

# MONTHLY WEATHER REPORT

# NOVEMBER 1977

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## Unsettled and windy most of month, but with sunny intervals.

Frontal systems from the Atlantic crossed the British Isles from time to time during the early part of the month. A depression in mid-Atlantic moved north-eastwards at the beginning of the second week and warm tropical air spread into Britain on the 9th and 10th behind an associated warm front which moved northwards across all districts. A secondary depression developed to the north-west of Ireland on the 11th, giving rise to a very strong south-westerly air-stream, which veered to north-west on the 12th. Fronts associated with depressions moving from Iceland to southern Norway then crossed the British Isles from time to time, most of them being followed by incursions of cold arctic air. A belt of high pressure extending from Iceland to Spain moved eastwards on the 25th and an anticyclone became established over the British Isles for the remainder of the month.

### Weather

The month was very unsettled until the 24th, with outbreaks of rain, thunderstorms, wintry showers and frequent gales in exposed places. The early part of the month was mild and it became unusually warm from the 9th to the 11th, but temperatures soon fell and wintry showers became frequent. Snow showers occasionally spread to southern areas and heavy snow fell in Scotland towards the end of the third week. The weather was much quieter after the 24th, with cold nights and persistent fog in places. Sunny intervals occurred throughout the month and made this a sunny November in most areas, despite the unsettled weather.

### Wind

It was windy until the 25th, with frequent gales on exposed coasts and hills. Directions were mainly south-westerly until the 11th, when severe gales over the Irish Sea area, coinciding with an unusually high tide and heavy rain locally, caused widespread flooding in north Lancashire. Considerable damage occurred to property along the coast, a pier at Morecambe was smashed and livestock perished in large numbers as flood-water rose quickly over adjacent farmland. The cost of the damage was estimated at over £1 million. Winds then veered north-westerly and gales were again severe in the west and north on the 14th. Most places recorded their maximum gust for the month on the 11th or 14th and on the latter date the wind gusted to 108 kt at the high-level station at Snaefell (Isle of Man). Directions remained mainly between west and north until the 25th, when the gales moderated. Speeds then became light and directions rather variable.

### Temperature

Monthly mean temperatures were mostly a little above average in south-east England and East Anglia, and in a few places in the east Midlands and north-west England. Mean values were below average almost everywhere else, but were near the normal over most remaining parts of England, except in the south-west, where a few places had values between 1.0 and 1.5 °C below normal. Monthly means were generally between 0.5 and 1.0 °C below normal in Wales, in the Isle of Man, and in southern and eastern Scotland and the Northern Isles and were mostly between 1.0

and 2.0 °C below average in remaining areas of Scotland and in Northern Ireland. The month started with mild weather, however, and it became very warm during the second week. On the 9th Hereford reported a temperature of 18.5 °C, and the 10th was a warm day almost everywhere, the London Weather Centre, with 18.2 °C, recording its highest November maximum since 1946. Colder weather reached most areas on the 12th and the rest of the month was cold. There were some very cold nights after the 25th, but the most noteworthy temperatures occurred in the Glasgow area, where at Abbotsinch Airport the temperature only rose above freezing for 5 hours during the last 5 days of the month: the 28th, with a maximum of -2.6 °C, and dense, freezing fog, was Glasgow's coldest November day for 25 years.

### Rainfall (including melted snow)

Rainfall was below average in the south-east of Northern Ireland, in parts of east and south-west Scotland, in extreme north-west and part of eastern England, and over a large area including East Anglia, the south Midlands and most southern counties, except parts of the south-east and south-west. Monthly totals were above average elsewhere, exceeding 150 per cent of the normal in parts of Wales, the north Midlands and Lancashire, and also over much of northern and parts of western Scotland. More than twice the normal rainfall for November fell in places in north-west Scotland. The month started with a very wet day, particularly over the southern half of England and in Wales: 117.0 mm fell at Treherbert Park (Mid Glamorgan) between 0524 GMT on the 1st and 0230 GMT on the 2nd. The unsettled weather continued until about the 24th, with thunderstorms and heavy falls of rain in places, but the end of the month was mainly dry. Wintry showers occurred most frequently between the 12th and the 24th.

### Snow

Wintry showers of sleet and hail were scattered at first, but became more

frequent after the 11th, with snow showers occasionally reaching southern areas. There were heavy falls of snow in Scotland towards the end of the third week and depths of 25 to 33 cm were measured in level snow on high ground. Some main roads in Scotland were blocked by snow for a time on the 21st. The showers became lighter and less frequent after the 24th. Snow lay on the upland slopes of the Scottish mountains throughout the month and on high ground in northern England and Wales from about the 12th. The snow cover extended down to about 150 m at times in parts of northern Scotland.

### Sunshine

Sunshine totals were a little below average in the south-west of Northern Ireland, in North Wales and in parts of the Isle of Man and Shetland, and were well below average in places in north-west Scotland, where Cape Wrath recorded only 15.8 hours of sunshine during the month. Sunshine was above average elsewhere and many places were very sunny, particularly in eastern and central England, where values exceeded 150 per cent of average over a large area: Birmingham/Edgbaston and Nottingham, both with over twice their normal amount of sunshine, had their sunniest November this century.

### Fog

Except for freezing fog patches in the Manchester area and the north-west Midlands on the night of 16th/17th, November was too windy for the formation of fog until the last few days. From the 27th onwards fog, which was freezing at times, mostly affected parts of the Midlands, northern England and southern Scotland. The fog persisted all day in the south-west Midlands on the 27th, in Carlisle on the 29th and in Glasgow from the 27th to the 30th.

### Miscellaneous Phenomena

The aurora was observed in Scotland on 2 nights.

**Table 1 District values**

District	air temperature °C					mean 30-cm earth temp °C	rain-days	rainfall	sun-shine
	Highest	Lowest	max.	min.	mean				
	Max. *	Min. *	difference from average						
0 Scotland N	15.0	-5.7	-1.1	-1.2	-1.1	-0.4	+2	178	91
1 Scotland E	15.9	-10.3	-0.7	-0.6	-0.7	+0.8	+2	110	128
2 England E & NE	16.5	-5.7	-0.1	-0.2	-0.2	+0.2	+3	107	152
3 East Anglia	17.2	-2.9	+0.1	+0.4	+0.3	+0.7	+3	94	147
4 Midland Counties	17.0	-7.4	-0.2	-0.5	-0.4	+0.3	+1	104	168
5 England SE & Central S	17.9	-3.4	-0.1	+0.1	0.0	+0.6	+2	103	147
6 Scotland W	14.6	-8.4	-1.0	-1.0	-1.0	+0.2	+2	131	121
7 England NW & Wales N	17.3	-6.8	-0.8	-0.3	-0.5	+0.3	+3	137	117
8 England SW & Wales S	18.0	-4.5	-0.7	-0.5	-0.5	-0.3	+2	104	130
N Ireland	15.5	-5.5	-1.4	-1.8	-1.6	-0.1	+3	115	119
Scotland	15.9	-10.3	-0.9	-0.9	-0.9	+0.2	+2	140	113
England & Wales	18.0	-7.4	-0.3	-0.2	-0.2	+0.3	+2	108	143

\*Highest maximum and lowest minimum of District Value Stations.