



GCSE Case Study: Storm Babet

Fill in the blanks: 18th October 2023, Met Office, Extratropical Cyclone, Flooding, Babet.

Storm _____, an _____, hit the UK on _____. It was one of the most severe storms in recent years, causing widespread _____ and damage. The storm claimed the lives of seven people and was the second _____ named storm of the 2023-24 season.

Highest Rainfall: _____ mm.

Highest gusts of wind: _____

Causes:

Match the cause to the description

Strong Jet Stream

A significant low-pressure system over the UK helped draw the storm in.

Warm Sea Surface Temperature

A high-pressure area over Scandinavia prevented the storm from moving eastwards, prolonging its impact over the UK.

Low Pressure Area

A powerful jet stream steered the storm towards the UK.

Blocking High Pressure

Elevated temperatures in the North Atlantic provided additional energy to the storm.

Locations affected:

Using an atlas, match the names of the locations most severely affected by the storm with their corresponding locations on this map:

- Derry
- Brechin, Angus
- Aberdeen
- Leeds
- Derby
- Nottingham
- Retford
- Sheffield
- York





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Cut out the impacts of Storm Babet and categorise them by sticking them under the headings **Social, Economic and Environmental impacts**.

<p>Fatalities and Injuries: 7 people died across the UK due to flooding and wind-related incidents.</p>	<p>Power Outages: Around 100,000 customers initially lost power, affecting homes and businesses.</p>	<p>Flooding: Widespread flooding damaged rivers, lakes, and wetlands, displacing wildlife.</p>
<p>Infrastructure Damage: Significant damage to roads, bridges, railways, and airports, leading to transportation disruptions. Leeds Bradford Airport was closed on 20th October after a large plane skidded off the runway whilst landing.</p>	<p>Landslides: Heavy rains from Storm Babet triggered landslides, causing damage to forests and natural habitats. For example, a slope near houses at the base of Chilwell Quarry collapsed due to the intense rainfall in October.</p>	<p>Debris and Waste: The storm caused extensive damage and debris, including hazardous materials. Over 750 tonnes of debris were removed from Sunderland's promenades and beaches after recent storms including Storm Babet.</p>
<p>Business Losses: Many businesses suffered due to flooding and power outages, resulting in job losses and economic downturns.</p>	<p>Displacement: Hundreds of people were rendered homeless due to flooding and property damage. 1,250 properties in England were flooded.</p>	<p>Soil Erosion: Soil Erosion: Intense rainfall increased soil erosion and disrupted local habitats, affecting wildlife and potentially reducing biodiversity.</p>
<p>School Closures: Numerous schools across Cheshire, Norfolk, Suffolk, Yorkshire, Scotland and North Wales, were closed due to a "danger to life".</p>	<p>Evacuations: Over 10,000 people were evacuated from their homes and forced to stay in temporary accommodation. Disrupting their daily life.</p>	<p>Agricultural Damage: Flooding damaged crops and farmland, killed livestock, and resulted in significant financial losses for farmers, leading to disruptions in food supplies.</p>
<p>Cost of Damages: Estimates calculate the costs of damage due to Storm Babet to be between £450m - £650m.</p>	<p>Pollution: Flooding spread pollutants from roads, industrial sites, and farms into rivers, contaminating water sources with harmful chemicals and affecting aquatic life.</p>	



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Reducing the Risk:

Describe what early warnings are and why they are important during a storm like Storm Babet.

What impact do you think the Met Office's red and amber warnings had on public safety? How might people's actions have changed in response to these warnings?

List the flood protection strategies implemented during Storm Babet (e.g., flood alerts, sandbags, pumps).

Describe the roles played by local authorities and emergency services during the storm.

Is the weather in the UK is becoming more extreme?

Using the information provided, discuss whether Storm Babet is evidence that weather in the UK is becoming more extreme. In your answer, consider the intensity, frequency, and impacts of recent storms, and compare these to historical weather patterns.