database, and is based upon the natural qualities of the geology at the site rather than any historical subsidence claims or events. Additionally, this data does not take into account whether buildings on site have been designed to withstand any degree of subsidence hazard.

Please see <u>page 2</u> > for further advice.

Surveyors are normally aware of local problem areas in relation to subsidence, however, this data provided by the British Geological Survey (BGS) can highlight areas where a significant potential for natural ground subsidence exists and whether it may need particular consideration. The term "Subsidence" refers to ground movement that could cause damage to foundations in domestic or other properties.

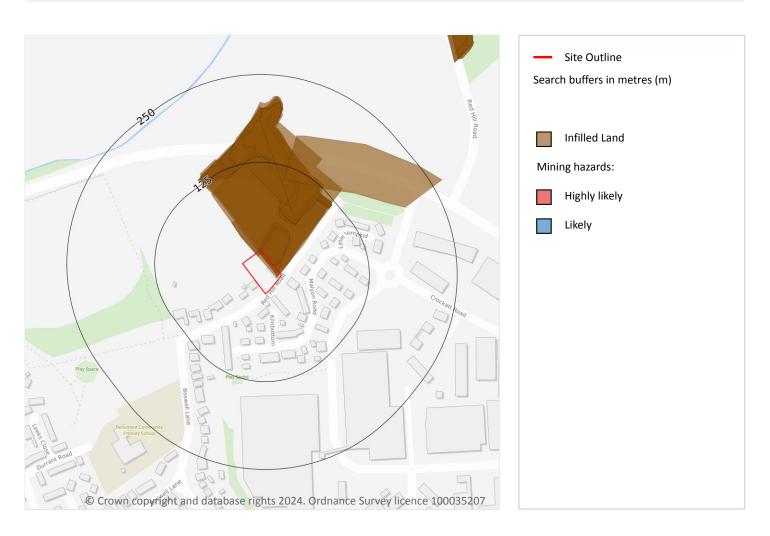
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Ground stability / Non-natural ground subsidence





Infilled land

Maps suggest the property is located on a previous pond, quarry, mine, landfill or other hole in the land. These land cavities are often filled in with various materials and this can cause structural problems, although such events are rare. Groundsure's experts recommend that you check whether your structural surveys have taken this into account.

Please see page 2 > for further advice.

Distance	Direction	Use	Date
0	on site	Disused Brick Works	1938
0	on site	Brick Works	1902
0	on site	Brick Works	1884
0	on site	Unspecified Ground Workings	1884



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Distance	Direction	Use	Date
0	on site	Pond	1938
0	on site	Pond	1902
0	on site	Pond	1971
0	on site	Pond	1954
0	on site	Disused Brick Works	1927
0	on site	Pond	1927

Groundsure's experts systematically analyse historical maps, which can highlight areas that, over time, may have been filled with various materials. The materials used are usually safe, although in some cases contaminative materials may also have been used. Past ground workings have been identified at the site. These workings may be associated with railway cuttings or other ground engineering but may also indicate mining activity. Information is taken from features identified on Ordnance Survey historical maps, which do not indicate the distance or direction that mines extend beneath the surface. For example, features such as mine shafts only indicate the entrance to a mine. From this, we may infer the potential for underground features to extend outward from this point. Some features within this database may also relate to non-mining underground activities e.g. air shafts for underground railways.



Climate change / Flood risk (5 and 30 Years)

Ambiental's FloodScore™ Climate data provides flood risk information from river, tidal and surface water flooding for a range of future time periods and emissions scenarios (Low emissions - RCP 2.6, medium and most likely emissions - RCP 4.5, and high emission - RCP 8.5). The temperature increases shown for each scenario are predicted increases by 2081-2100. The models are based on the UK Climate Projections 2018 (UKCP18). It is plausible that climate change will increase the severity and frequency of flood events in the future. FloodScore™ Climate has been designed to provide banks, building societies and insurers with future flood risk information for their long-term assets. The data within this report is based on the highest risk found within a buffer zone around the buildings. The 'Year' in the table represents the median of the date range used for each modelled timeframe.

Temp increase range	Year	Combined flood risk	River flooding	Coastal flooding	Surface water flooding
RCP 2.6 0.9-2.3°C	2027	Negligible	Negligible	Negligible	Negligible
RCP 2.6 0.9-2.3°C	2055	Negligible	Negligible	Negligible	Negligible
Temp increase range	Year	Combined flood risk	River flooding	Coastal flooding	Surface water flooding
RCP 4.5 1.7-3.2°C	2027	Negligible	Negligible	Negligible	Negligible
RCP 4.5 1.7-3.2°C	2055	Negligible	Negligible	Negligible	Negligible
Temp increase range	Year	Combined flood risk	River flooding	Coastal flooding	Surface water flooding
RCP 8.5 3.2-5.4°C	2027	Negligible	Negligible	Negligible	Negligible
RCP 8.5 3.2-5.4°C	2055	Negligible	Negligible	Negligible	Negligible

This data is sourced from Ambiental Risk Analytics.

Climate change / Natural ground instability (5 and 30 Years)

This data shows the increase in shrink swell subsidence hazards as a result of climate change. When certain soils take in water they can swell, causing heave. Conversely, when these soils dry out they can shrink and cause subsidence. Climate change will result in higher temperature and therefore likely cause periods of drought and an increase in shrink swell subsidence. This data has been produced using the Met Office local projections to accurately model predicted rainfall, it is only available for RCP8.5 (the 'worst case' climate scenario).

Temp increase range	Year	Wet scenario	Average rainfail	Dry scenario
RCP 8.5 3.2-5.4°C	2030s	Highly unlikely	Highly unlikely	Likely
RCP 8.5 3.2-5.4°C	2050s	Highly unlikely	Highly unlikely	Highly likely



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This data is sourced from the British Geological Survey.

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Datasets searched

This is a full list of the data searched in this report. If we have found results of note we will state "Identified". If no results of note are found, we will state "Not identified". Our intelligent filtering will hide "Not identified" sections to speed up your workflow.

Contaminated Land	
Former industrial land use (1:10,560 and 1:10,000 scale)	Identified
Former tanks	Identified
Former energy features	Not identified
Former petrol stations	Not identified
Former garages	Not identified
Former military land	Not identified
Former landfill (from Local Authority and historical mapping records)	Identified
Waste site no longer in use	Not identified
Active or recent landfill	Not identified
Former landfill (from Environment Agency Records)	Identified
Active or recent licensed waste sites	Identified
Recent industrial land uses	Identified
Current or recent petrol stations	Not identified
Dangerous or explosive sites	Not identified
Hazardous substance storage/usage	Not identified
Sites designated as Contaminated Land	Not identified
Historical licensed industrial activities	Not identified
Current or recent licensed industrial activities	Not identified
Local Authority licensed pollutant release	Identified
Pollutant release to surface waters	Not identified
Pollutant release to public sewer	Not identified

Contaminated Land			
Dangerous industrial substances (D.S.I. List 1)	Not identified		
Dangerous industrial substances (D.S.I. List 2)	Not identified		
Pollution incidents	Identified		
Superficial hydrogeology			
Aquifers within superficial geology	Identified		
Superficial geology	Identified		
Bedrock hydrogeology			
Aquifers within bedrock geology	Identified		
	Not identified		
Groundwater abstraction licences	Not identified		
Groundwater abstraction licences Bedrock geology	Not identified Identified		
	Identified		
Bedrock geology Source Protection Zones and drinking	Identified		
Source Protection Zones and drinking abstractions	Identified g water		
Bedrock geology Source Protection Zones and drinking abstractions Source Protection Zones Source Protection Zones in confined	Identified g water Identified		
Source Protection Zones and drinking abstractions Source Protection Zones Source Protection Zones in confined aquifer	Identified g water Identified Not identified		
Bedrock geology Source Protection Zones and drinking abstractions Source Protection Zones Source Protection Zones in confined aquifer Drinking water abstraction licences	Identified g water Identified Not identified		
Source Protection Zones and drinking abstractions Source Protection Zones Source Protection Zones in confined aquifer Drinking water abstraction licences Hydrology	Identified g water Identified Not identified Not identified		
Source Protection Zones and drinking abstractions Source Protection Zones Source Protection Zones in confined aquifer Drinking water abstraction licences Hydrology Water courses from Ordnance Survey	Identified g water Identified Not identified Not identified		





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Flooding			
Flood storage areas: part of floodplain	Not identified		
Historical flood areas	Not identified		
Areas benefiting from flood defences	Not identified		
Flood defences	Not identified		
Proposed flood defences	Not identified		
Surface water flood risk	Not identified		
Groundwater flooding	Not identified		
Natural ground subsidence			
Natural ground subsidence	Identified		
Natural geological cavities	Not identified		
Non-natural ground subsidence			
Coal mining	Not identified		
Non-coal mining	Not identified		
Mining cavities	Not identified		
Infilled land	Identified		
Radon			
Radon	Not identified		
Planning constraints			
Sites of Special Scientific Interest	Not identified		
Internationally important wetland sites (Ramsar Sites)	Not identified		
Special Areas of Conservation	Not identified		
Special Protection Areas (for birds)	Not identified		
National Nature Reserves	Not identified		
Local Nature Reserves	Not identified		
Designated Ancient Woodland	Not identified		
Green Belt	Not identified		

Planning constraints			
World Heritage Sites	Not identified		
Areas of Outstanding Natural Beauty	Not identified		
National Parks	Not identified		
Conservation Areas	Not identified		
Listed Buildings	Not identified		
Certificates of Immunity from Listing	Not identified		
Scheduled Monuments	Not identified		
Registered Parks and Gardens	Not identified		
Climate change			
· · · · · · · · · · · · · · · · · · ·			
Flood risk (5 and 30 Years)	Identified		
	Identified		
Flood risk (5 and 30 Years) Natural ground instability (5 and 30			
Flood risk (5 and 30 Years) Natural ground instability (5 and 30 Years)			
Flood risk (5 and 30 Years) Natural ground instability (5 and 30 Years) Coastal Erosion	Identified Not identified		



Contaminated Land Assessment Methodology and Limitations

Our risk assessment methodology and limitations can be found at Risk Assessment methodology and Limitations - Groundsure A

Flood information

The Flood Risk Assessment section is based on datasets covering a variety of different flooding types. No inspection of the property or of the surrounding area has been undertaken by Groundsure or the data providers. The modelling of flood hazards is extremely complex and in creating a national dataset certain assumptions have been made and all such datasets will have limitations. These datasets should be used to give an indication of relative flood risk rather than a definitive answer. Local actions and minor variations, such as blocked drains or streams etc. can greatly alter the effect of flooding. A low or negligible modelled flood risk does not guarantee that flooding will not occur. Nor will a high risk mean that flooding definitely will occur. Groundsure's overall flood risk assessment takes account of the cumulative risk of river and coastal data, historic flood events and areas benefiting from flood defences provided by the Environment Agency/Natural Resources Wales (in England and Wales) and surface water (pluvial) and groundwater flooding provided by Ambiental Risk Analytics. In Scotland the river and coastal flood models are also provided by Ambiental Risk Analytics.

Risk of flooding from rivers and the sea

This is an assessment of flood risk for England and Wales produced using local data and expertise, provided by the Environment Agency (RoFRaS model) and Natural Resources Wales (FRAW model). It shows the chance of flooding from rivers or the sea presented in categories taking account of flood defences and the condition those defences are in. The model uses local water level and flood defence data to model flood risk.

The categories associated with the Environment Agency and Natural Resources Wales models are as follows:

RoFRaS (rivers and sea) and FRAW (rivers):

Very Low - The chance of flooding from rivers or the sea is considered to be less than 1 in 1000 (0.1%) in any given year.

Low - The chance of flooding from rivers or the sea is considered to be less than 1 in 100 (1%) but greater than or equal to 1 in 1000 (0.1%) in any given year.

Medium - The chance of flooding from rivers or the sea is considered to be less than 1 in 30 (3.3%) but greater than 1 in 100 (1%) in any given year.

High - The chance of flooding from rivers or the sea is considered to be greater than or equal to 1 in 30 (3.3%) in any given year. FRAW (sea):

Very Low - The chance of flooding from the sea is considered to be less than 1 in 1000 (0.1%) in any given year.

Low - The chance of flooding from the sea is considered to be less than 1 in 200 (0.5%) but greater than or equal to 1 in 1000 (0.1%) in any given year.

Medium - The chance of flooding from the sea is considered to be less than 1 in 30 (3.3%) but greater than 1 in 200 (0.5%) in any given year.

High - The chance of flooding from the sea is considered to be greater than or equal to 1 in 30 (3.3%) in any given year.

Historic flood events

Over 86,000 events are recorded within this database. This data is used to understand where flooding has occurred in the past and provides details as available. Absence of a historic flood event for an area does not mean that the area has never flooded, but only that Environment Agency/Natural Resources Wales do not currently have records of flooding within the area. Equally, a record of a flood footprint in previous years does not mean that an area will flood again, and this information does not take account of flood management schemes and improved flood defences.

Surface water flooding

Ambiental Risk Analytics surface water flood map identifies areas likely to flood following extreme rainfall events, i.e. land naturally





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vulnerable to surface water or "pluvial" flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1000 year rainfall events. The flood risks for these rainfall events are reported where the depth would be greater than the threshold for a standard property to modern building standards. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though older ones may even flood in a 1 in 5 year rainstorm event.

Proposed flood defences

The data includes all Environment Agency/Natural Resources Wales's projects over £100K that will change or sustain the standards of flood defence in England and Wales over the next 5 years. It also includes the equivalent schemes for all Local Authority and Internal Drainage Boards.

Flood storage areas

Flood Storage Areas may also act as flood defences. A flood storage area may also be referred to as a balancing reservoir, storage basin or balancing pond. Its purpose is to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel. It may also delay the timing of a flood peak so that its volume is discharged over a longer time interval. These areas are also referred to as Zone 3b or 'the functional floodplain' and has a 5% or greater chance of flooding in any given year, or is designed to flood in the event of an extreme (0.1%) flood or another probability which may be agreed between the Local Planning Authority and Environment Agency/Natural Resources Wales, including water conveyance routes. Development within Flood Storage Areas is severely restricted.

Groundwater flooding

Groundwater flooding is flooding caused by unusually high groundwater levels. It occurs as excess water emerging at the ground surface or within underground structures such as basements. Groundwater flooding tends to be more persistent than surface water flooding, in some cases lasting for weeks or months, and it can result in significant damage to property. This risk assessment is based on a 5m Digital Terrain Model (DTM) and 1 in 100 year and 1 in 250 year return periods.

Conservation Area data limitations

Please note the Conservation Area data is provided by Historic England and Individual Local Authorities. Due to different methodologies used by different Local Authorities the data may be incomplete. We recommend reviewing your local search for confirmation.

Subsidence data limitations

The natural ground subsidence assessment is based on the British Geological Survey's GeoSure data. GeoSure is a natural ground stability hazard susceptibility dataset, based on the characteristics of the underlying geology, rather than an assessment of risk. A hazard is defined as a potentially damaging event or phenomenon, where as a risk is defined as the likelihood of the hazard impacting people, property or capital. The GeoSure dataset consists of six data layers for each type of natural ground subsidence hazard. These are shrink-swell clay, landslide, compressible ground, collapsible ground, dissolution of soluble rock and running sand. Each hazard is then provided with a rating on is potential to cause natural ground subsidence. This rating goes from A-E, with A being the lowest hazard, E being the highest. Groundsure represent full GeoSure data as either Negligible (ratings of A), Very Low (ratings of B), Low (C), Moderate (D) or High (E). Where GeoSure Basic is instead used, ratings are displayed as Negligible-Very Low (A or B ratings), Low (C) or Moderate-High (D or E). The GeoSure data only takes into account the geological characteristics at a site. It does not take into account any additional factors such as the characteristics of buildings, local vegetation including trees or seasonal changes in the soil moisture content which can be related to local factors such as rainfall and local drainage. These factors should be considered as part of a structural survey of the property carried out by a competent structural surveyor. For more information on the "typical safe distance" trees should be from a property please see this guide:

www.abi.org.uk/globalassets/sitecore/files/documents/publications/public/migrated/home/protecting-your-home-from-subsidence-



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ClimateIndex™ data and limitations

Groundsure's ClimateIndex™ is an assessment of the physical risk to the property from hazards which may be exacerbated by climate change. It considers the following hazards only:

- River flooding
- Flooding from the sea and tidal waters
- Surface water flooding
- Shrink swell subsidence
- Coastal erosion

These hazards are assessed using a weighted sum model, which allows for the consistent comparison of hazards between different time periods, emissions scenarios and the relative severity of predicted impacts. All flood and subsidence impacts have been produced using the latest UKCP18 climate prediction models. Assessments are provided for the short term (c.5 years) and medium term (c.30 years) only. A range of Representative Concentration Pathways (RCPs)
→ have been used depending on the source dataset and its derivation. For example, flood data has been provided for RCP2.6, 4.5 and 8.5, whereas subsidence data has been derived using local projections only available for RCP8.5. Each RCP variance has been assigned an appropriate weighting in the calculator to reflect the relative likelihood of that scenario and where a full range of RCP scenarios is not available Groundsure have extrapolated to give equivalent values.

The banding applied to a property reflects its current and future risk from the hazards identified above. If a property's banding does not change from the present day to the medium term, the property's risk profile is not considered likely to be affected by climate change, though risks may still be present. Any increase in the banding of a property indicates that the property has the potential to be affected by climate change.

Band	Description	Short term (c.5 year)	Medium term (c.30 year)
Α	No risks of concern predicted	76%	75%
В	Minor risks e.g. low level surface water flooding	15%	15%
С	Minor to moderate risks e.g. river flood event above property threshold	4%	4%
D	Moderate risks e.g. above threshold flood events and significant increase in subsidence potential	2%	2%
Е	Significant risks e.g. multiple flood risks above property threshold	2%	2%
F	Severe risks to property e.g. coastal erosion risk	1%	2%

Approximate percentage of properties falling into each band. The figures have been calculated based on an assessment of residential properties only.



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Conveyancing Information Executive and our terms & conditions

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- normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

Operations Director, Groundsure Ltd, Nile House, Nile Street, Brighton, BN1 1HW. Tel: 01273 257 755. Email: info@groundsure.com If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: admin@tpos.co.uk We will co-operate fully with the Ombudsman during an investigation and comply with their final decision.

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