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Great weather events: the winter of 1946/47

In 1947 the UK was recovering from the trauma of the war years and could have done without the problems of dealing with one of the most severe winters on record. Two relatively short spells of cold weather - one in December 1946, the other in early January 1947 - led to the 'main event' which persisted from 21 January to 16 March.

Bringing about the start of the third cold spell was an anticyclone that became anchored over Scandinavia around 20 January. This blocked the eastward progress of Atlantic depressions and forced them to take routes south of the UK. The result was that easterly winds set in, bringing snow first to eastern and south-east England before extending across much of the country. On 30 January the Isles of Scilly were lying under about 18cm of snow - an extraordinary sight.

Intensely cold conditions affected much of England and Wales in the final week of January - on the morning of the 30th the temperature at Writtle (Essex) was -20 °C. Over the month as a whole, the highest temperature for England and Wales was around 14 °C, and the minimum was a numbing -21 °C.

Coldest February on record

Easterly winds persisted throughout February, with only brief breaks in the cold snowy weather. On no day did the temperature at Kew Observatory top 5 °C, and only twice in the month was the night minimum temperature above freezing. It was the coldest February on record in many places and, for its combination of low temperatures with heavy snow, bore comparison with January 1814.

In some parts of the country, snow fell on 26 days. It was often light and powdery so it was easily whipped up into deep drifts that affected roads and the railway network. New ways were tried in order to clear them. One method was to mount jet-turbine engines on towed trailers and angle the hot air outflow of the engines towards the ground; these were hugely effective in clearing the snow from roads but the underlying surface melted too, so the experiment was rather short-lived!

Cold, dry and cloudy

A notable feature of February 1947 was dry conditions in parts of western Scotland. Because of the persistent anticyclonic conditions, some places that were normally very wet had no rain at all. A completely dry month in western Scotland is unusual, and was unprecedented for February. Another unusual feature was cloudiness in the Midlands and south of England - a complete contrast to the north-west of Scotland, where the weather was unusually sunny.

At Kew, Nottingham and Edgbaston, there was no sun on 22 days and, at Kew, there was none at all from the 2nd to the 22nd. Most places in the Midlands and southern England recorded sunshine totals less than half the average.

When skies did clear, night-time temperatures plunged. A minimum of -21 °C was recorded at Woburn in Bedfordshire early on the 25th. Without the cloud, the month would almost certainly have been even colder than it was, certainly at night.

Gales and snow in March

If February hadn't been enough, March proved to be even worse. In the first half of the month, there were more gales and heavy snowstorms.

On 4 and 5 March, heavy snow fell over most of England and Wales, with severe drifting. On 6 March, drifts were five metres deep in the Pennines and three metres in the Chilterns. In some places, glazed frost occurred. On 10 and 11 March, southern Scotland had its heaviest snowfall of the winter and, on the 12th the Scottish Highlands reported drifts more than seven metres deep.

Thaw brings floods

Meanwhile, mild air with a temperature of 7-10 °C edged into the extreme south-west of the UK on 10 March, bringing rain. The ensuing thaw was rapid - by the evening of the 11th, vast areas of southern England were under water. After weeks of frost, the ground was frozen hard. The rain and meltwater couldn't soak into the ground - surface run-off was its only option.

The warm air spread northwards and eastwards. Meltwater from the Welsh mountains poured into the valleys of the Severn and Wye, flooding Herefordshire and Gloucestershire. The rivers of the English Midlands burst their banks and, by 13 March, Fenland rivers were close to overspill.

On the 15th, a deepening depression from the Atlantic approached the UK, bringing rain and severe gales. During the afternoon of the next day, mean winds over southern England reached 50 knots, with gusts of 80-90 knots. Buildings were damaged and waves were whipped up on floodwaters. In East Anglia, where the major rivers flow north-eastwards, the south-westerly wind drove their waters ahead and waves pounded the dykes. Water levels rose, the dykes were breached and most of Fenland was inundated. Troops were called in, but could do little to stop water racing through the breaches.

River levels rose relentlessly. For example, the Trent burst its banks at Nottingham on 18 March, flooding hundreds of homes - many to first floor level. When floodwater reached the tidal part of the Trent, it was impeded by a spring tide, and the whole of the lower Trent valley was flooded.

The floods in the West Country subsided after the 20th, but rivers continued to rise in eastern England. The Wharfe, Derwent, Aire and Ouse all burst their banks and flooded a huge area of southern Yorkshire. Selby was almost completely under water, only the ancient abbey and a few streets around the market place escaped inundation. Seventy per cent of all houses in the town were flooded.

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The cold and snowy weather had, at last ended, but the misery of the floods continued into the spring. And to make matters worse, the severe difficulties caused by the winter of 1947 were aggravated by the fuel and food shortages that remained after World War II.

[More from Education about the winters of 1947 and 1963](#)

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