



Weather Front

December 2024/1924

December 2024

Observers Notes

Saltfleetby: 8th, NNW gale, gust 54 mph and heavy rain shower, with hail, not easing all day, gust 53 mph late afternoon.

10 Day Mean Temperatures.			
Date	Max	Min	Mean
1-10	9.9	4.1	7.0
11-20	10.3	4.9	7.6
1-20	10.1	4.5	7.3
21-31	9.6	3.3	6.4

Wind Speed Analysis, Beaufort Force.			
F1	F2	F3	F4
2	13	4	3

F5	F6	F7	F8
3	2	3	1

F9
0

Lowdham: On the 4th the lowest minimum temperature of 0.3 C was the highest for December since 1991, and in the Nottingham area since 21 December 1953. The grass minimum temperature of -2.6 C, on the 4th, was the highest for December on the station record (1991). The sunshine total for December 2024, at Radcliffe-on-Trent, was 47.2 hours (73% of the 1991-2020 average).ⁱ

Derby: There was only one report of fog at 0900, however mist and fog occurred at other times over a four-day period. The report of “nil air frosts) in December 2024 was only the third December on record, since 1952, with no air frost reported.

Mountsorrel: December 2024 was the warmest since 2015. It was also another wet month. It was an extremely dull month with just 27 hours of sunshine being recorded, which made December 2024 the dulllest December on the station record, and the dulllest locally since 1989. The month was very unsettled, and mild, with only one air frost, the lowest in 22 years of observations. There was only one day of snow falling, again a record low for the station.

Mickleover: The mildest December since 2015, and the second mildest since 1988. No air frosts were recorded, which was only the second time on the station record.

Bablake: This was the dulllest December in Coventry since 1989 (20.0 hours); only two Decembers have recorded less sunshine in the past 50 years (1987 and 1989).

Ely: Dull, generally mild, and drier than recent months. Very few highlights; foggy just after Christmas, only one air frost, wet the first week, then only one really wet day.

Coton-in-the-Elms: A very mild December. The mean temperature was the second highest for December in 34 years of recording; the highest being 9.6 C in December 2015. Frosts were infrequent, and snow non-existent. The total rainfall for the 24-hour period, ending at 0900 on the 18th, was 24.3 mm, which was the wettest day on record back to 1991.

Desford: A mild month with average rainfall and no air frosts. Very mild Christmas Eve, some sunshine breaking the anticyclonic gloom on Christmas Day, but fog and low cloud persisting after Christmas.

Middleton: The third warmest December on record (since 1977) behind 1988 and 2015. The second dulllest month of any name since 2000, only December 2021 was duller.

UK overview

December was marked by a series of unsettled weather patterns across the UK. The month began with a mix of rain and wintry showers, particularly affecting northern and western regions. Storm Darragh, the fourth named storm of the season, brought significant disruption from the 6th to the 8th, with heavy rain and severe gales, especially in coastal areas of Wales and southwest England. This multi-hazard event brought a prolonged spell of damaging winds, as well as significant rain, and saw the first red warning issued since Storm Isha in January 2024. Following the storm, high pressure briefly settled over the UK, bringing calmer and colder conditions, particularly in Scotland where frost and freezing fog occurred. However, changeable weather returned with frontal systems bringing showers across various parts of the UK as well as fog and wind and some wintry showers on high ground in the north, which persisted through to the 22nd. Temperatures turned milder as a tropical maritime airmass from the southwest dominated, with fog and drizzle across the UK and some rain in Scotland. The final few days of December saw wet and unsettled weather set in, with heavy rain in northern England, Wales and Scotland. December was milder than average, with the UK experiencing a provisional mean temperature of 6.2°C, 2.0°C above the long-term average.

This was provisionally the fifth warmest December on record for the UK. All four countries saw temperatures above average overall, although Wales and Northern Ireland were slightly cooler than England and Scotland. Rainfall has been above average for the UK, provisionally recording 139.4mm of rainfall, 110% of the long-term average. Scotland, in particular was exceptionally wet, seeing 133% of the long-term average rainfall. Meanwhile Northern Ireland saw below average rainfall levels, provisionally recording only 69% of the long-term average rainfall for December. The month was dull overall, with sunshine hours around half the average for the UK, which provisionally recorded only 24.3 hours of sunshine, 57% of the long-term average. Scotland and Northern Ireland were slightly sunnier, seeing 62% and 60% of the long-term average sunshine hours, respectively. Reference climatology used for calculating anomalies is the period 1991-2020 unless otherwise stated.

Weather impacts

- Storm Darragh brought strong winds and heavy rain to much of the UK, in particular Wales and southwest England
- Heavy rain on the 30th and 31st saw flooding in NW England and Scotland

December was a mild, largely westerly month with unsettled weather. The month opened with typical Atlantic-based weather but by the 4th there were signs of a major development that would potentially bring stormy conditions to many parts of the UK on the 7th. The system responsible was named Storm Darragh on the 5th, by which time a medium impacts amber wind warning was in force for Northern Ireland and the western edges of southern Scotland, England and Wales. On the 6th this was escalated to high impacts with a red wind warning issued for west Wales and the Bristol Channel area of south Wales and southwest England, the first red warning since storm Isha in January. The red warning also led to the issuance of an Emergency Alert to those within the warning area. Also, on the 6th an additional medium impacts amber warning for rain was issued for south Wales, an area still recovering after the effects of Storm Bert only a fortnight before. Storm Darragh's winds peaked on Saturday 7th, which led to a considerable number of pre-Christmas weekend markets and events being cancelled, especially those within the amber and red wind warning areas. Such pre-emptive moves doubtless reduced the extent of impacts but even so, the National Grid reported that in excess of three quarters of a million domestic and business premises lost power for a time as a result of the winds. Gusts reached 70 to 80mph widely across south and west Wales, southwest England, northeast England and Northumberland, with a gust of 96mph recorded at Berry Head, Devon. Two fatalities were reported on the day of the storm, one in Longton, Lancashire and another in Birmingham, both the result of falling trees impacting vehicles. In Northern Ireland, a cooling chimney at Ballylumford Power Station was reportedly damaged by strong wind gusts with the site unable to resume power generation for over a week. Across the amber and red warning areas of Wales and southwest England in particular, transport disruption was widespread with numerous road closures and rail restrictions reported as a result of fallen trees, debris, etc. Both Severn bridges were reportedly closed for several hours

whilst Natural Resources Wales reported heavy treefall across its estates, with Cardiff Council reporting more trees downed as a result of Storm Darragh than in the previous 20 years. The Porth Wen solar farm in Anglesey, the UK's largest, reported many of its solar panels damaged by the sheer strength of the wind. The largest economic impact, however, was the extended closure of the nearby Holyhead Port to Irish Sea ferry traffic as a result of wind damage. On the 17th, ten days after Storm Darragh, it was announced that the ferry terminal would remain closed until at least 15th January with serious knock-on effects for the diversion ports of Cairnryan (southwest Scotland) and Fishguard (southwest Wales). Meanwhile, within the broader yellow wind warning area for Storm Darragh there was plenty of disruption and many cancelled outdoor pre-Christmas events. Builth Wells in Powys saw serious flooding as the River Wye rose to near record levels with several vehicle rescues reported in addition to a number of houses being pumped clear of flood water. The weather quietened down considerably in the wake of Storm Darragh as high pressure built for a few days. The 14th to 16th saw a prolonged rainfall event affect the northwest Highlands, though only low impact rain warnings were required. A few flood warnings were triggered with several roads reported closed. The period between the 17th and 22nd was often windy and unsettled with various low and medium impact yellow wind warnings issued up and down the country. One or two minor wind impacts were reported on the 18th across Wales with some small-scale surface water flooding reported from both Cardiff and Swansea later on the 18th. The weekend of the 21st and 22nd was windy across the UK, especially across northern and western Scotland, where some localised power outages were reported. A proportion of flights out of Heathrow Airport were reported as being pro-actively cancelled ahead of the strong winds on one of the busiest travelling weekends of the year. With gusts of around 70mph being observed on the trans-Pennine A66, the decision was taken to close the high-level sections until the winds moderated. The 23rd to 29th saw mild, benign conditions predominate, but the 30th and 31st saw a slide back to more unsettled weather with western Scotland very wet and a slow-moving band of heavy rain becoming anchored across northern Wales and northwestern England later on New Years Eve. Two amber rain warnings were issued for Scotland and northwest England on the 30th and 31st, that for Scotland being accompanied by three severe flood warnings. On the 30th, rail services across western Scotland were badly disrupted by flooding whilst strong winds resulted in the cancellation of Edinburgh's Hogmanay celebrations on the 31st. The persistent rain across northwest England late on the 31st resulted in numerous flood warnings being issued and was linked to multiple traffic incidents across Lancashire with road flooding and stranded vehicles reported. Across Greater Manchester there was increasing concern that the amount of rainfall could eventually trigger some significant flooding impacts by New Year's Day, as would prove to be the case.

December 1924

Copdock: Another wet month, but the sunniest December in my records, except 1904 and 1917. The land is completely water-logged.

Hodsock: A very warm month especially at nights. Mean temperature not quite so high as in 1900, but we have never had a December without at least two nights with the temperature in the screen below 32 F.

Meltham: Equally warm with December 1900, and with that exception the warmest in my records of 47 years. Last nine days very stormy and wet, like December 1921. No snow this quarter.

Newport (IOW): A wet and wild month, becoming stormy towards its close.

Southport: The most southerly December since the anemograph was erected in 1898, and warmest, with one exception (1898) during 54 years of observations. Wet but sunny. Not a single ground frost.

Torquay: Generally unsettled, exceptionally wet, with frequent and heavy gales. Sunshine normal and absence of frosts.

Island Eriska (Argyll): Last week of month very stormy – rain, sleet and snow with thunder and lightning. Heavy snow on surrounding hills.

Lerwick: The chief characteristics of the month, as compared with December 1923, have been lesser sunshine, greater frequency of gales, and a very high temperature.

Portree (Skye): Exceptionally wet and stormy month with thunder on 7 days.

Robaston Manse (Hawick): The greater part of the month was remarkably mild. Early primroses in bloom.

Belvoir Castle: Total rainfall 2.82 in, 71.6 mm, 115%.

Lincoln, Sessions House: Total rainfall 2.21 in, 56.1 mm, 101%.

Skegness, Estate Office: Total rainfall 1.59 in, 40.4 mm, 72%.

Louth, Westgate: Total rainfall 2.50 in, 63.5 mm, 90%.

Brigg: Total rainfall 2.00 in, 50.8 mm, 82%.

Worksop, Hodsock: Total rainfall 2.25 in, 57.1 mm, 95%.

Mickleover, Clyde House: Total rainfall 2.69 in, 68.3 mm, 102%.

Buxton, Devon Hospital: Total rainfall 4.91 in, 124.7 mm, 87%.

Derby/Burton-on-Trent: All rain gauge sites received 60 mm +/- 5 mm, which represents about normal amounts during, what was, quite a mild month. The lowest temperatures were around -1 C on the 17th, 24th, and 31st, while the highest maximum was about 12 C on the 19th. Numerous days achieved 10 C. The overall mean in Burton was 6.3 C, which compares with

the CET value of 6.8 C. There were 5 air frosts at Burton-on-Trent. The month was noticeable milder than the average for 1891-1920 (4.5 C).

UK Overview of December 1924

Unsettled, but mild, conditions, with strong winds and gales during the second half of the month summarise the month of December 1924.

The month commenced with unsettled conditions, associated with secondary depressions of the west coast of Iceland, dominated the country. Rain, locally heavy, together with mist, fog, and low cloud predominated. On the 5th a deep and vigorous know, centred off south-west Iceland, moved north, while secondaries moved north-east across the British Isles producing strong southerly or south-westerlies which reached gale force in the English Channel and at coastal stations. There was also heavy rain in places. Unsettled conditions continued to affect the Faroes and Hebrides but, on the 7th, a ridge of high pressure moved across England producing fine weather. On the 10th an anticyclone, centred over Russia, extended westwards to include the British Isles. The flow from the continent brought the thick fog and mist from central Europe to eastern and south-eastern England. During the following few days shallow secondary depressions skirted the northern and western coasts of the country bringing dull, but mild, weather with local rain or drizzle to northern parts; the weather improved temporarily on the 14th and on the 16th. Conditions improved for a few days bringing drier weather to most of England, but not to the west. On the 22nd secondary depressions, associated with a deep low located to the south-west of Iceland, produced very unsettled weather over the British Isles, with gales being reported from exposed places. On the 27th, associated with these secondaries, rain fell over a wide area, with sleet and hail being reported in the north and north-west. The gales were particularly severe in the English Channel, reaching 60 mph [52 kt] at times. A short-lived improvement was followed, during the last few days, by further secondary depressions, giving a very stormy end to the month.

The mean temperature for the month through out the country was above average. The greatest departure was +5.2 F [+2.6 C] in northern and eastern Scotland, and north-west England, while the smallest departure was +1.3 F [+0.6 C] in the Channel Isles. During the 1st, 3rd, and 4th weeks the mean was above average, but during the 2nd the mean temperature was below average in three areas. During the period of fog, on the 10th and 11th, maxima below 35 F [2 C] were recorded at a few stations, while at Wisley and Wallinton the maximum temperature on the 10th was 32 F [0 C]. In Scotland Decmber 1924 was the mildest experienced for at least 60 years; at Edinburgh the only milder Decembers were those of 1843 and 1857.

Ground frosts were reported on several occasions, at South Farnborough, on the 10th, the grassminimum was as low as 15 F [-9,4 C].

Precipitation was above average in most places, except for north-east England and the Channel Isles. In England the east coast, part of the north Midlands, a small area on the north-east coast, and parts of Devon and Somerset were reported as being below average. The northern and eastern coasts of Scotland were also below average, with the low lying areas of Moray and Banff being less than 50%. At Gordon Castle the total rainfall of 24 mm was about 33% of average, and the lowest recorded rainfall for December since 1905. In the Upper Thames valley, parts of Sussex and Kent, the Lake District, South Wales, the north-west, central and south Scotland rainfall was greater than 150%, but nowhere did precipitation exceed 200% of average. During the first three weeks precipitation was mainly below average, but above in all areas during the fourth week.

The depression which approached Scotland on the night of the 12th/13th brought heavy rain along the west coast of Ireland and Scotland, 119 mm being recorded at Kinlochquoich, and 79 mm at Ardgour in Scotland, while in Ireland 41 mm was recorded at Blacksod, and 39 mm at Mallarany on the west coast. Heavy rain was again reported in Scotland on the 16th; 56 mm at Greenock, and 54 mm at Eskdalemuir. During the last few days there was extensive flooding in many parts of the country.

Apart from some snow and sleet reported at Oundle and Wisley on the 13th, very little snow was noted until the end of the month when showers of sleet and snow fell in many parts of Scotland, and at a few places in England and Ireland. Snow depths of 2 or 3 inches [5 to 8 cm] were reported from a few places in England and Scotland.

Reports of sporadic thunderstorms were noted on the 5th, 21st to 24th, and 27th to 31st in many places in the British Isles, and on every day from the 27th to the end of the month in Scotland, mainly towards the north-west.

Although the month was mainly unsettled, a few sunny days occurred, and the duration of sunshine was therefore above average in all areas, apart from the north-east of England and western Scotland. The greatest excess was 0.62 hours in the Channel Isles, and the least was 0.09 hours in western Scotland. The Channel Isles had 29% of possible duration, but northern and western Scotland had only 12%. Sunshine duration was below average during the period 3rd to 10th, but above for the remainder of the month.

Mist and fog were prevalent during the month. Intense gloom, due to fog, was noted in and around London on the afternoon of the 22nd. The foggy conditions, noted on the continent, extended to the British Isles on the 10th and 11th, and were dense. In many places traffic was interrupted, and in some areas in and around London entirely suspended; at Hampstead the fog persisted for 62 hours.

A warm, generally wet and stormy month, with a period of dense fog around the middle of the month.ⁱⁱ

Around the World

Pressure was below average over an area covering the Atlantic Ocean and Spitzbergen, and was very low over Iceland, while a large area of high pressure covered Central and Eastern Europe extending well into Russia. The synoptic situation favoured a strong south-westerly air stream over Great Britain and Scandinavia which, in turn, produced above average temperatures over the whole of Europe; at Spitzbergen temperatures were +11 F [+5.5 C] above average, at Haparanda [Sweden, at the head of the Gulf of Bothnia] +10 F [+5.0 C] above average, and at Lisbon and Zurich +2 F [+1 C]. Precipitation was slightly above average over north-west Europe, but below in Central Europe. On the 5th an anticyclone was established over western Russia and had spread west, by the 17th it had extended to the south of the Azores and was remained stationary until nearly the end of the month. These calm conditions produced significant mist or fog over Russia and Central Europe, but comparatively warm weather over north-west Europe. Depressions alternated with fair weather during which significant periods of fog, and some very low temperatures were experienced. Conditions became more stormy later in the month, with many gales accompanied by heavy rain. Early in the month bad weather was reported over the Mediterranean but, as the European anticyclone extended west, more stable conditions began to dominate and, by the 12th fine weather was established. On the 1st a violent storm was reported from Nice with much damage being done, and on the 3rd a storm affected the whole of the Iberian peninsula. From the 8th to the 11th thick fog over Belgium and Germany produced significant problems to rail and shipping traffic. Fog also caused problems in France and, as in England, the last few days of the month saw storms being reported along the Atlantic and English Channel coasts. In Switzerland the weather was fine and dry, with little snow, until the 29th, when significant snow fell and the winter sports season was able to start.

In the middle of the month Canada and the USA experienced a period of intense cold. Heavy snowstorms affected rail traffic in Western Canada; a temperature of -44 F [-42 C] was noted at Edmonton in Alberta on the night of the 16th/17th, and schools were closed until the weather moderated. The cold weather also affected all the states west of the Mississippi; at Miles City, Montana, another minimum temperature of -44 F [-42 C] was reported on the 19th. A further wave of intense cold covered America at the end of the month.

Snow was reported at Baghdad on the 26th; the first fall in 14 years, and was followed by 8 F of frost [24 F -4 C?]. Fog was reported from Japan, on the 12th, and was found to be the cause of a shipping incident; a naval repair ship ran aground on a reef with 100 seamen being drowned.

Rainfall in Western Australia and Tasmania was below average, in Tasmania it was only 39% of normal. There was however an excess in parts of Queensland and New South Wales, the extreme south-east coast of New South Wales receiving 237% of average. Elsewhere rainfall was about average. On the 23rd a storm in Sydney produced a wind speed of 70 mph [61 kt] which seriously affected traffic.

In Brazil rainfall was reported to be heavy in central districts, being 113 mm above average, but in southern districts it was irregular, being only 29 mm above average. No data for the northern districts was available to the Meteorological Magazine at the time of going to press. Crops were reported to be good, but some had been damaged from flooding after the heavy rain in central districts.ⁱⁱⁱ

Central England Data.^{iv} December 1924 (Averaging period is 1891 to 1920.)

Mean Maximum Temperature: 8.9 C. Average: 7.0 C.

Mean Minimum Temperature: 4.7 C. Average: 2.1 C.

Mean Temperature: 6.8 C. Average: 4.5 C.

England and Wales Rainfall: 123.9 mm. Average: 104.2 mm.

Midlands Data. (Averaging period is 1911 to 1920).

Midlands Mean Maximum Temperature: 8.6 C. Average: 7.0 C.

Midlands Mean Minimum Temperature: 3.7 C. Average: 1.4 C.

Midlands Mean Temperature: 6.1 C. Average: 4.2 C.

Midlands Rainfall: 93.2 mm. Average: 97.9 mm.

Central England Data December 2024 (Provisional) (Averaging period is 1991-2020).

Mean Maximum Temperature: 9.1 C. Average: 7.9 C.

Mean Minimum Temperature: 4.6 C. Average: 2.2 C.

Mean Temperature: 6.8 C. Average: 5.0 C.

England and Wales Rainfall: 89.3 mm. Average: 103.6 mm.

Midlands Data.

Mean Maximum Temperature: 9.1 C. Average: 7.4 C.

Mean Minimum Temperature: 4.1 C. Average: 1.6 C.

Mean Temperature: 6.6 C. Average: 4.5 C.

Midlands Rainfall: 86.4 mm. Average: 82.3 mm.

Sunshine: 28.8 hours. Average: 49.7 hours.

ⁱ Courtesy of T Scholey.

ⁱⁱ Monthly Weather Report, December 1924, Meteorological Office, HMSO, February 1925, p. 155.

-
- iii Meteorological Magazine, December 1924, Meteorological Office, HMSO, January 1925, pp 296-297.
iv Hadley Centre, Central England and Midlands, Meteorological Office.