

Property Address

**Sample Site, Sample Road, Sample**



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#### Physical risks

Risks that result from climatic events. We may face more frequent severe weather events, such as flooding, drought and storms. Gradual onset of these environmental changes as a result of climate change could impact your intended use of the Property.

These physical risks may have associated transition risks to manage or mitigate change.

#### Transition risks

Risks that result from changes in behaviour including government policy as the UK transitions to a low-carbon economy.

This report looks at the energy performance of the Property. There may be a requirement for investment to improve the energy efficiency due to future policy changes implemented as part of meeting the UK government target of achieving net zero emissions by 2050.

## i Introduction to your climate change report

The Landmark Climate Change report is a desktop report, designed to highlight how climate change could impact a given property. The data baseline to inform the assessment is derived from UK Climate Projections (UKCP)18. Developed by the Met Office, this is the most authoritative climate projection data available for the UK. Within the data, there are four different emission scenarios known as Representative Concentration Pathways (RCPs). The RCP pathways represent a broad range of assumptions and are neither forecasts nor policy recommendations.

Climate change in the UK is projected to cause drier summers and more extreme wet winters. Even if the expected trajectory of climate change is lower than expected, there will be some climate impact.

The risk modules shown on the right hand side of this page have been chosen to show the potential impact that climate change could have at a property-specific level.

This report is generated based on the Unique Property Reference Number (UPRN) for the property, rather than the boundaries of the property, and is designed to provide an overview of potential future risks. Further, in depth, advice and recommendations for managing current environmental risks at the property is provided within the standard environmental desktop search.

### What are RCPs?

RCPs are emission scenarios (adopted by the Intergovernmental Panel on Climate Change (IPCC)) that describe alternative climate change pathways depending on the volume of greenhouse gas emissions. RCPs used within this report are:

**RCP2.6** compatible with aims to limit global temperature rise by no more than 2°C by 2050

**RCP4.5** mid-range scenarios - likely current trajectory

**RCP8.5** used to highlight a 'business as usual' scenario, where emissions continue to rise throughout the century.

Where appropriate within this report, we have used the mid-range emission scenario (RCP 4.5) to give a projected climate change risk for the Property.

### Flooding

Climate change is likely to impact the variability of rainfall – causing extreme weather events, such as flooding, from both periods of heavy rainfall, and also from a lack of rain (drought) affecting the potential permeability of the ground.

### Subsidence

Climate change is likely to drive an increase in subsidence related issues for properties. The most common cause of natural subsidence in the UK is the shrinking and swelling of clays. The soils swell, absorbing moisture in wet conditions, and contract when they dry out, which can result in ground movement.

### Heat stress

Climate change is causing a rise in average summer temperatures. The increase in temperature can affect how people live and work. Changes in temperatures will require adaptations to property including how development sites and buildings are designed, changes to construction methods (including potentially changes to foundations, building materials, insulation, heating, cooling etc.). There will also be adaptations to infrastructure such as roads, public open spaces, and public transportation.

### Coastal erosion

Coastlines can be adversely affected by storms, high tides, and rising sea levels. All of these factors are likely to increase due to climate change. As such, coastal erosion is likely to be accelerated in many areas of the UK.

### Energy performance

Energy performance of buildings is a key transition risk factor. Minimum EPC rating requirements are due to be raised in order to meet the government's carbon reduction targets. This could require investment to improve energy performance to meet new standards.

# Flooding

## Flood risk

Flooding is a key environmental risk in the UK now and is likely to increase due to climate change.

We have provided analysis of the current risk vs the 2050 risk using the Met Office UKCP18 data, covering river, coastal and surface water flooding. We have also provided a wider range of scenarios below. This view of risk supplements the more detailed view of current risk in your standard flood report.

## Recommendations

- 1 Ask the seller whether flooding has occurred at the Property before.
- 2 Establish the availability of buildings and contents insurance before exchanging contracts.

## If you are concerned about the flood risk identified

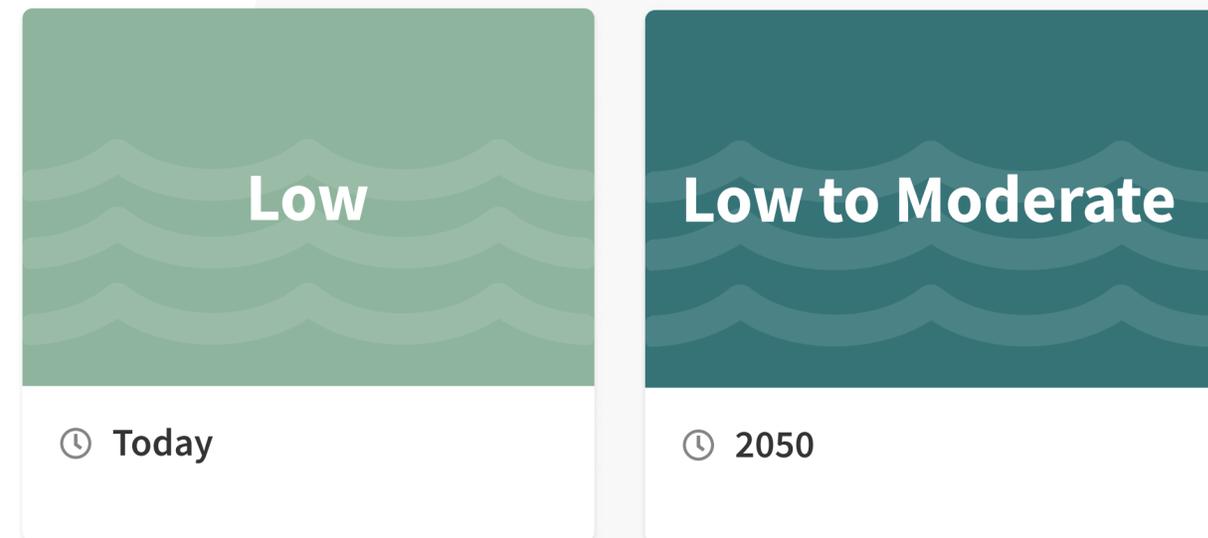
- 1 Review your current flood report which provides a more detailed review of risk now. Landmark can also provide more detailed assessment if you are concerned about future risk.
- 2 The government has set out its 2021-2027 investment for flood defences policy. The local authority should be able to provide further information on any schemes benefiting the area.

### Why we search this

Flood risk can significantly impact a business not just through flooded premises, but also business continuity. Commercial properties being classed as less sensitive means they could be built in more flood prone areas. Climate change impacting weather patterns is expected to result in more flooding across the UK. This is due to wetter winters, more frequent and severe flash flooding, and storm events.

## Risk of flooding

Based on a projected RCP 4.5, the Property faces the following risk:



## Flood stress test

To assist with investment modelling and climate stress testing, we have summarised risk from a specific range of RCP and decades:

RCP/decade	2030	2050	2080
2.6	Low	Low to Moderate	Low to Moderate
4.5	Low	Low to Moderate	Low to Moderate
8.5	Low to Moderate	Low to Moderate	Moderate

## Ground stability

### Subsidence

Natural subsidence risk is associated with building in areas that are prone to ground instability as a result of the underlying geology.

The most common cause of natural subsidence in the UK is the shrinking and swelling of clays. The soils swell, absorbing moisture in wet conditions and contract when they dry out, which can result in ground movement. Further information on current risk can be found in the Ground Hazards section of your current environmental report.

### Recommendations

- 1 Speak to a structural surveyor if you have concerns about the Property and arrange a physical inspection.
- 2 The BGS provide information on steps that can be made to limit future impact of subsidence related issues and what to look out for. [Click Here](#)
- 3 Check the terms of insurance before completing and make sure you are comfortable with the policy on offer. This may also reference other types of ground movement. Any past claims may be as a result of non-geological issues and instead be linked to property specific causes such as damaged pipes or tree roots.

### Why we search this

The BGS expect that climate change will result in increased subsidence related issues. By 2030, the BGS report that more than 3% of UK properties are likely to be affected, and by 2070, over 10%. The greatest risk is expected to be in the south east of England and London due to the nature and age of the clay formation. [Click Here](#)

### Ground stability projections

Based on a projected RCP 4.5, the Property faces the following risk:



### Ground stability stress test

To assist with investment modelling and climate stress testing, we have summarised risk from a specific range of RCP and decades:

RCP/decade	2030	2050	2080
2.6	Negligible	Negligible	Negligible
4.5	Negligible	Negligible	Negligible
8.5	Negligible	Negligible	Negligible

## Heat stress

### What impacts heat stress?

Temperatures in the indoor workplace are covered by the Workplace (Health, Safety and Welfare) Regulations 1992. [\(Click Here\)](#) Currently there is no law for minimum or maximum working temperatures, although both the Government and the Health & Safety Executive state that during working hours, temperatures in all indoor workplaces must be ‘reasonable’. It is usually accepted that people work best between 16°C and 24 °C. The Trades Union Congress (TUC) is calling for a maximum working temperature of 30°C.

Temperature can also be a potential workplace hazard and therefore can fall under the Management of Health and Safety at Work Regulations 1999.

### Recommendations

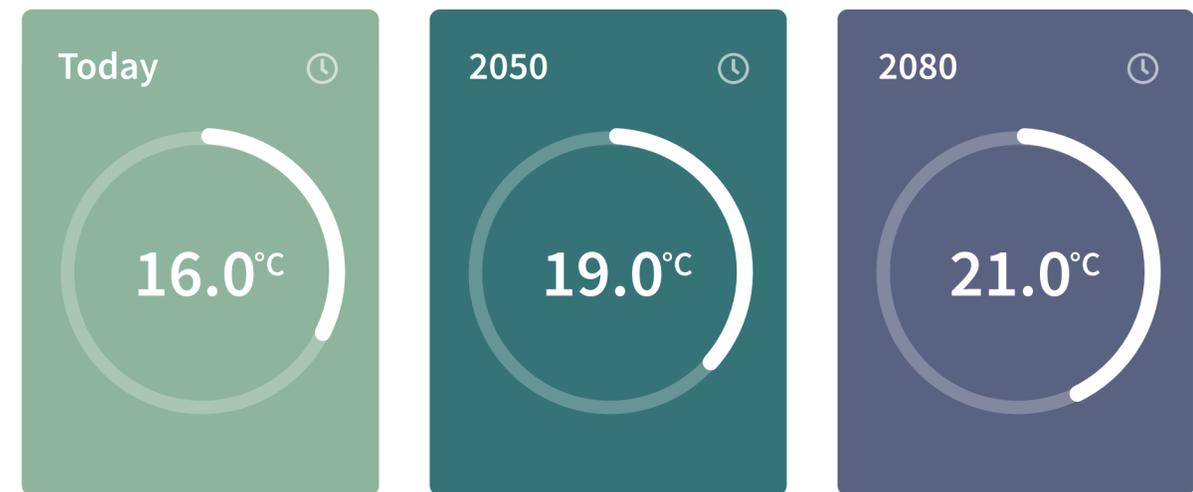
- 1 Employers should make a suitable assessment of the risks where relevant under the Health and Safety at Work Regulations 1999. The HSE provides Heat Stress advice and a checklist for employers to use. [Click Here](#)
- 2 Controlling temperatures may require greater use of air conditioning. This will need to be accounted for in any businesses net zero data, target setting, and mitigation

### Why we search this

The Met Office have stated that climate change is already causing warming across the UK and the UK’s ten warmest years on record have occurred since 2002. It is predicted that based on UKCP18, the most up to date Met Office climate predictions, by 2070, summer temperatures will be between 1 – 6°C warmer and 60% drier with a greater possibility of heatwaves. [Click Here](#)

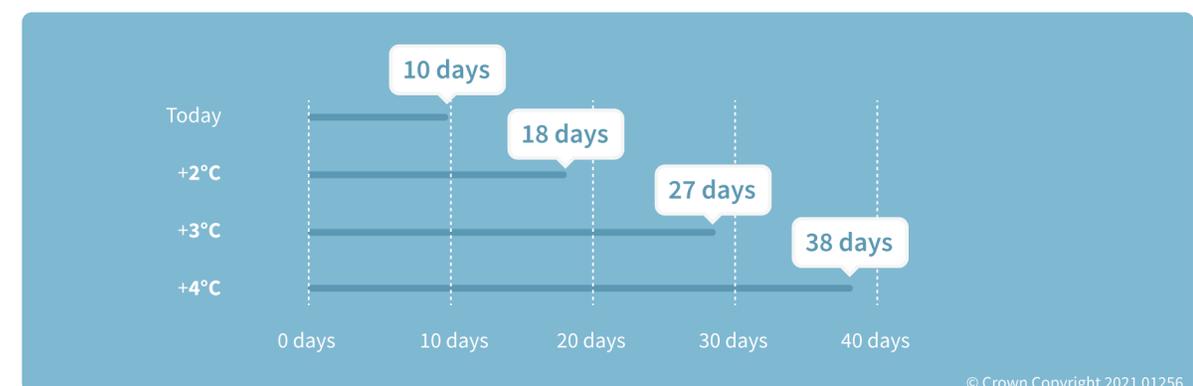
### Average summer temperature affecting property

Based on current models the Property will face the following average temperatures over time, for RCP8.5 - the only scenario modelled by UKCP18 at a local level:



### Days where temperatures exceed 25°C

The graph below shows the amount of days in the UK exceeding 25°C degrees based on global temperature increases:



## Coastal Erosion

The policy for the area (Shoreline Management Plan) will play an important role in how locations that are at risk are affected. For England and Wales useful resources have been provided to understand what the local policy is for the short, medium and long term. Policy is split between 4 different management methods categorised below:

- no active intervention - no current plans to build any defence
- hold the existing defence line - maintaining current defence
- managed realignment - allowing the shoreline to move to an agreed position
- advance the line - new defences planned extending the land area out to sea

For Scotland, flood maps provide areas likely to be susceptible to coastal erosion.

### Recommendation

- 1 Some areas of the coastline will be more at risk from erosion than others. If you are within close proximity to the coast (500m), it would be prudent to check you are comfortable with the erosion rates and management policy for that section of the coastline. Review the related Government Agency's online and free to use flood map.

England - the Environment Agency National Coastal Erosion Map [Click Here](#)

Wales - The Natural Resources Wales National Coastal Erosion Risk Map [Click Here](#)

Scotland - The Flood Risk Management Maps on the SEPA website provide information.

### Why we search this

Coastal erosion is a natural occurrence expected to affect certain areas of the UK coastline. Climate change through more severe storms and sea level rise is expected to result in higher erosion.

While the percentage of properties at risk is will be small, the impact would be significant.

Property distance from coast:

750m

#### 10 key towns at risk

- A. Happisburgh, Norfolk
- B. Kessingland, Suffolk
- C. Hornsea, East Riding of Yorkshire
- D. Withernsea, East Riding of Yorkshire
- E. Sunderland, Tyne & Wear
- F. Filey, North Yorkshire
- G. Camber, East Sussex
- H. Pevensey Bay, East Sussex
- I. Shoreham-by-Sea, West Sussex
- J. Bognor Regis, West Sussex

Please note, this is not a definitive list of towns at risk of coastal erosion



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# Lightbulb EPC

## Energy performance

Landlords will need to demonstrate the building has reached the highest EPC band that a cost-effective package of measures can deliver. If an exemption applies, landlords will need to register this on the PRS Exemption Register. It is the landlord’s obligation to ensure they are compliant.

Date	For Who?	Minimum EPC Rating
1st April 2023	All Tenancies	E
1st April 2025	All rented buildings must have valid EPC	E
1st April 2027	New Tenancies	C (proposed rating)
1st April 2030	All Tenancies	B (proposed rating)

## Recommendations

- 1 Review your EPC. This should set out remedial measures that could be followed to improve energy efficiency.
- 2 Consult a surveyor if needed to assess what works can be undertaken to meet any potential future standards.
- 3 For more information on EPCs [Click Here](#). The current rating may impact on your ability to let, or continue to let the property, so speak to your legal adviser.

### Why we search this

The Government’s Energy White Paper sets out that the 2020s must be a decade of action on tackling emissions to help meet the statutory obligations for net zero by 2050.

The Minimum Energy Efficiency Standard (MEES) was set out by the Energy Efficiency (Private Rented Property) (England and Wales) Regulations in 2015 and future policies on minimum EPC standards can be expected in the future.

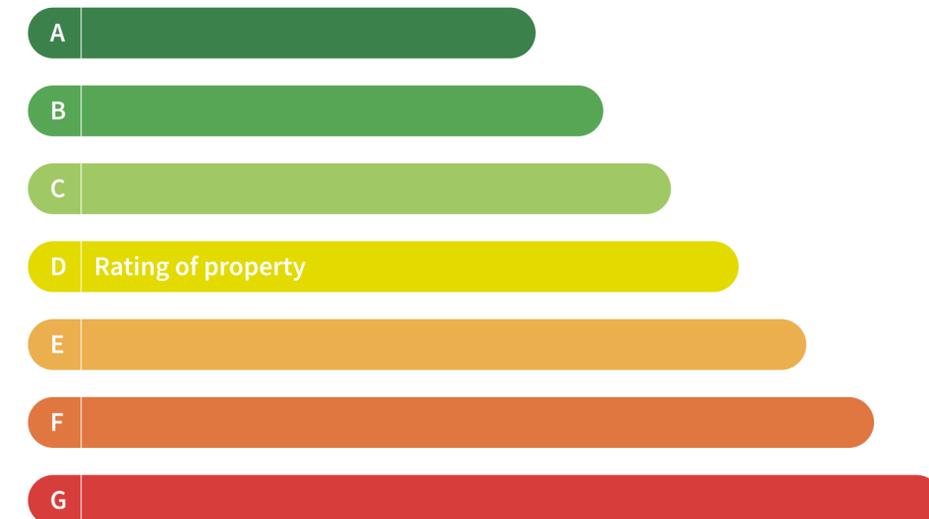
# Valid EPC certificate ✓

## Property rating:

Inspected 15 Sep 20 | Valid until 15 Sep 30



## EPC rating



# Useful information

## The Purpose and Scope of the Report

The Landmark Climate Change Report is a desktop report, designed to enable property professionals, property investors or businesses to understand how climate change could impact a given property. The data baseline to inform the assessment is derived from UKCP18. The report is property specific, based on a UPRN.

## Stress Testing

As the future climate scenario is unknown and may change in future, in some instances alongside the assessment we have also provided other scenarios to assist with other decision making.

## What are climate risks?

The impacts from climate change could affect UK companies in many ways. Both the UK Government and the Bank of England have advocated climate related disclosures, which was set out by the Task Force for Climate Related Financial Disclosures in their 2017 recommendations.

## The Paris Agreement

Goal 13 of the UN Sustainable Development Goals calls for urgent action to combat climate change. The Paris Agreement on climate change officially entered into force on 4th November 2016. As of 2020, 195 signatories and 189 countries have joined the Paris Agreement.

The agreement pledges that signatories will take steps to limit temperature rise to well below 2°C by 2050. Both the EU and the UK have pledged climate action and have now written into law that they will have net-zero greenhouse gas emissions by 2050.

## Industry White Paper

Landmark Information Group asked leading property experts to contribute to a climate change white paper, which sets out the physical and transitional risks that the industry faces. The paper proposes workable solutions to the challenge of reporting on and responding to the risks. You can read the white paper here: <https://climatechange.landmark.co.uk>

## UKCP18

UK Climate Projections 2018 (UKCP18) is the Met Offices climate projection tool for the UK, which is the update from UKCP09. The data provides probabilistic scenarios for how the climate of the UK may change over the 21st Century. The Met Office states that the tools have been designed to help decision-makers assess their exposure to the climate.

Source: <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/about/what-is-ukcp#:~:text=The%20UKCP18%20project%20uses%20cutting,change%20over%20the%2021st%20century>

Representative Concentration Pathways (RCPs)	Change in Temperature (C) by 2081-2100	Description
RCP2.6	1.6 (0.9-2.3)	Emissions strongly reduced
RCP4.5	2.4 (1.7-3.2)	Mitigation implemented but Paris Agreement missed (IPCC moderate scenario)
RCP6.0	2.8 (2.0-3.7)	2nd medium emission stabilisation pathway
RCP8.5	4.3 (3.2-5.4)	Emissions continue to grow unmitigated

## Task Force for Climate Related Financial Disclosure (TCFD) Recommendations

Understanding future climate risk requires consideration as part of the 'Task Force for Climate Related Financial Disclosures' (TCFD Recommendations). Within the recommendations, risk management is an integral step where organizations are expected to identify, assess and manage climate related risks.

These recommendations are fast becoming the linchpin of best practice, at an industry and national policy level. The Better Building Partnership (BBP) is a collaboration of the UK's leading commercial property owners. Its members have signed a ground-breaking commitment to deliver net zero carbon real estate portfolios by 2050. Member organisations are also committing to developing climate change resilient strategies in line with the TCFD Recommendations.

# Useful information

## Transition risks for built environment

The Government are committed to net zero emissions by 2050. In order to achieve this target, the Government are looking at ways the UK can reduce its emissions in all sectors. One of these has been a focus on buildings. The UK has nearly 30 million buildings (27 million of which are residential) and include some of the oldest building stock in Europe. Heating and powering buildings currently accounts for 40% of the UK's total energy usage. Therefore, there is a need to improve the energy efficiency of our homes and buildings.

The Future Homes and Buildings Standard is not due to be implemented until 2025, however through consultations, Parts L (conservation of fuel and power) and F (ventilation) of the Buildings Regulations for new dwellings were changed in 2021. From 2025, new homes built after this time, will produce 75%-80% less carbon emissions than homes delivered under the old regulations.

Existing homes and some home improvements will also be subject to higher standards but these will only come when the occupants want to make thermal upgrades or if building an extension. These are already being asked for. Part L for example requires changes in ventilation. For existing domestic buildings, background ventilations should be fitted to all replacement windows.

There will also be a phase out of gas boilers. The sale of new gas boilers will be prohibited from 2025 and they will be replaced by heat pumps and – depending how the technology develops- hydrogen boilers.

## Report Limitations

In producing this Climate Change Report we have selected relevant data sets for the risks identified in this report. Our assessment is based on one of three RCPs – 2.6, 4.5 and 8.5 and a c.5 year, 30 year and 50 year scenario. It is quite possible that the actual pathway that is taken is not in fact the reported RCP or that the effects of climate change for this scenario are not as currently predicted by the IPCC. It is also highly likely that the data sets that we use and the modelling that we carry out will evolve over time. Therefore, this report should be read in the context that there is a high level of uncertainty on how the climate will change over the next 30-50 years and the report can only give a broad indication on how the identified risks may develop over this period.

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Milford House  
43-55 Milford Street  
Salisbury  
Wiltshire SP1 2BP

Tel: 01722 333306

Fax: 01722 332296

Website: [www.tpos.co.uk](http://www.tpos.co.uk)

Email: [admin@tpos.co.uk](mailto:admin@tpos.co.uk)

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