



Weather Front.

August 2024/1924.

August 2024

Observers Notes.

Ely: A warm month for daytime data, but yet another month with cool nights. Unusually for 2024 a mainly dry month with only one really wet day, the 24th. The driest August since 2003. No thunder heard and only 5 thunder days so far this year.

Derby: An unremarkable August.

Middleton: The driest August since 2003. The largest daily rainfall was the least in August since 1995. It was the 7th consecutive month with below average sun shine.

Mickleover: The driest August since 2003 and the fourth driest since 1983. There were only 5 days when the maximum temperature exceeded 25 C.

Mountsorrel: A slightly milder month than average. There were some fine days, but temperatures over 26 C were exceeded on only five days, the warmest being the 12th. It was the warmest August since 2022. It was also a very dry month, and the driest since 2022. The sunshine total of 153 hours made it the dullest August since 2021. There were no substantial areas of high pressure until the close of the month with a maximum pressure of 1026 mb on the 31st.

Lowdham: The lowest maximum temperature of 17.8 C was the highest since 1990. The maximum daily rainfall of 6.3 mm, on the 1st, was the lowest daily fall since 1995. The January to August rainfall total of 527.3 mm is the 16th wettest for the period in the Nottingham area since 1840. The sunshine recorded at Radcliffe-on-Trent was 160.3 hours (93% of the 1991-2020 average).ⁱ

Desford: A dry month with average temperatures. Nearby thunderstorm and torrential rain to east of this location on the evening of the 1st.

UK overview August 2024

August began on a warm note, with temperatures above average across the country, but cooled in the second half of the month. The weather was changeable, with scattered showers as well as dry, fine spells. The winds were often from the west or southwest, bringing moist, sometimes warm air from the Atlantic. August began with widespread thunderstorms across central and southern parts of England, which brought heavy downpours and some flooding. Temperatures were above or around average for the first week, and then a warm spell moved in from the 10th. The 12th saw the highest temperature of the year so far, 34.8°C, recorded in Cambridge, while thunderstorms spread across Scotland, Northern Ireland and northern England. Following this the temperatures returned to around average for many and below average for northern areas. Scotland in particular saw cooler than average temperatures in the second half of the month. On the 22nd, the 12th named storm of the season arrived: Storm Lilian brought strong winds and heavy rain to northern England and Wales and parts of Scotland. The 2023/24 storm season saw the most named storms since the naming system was launched in 2015. Overall, temperatures across the UK were slightly above average, with a provisional mean temperature of 15.4°C, 0.3°C above average. However, there was regional variation, with Scotland and Northern Ireland slightly below average (-0.1°C) and England more above average (+0.6°C). Rainfall showed similar regional variation, with northwestern Scotland provisionally experiencing 162% of the average August rainfall while southern England only recorded 50% of the average. Some areas of Scotland including Glasgow, Renfrewshire, and Ayrshire and Arran provisionally recorded over 200% of the average August rainfall. Western Scotland provisionally experienced its third wettest August on record in a series from 1836. For the UK overall, rainfall was nearly average with 103.5mm of rain, 110% of the long-term average. Sunshine was just slightly below average for the UK (provisionally 159.6 hours, 99% of the long-term average).

Reference climatology used for calculating anomalies is the period 1991-2020 unless otherwise stated.

Weather impacts

- Thunderstorm activity led to flooding from heavy downpours across the UK
- Strong winds and heavy rain from storm Lilian caused power cuts and disruption to road and rail transport

August saw unsettled weather with a predominance of Atlantic weather systems and only brief settled interludes when temperatures in southeastern England reached 30°C on several occasions. There was a strong rainfall contrast between the very wet west of Scotland/Cumbria and the dry/very dry central and southern England. The month opened with thunderstorm activity across central and southern England. In the Birmingham area, heavy rain on the 1st led to road flooding, while in Hampshire there was extensive surface

water flooding following torrential downpours. Rail services in the area were badly disrupted by flooded sections of lines around Basingstoke and Winchester. Fallen trees affected road travel in Hampshire, and there were reports of stranded cars in Surrey after surface water flooding. A short hot spell in southern and southeastern England on the 11th and 12th led to the hottest day of the year so far (34.8°C reported in Cambridgeshire), but the transition back to cooler conditions on the 12th brought some lively thunderstorms across the more northern and western parts of the UK, especially Northern Ireland and Scotland. Lightning from the storms across Scotland on the morning of the 12th was reportedly responsible for a house fire in Aviemore from which residents were able to escape without serious injury. Around Aberdeenshire there was surface flooding from torrential downpours that affected road travel. Thunderstorm activity further south was much more muted but one that crossed the Sheldon area of Birmingham on the morning of the 12th was reportedly responsible for another house fire with several non-fatal injuries reported from the scene. In Northern Ireland, lightning was again the culprit with around 400 properties losing power for a time as a likely result of lightning damaging transmission infrastructure. Some 10,000 premises were reportedly off supply across the Republic of Ireland. Atlantic weather fronts brought widespread rain to Scotland, Northern Ireland and northern England on the 15th and may have been partly responsible for a fatal road traffic accident in Cumbria due to the difficult driving conditions at the time. Strong winds and high tides on the 21st led to road flooding in the centre of Stornoway, and strong winds were responsible for a couple reported line closures in western Scotland and western Wales where fallen trees were blocking the lines. Southwest Scotland saw some local road disruption due to both excess surface water and fallen trees in Dumfries and Galloway on the 22nd. The strong winds and rain led to the naming of the 12th storm of the 2023/24 season, Storm Lilian, which brought powerful winds on the 22nd and 23rd. Reports from Northern Powergrid suggested as many as 60,000 customers had been affected by power cuts, primarily across Yorkshire. Significant disruption to road and rail transport was reported across northern England with much of the Greater Manchester tram network brought to a halt after trees impacted several lines. The opening day of the Bolton food and drink festival was cancelled after stalls were badly damaged by the winds, necessitating a major clean-up operation. Wind damage was reported at a farm adventure park near Caerphilly, south Wales.ⁱⁱ

Overseas, August 2024.

Between 31st July and 1st August 147 mm of rain was recorded in the eastern parts of Delhi which broke the 14 year record for the highest single-day total in July. Delhi received more than half its monthly rain fall on the 31st. The torrential rain caused significant damage throughout northern India from flash floods, which overloaded the drainage system. In Kerala landslides were caused by 572 mm of rain in 48 hours, which resulted in at least 194 deaths, almost 200 people missing, and more than 8,300 people seeking government relief.ⁱⁱⁱ

Japan experienced significant heating. On 28 July temperatures reached nearly 40 C in Kyushu, the most southerly of the islands, and night minima also remained high, not dropping below the mid to high 20 C's. There were however signs of a reprieve later in the following week.^{iv}

Hurricane Debby made landfall along the Big Bend coast of Florida early on the 5th, before weakening. It then tracked towards the north-east across Florida and Georgia bringing heavy rain and associated floods; Lake City reported nearly 500 mm of rain. Storm surges were reported in coastal areas resulting in around 500 people being rescued from their homes, more than 250,000 homes lost power, and 6 deaths were recorded.

The storm moved over the Atlantic on the night of the 6th and provided South Carolina with further heavy rain on the 7th. A second landfall was made in the early hours of the 8th near Bulls Bay, South Carolina. At least three tornadoes were reported with the arrival of the storm, one of which damaged buildings near Raleigh, North Carolina.^v

The storm moved along the US east coast leaving many without power, and causing severe flooding. Significant damage was reported across the states of Ohio, New York, Pennsylvania, and Vermont. Power outages affected large areas and, in Pennsylvania, many rescues were reported due to rapidly rising flood water.^{vi}

Tropical cyclones in the western Pacific, and western Atlantic, were reported to have strengthened, with Typhoon Ampil in the western tropical Pacific, and hurricane Ernesto in the western tropical Atlantic. Ernesto caused severe disruption in Puerto Rico with almost one million people without power when winds of 80 mph battered the island. Rainfall at one observing station recorded more than 250 mm of rain. Ernesto moved north towards Bermuda where a hurricane warning was issued as Ernesto strengthened to a category 2 or 3 storm.^{vii}

Hundreds of people were evacuated as flash floods struck homes in the Balearic Islands during the week ending the 17th. Heavy rain and thunderstorms struck the islands on the 14th and 15th, together with hail and strong winds. The town of Soller, Majorca, received a total of 114 mm in 24 hours, 68 mm of which fell in one hour. Winds of 62 mph caused damage to roofs, trees, and made coastal waters unsafe for many vessels. One fisherman had to be rescued, several small vessels sank, and two yachts were reported to have collided. A heavy burst of hail destroyed a supermarket roof, 50 flights were cancelled, and 29 passengers had to be rescued from a train stranded by flood water.^{viii}

Very heavy rain across Tripura, north-east India, created the worst floods that the state had experienced in thirty years. The persistent rain, from the 19th to the 21st, resulted in several rivers exceeding their danger levels and resulting in widespread flooding, the deaths of 10 people, and the displacement of 34,000 others. The 24 hour rainfall at Bagaja was 375.8 mm, and at Belonia 324.4 mm, both on the 21st. A low pressure system over Bangladesh was

moving slowly westwards into north-east India, with a further 100-150 mm of rain expected on the 23rd. Nearly 3 million people in Bangladesh were affected by flooding, and road connections were severed, which hampered relief efforts.^{ix}

Hurricane Hone passed just 50 miles south of Hawaii on the 25th, with sustained winds near the centre of 80 mph. The impact from the storm saw elevated surf and sea swells causing breaking waves up to 4.3 metres. The biggest threat was from flash flooding and landslides on the steep slopes, especially on the eastern, windward, side of the island. Reports of 110 mm of rain were noted in six hours from 9 pm on the 24th.

Typhoon Shanshan was reported to be heading for southern Japan on the 25th, mean speeds of 75 mph and gusts of 110 mph. By the 26th sustained wind speeds were above 97 mph. The storm peaked in the early hours of the 28th with gusts of 130 mph, but several gusts up to 157 mph were recorded, throwing debris in the air, and ripping tiles of roofs. It was reported that rainfall in one area, over a two day period, was equivalent to about half the average annual rainfall of the UK, some parts of Japan receiving between 50 and 80 mm in one hour.^x

August 1924

Observers Notes.^{xi}

Arlington (Devon): The wettest August since 1912, When the total of 339 mm was registered. {The 1924 rainfall total was 261.1 mm}.

Berwick -upon-Tweed: Dull, damp month, humid and calm.

Copdock (Suffolk): A very disappointing month, dull, wet, and cold. Sunshine 20% below average and rainfall and rain days some 30% above average. Temperature much below normal.

Skegness: An average August.

Torquay: The outstanding features of the month were the absence of high temperatures, dull and overcast skies with short periods of bright sunshine, frequent drizzle.

Walton-on-Naze: The month was remarkable for very low temperatures, scant sunshine, high humidity, and the unusual number of thunderstorms.

Cranford House (nr. Aberdeen): Wet, cold, and little sunshine.

Portree (Isle of Skye): Weather very unsettled, and wet.

Roberton Manse (Roxburghshire): From first to last a cloudy and rainy month.

Dublin: In fitting sequel to July, August proved a cloudy, cool, and rainy month; wind entirely from between SW and NW.

Burton-on-Trent/Derby: The August 1924 situation locally shows a wide rainfall variation, but with the emphasis on Burton for the higher totals. Derby gauges yielded total in the 68-82 mm range, which was perhaps quite close to normal, while Burton received 82-115 mm, the latter area having 20 to 24 days with rain. Temperatures were well below modern expectations for August. The overall mean values were in the 13.5 C to 14.5 C range, CET being 14.1 C, and extremes being around 28 C on the 11th, and 5 C as a minimum on the 9th. Most minimum values were below 10 C at Byrkley Gardens (c. 425 ft AMSL).

[18-19 August: severe floods, cyclonic situation, heavy rain 239 mm at Cannington, Quantock Hills (Somerset), third-largest daily total on record, severe floods.]^{xii}

[August, cool and wet, though with a few fine spells.]^{xiii}

Overview August 1924.

The weather of August 1924 was mainly cool, unsettled, and westerly. The beginning of the month saw rain falling over the whole country followed by a short spell of anticyclonic conditions from the 6th to the 10th. During this period several stations reported bright sunshine of 13 or 14 hours; in the north-east the week ending the 9th was rainless. On the 11th unsettled weather returned to western coasts from a depression located to the south of Iceland which spread south-east. The remainder of the month saw low pressure in the north and north-west with rain falling once again over the whole country. High winds and gales were reported in the English Channel, and other parts of the coast on the 17th.

The mean temperature over much of the country was below average, except for northern Scotland where the mean was 0.3 F [0.1 C] above. The largest deficiency was 2.5 F [1.3 C] in the Channel Isles and the Isles of Scilly. The week of the 17th to 23rd was the coldest, but each week saw the weekly mean below average everywhere.

There was a small range of temperature, the deviation from average being more marked by day than by night. The night of the 4th/5th was very warm in many parts of England, temperatures not falling below 60 F [15.6 C] in some places [58 F , 14.4 C at Brocklesby]. Soil temperatures were generally below average, particularly in Scotland, but at a few stations in England the soil temperature was above normal. Ground frosts occurred at a few stations; Comondale (Yorkshire) recorded four occasions and, on the 9th, the ground temperature at Rhayader (Radnor) was 29 F [-2 C].

Rainfall in most areas was above average but, in northern Scotland, north-east and eastern England, southern Ireland, the Channel Isles, and the Isles of Scilly, rainfall was slightly below average. Precipitation was below average in several small areas, however, there were two large areas. The first being an irregular region extending from northern England to central Scotland, while the second enclosed a considerable part of central and southern Ireland. Rainfall exceeding 150% of average could be found in a number of localities throughout the

country, the largest being one which extended from County Mayo to County Antrim. The distribution was however very irregular, a few small areas having under 73% of average.

The driest period was from the 3rd to the 9th, while the wettest week was from the 17th to the 23rd. Early on the morning of the 19th heavy rain to the east of the Quantock Hills (Somerset) was unprecedented, and gave the second largest fall ever recorded, at that time, in one day anywhere in the British Isles. The total rainfall recorded at Brymore House, Bridgewater, ending at 0800 on the 19th was 230 mm, while the total to 0900 was 239 mm. The previous largest fall was 243 mm at Sexy's School, Bruton, Somerset, on the 28 June 1917.^{xiv}

There had been no rain before 2300 on the 18th, but heavy showers had fallen by 0300 on the 19th, and thunder was heard in the west. Very heavy rain was noted around 0300, and frequent thunder was reported. The rain and hail was so intense that "it stifled the noise of the thunder. As soon as one could see out the place was like a river and in places the water was 4 ½ feet deep [1.35 m]..."^{xv}

It is understood that the raingauge was a "Snowdon" pattern capable of holding 10 in [254 mm] of rain. The Snowdan pattern is similar to the Meteorological Office MK 2 gauge, but does not have the splayed base of the latter gauge and therefore can be moved very easily from the vertical.^{xvi} While there are no direct measurement supporting the 215.9 mm in 4 ½ hours, other observations in the area agree that the most intense rain was between 0300 and 0730, and that the mean rate of rainfall during that period was in excess of 1 in [25.4 mm] per hour.

Reports of floods suggested two areas of heavy rain, one on the eastern side of the hills covering the villages of Stogursey, Combrich, Cannington, Fiddington, and Nether Stowey, while to the other side of Bridgewater, the heavy rain fell on the Polden Hills, covering the villages of Cossington, Catcott, and Ascott. No rainfall reports were available from these areas, but outside the Quantock's area two rainfall totals support the Brymore total; at Ashford 4.50 in [114.3 mm], one mile west of Brymore, and at Fairfield House, 3.93 in [99.8 mm] to the west of Stogursey. Many other heavy falls of rain, mainly associated with thunderstorms, were also reported; 83 mm at Inverurie (Aberdeen) on the 22nd, 51 mm at Stonyhurst on the 20th, and 42 mm at Mallarany (Mayo) on the 27th. Some of the largest totals recorded were; 475 mm at the Styne (Seathwaite, Cumbria), 335 mm at Delphi Lodge (Mayo), and 305 mm at yn Fawr (Glamorgan). At Logie Coldstone (Aberdeen) it was the wettest August since 1878, and at Grantowwn-on-Spey (Elgin) the rainfall of the wet August of 1923 was exceeded.

Thunderstorms were frequent and almost no station on the eastern side of England, or in the Midlands, were entirely free. On the western side of England there were records from many stations, and frequent reports from Scotland, but less than in July, the most widespread occurring on the afternoon of the 22nd. Tenbury (Worcester) and Hampstead reported 4 days of hail, but many stations provided a nil return.

The duration of sunshine was below average everywhere. The largest deficiency being in eastern Scotland (-1.39 hr) and the smallest was in northern Scotland (-0.33 hr). South-east England had 39% of possible duration while northern, and eastern, Scotland had 22%. The week 3rd to 9th was the brightest, and the week 24th to 30th the dullest. The two largest mean daily durations were 6.89 hr at Guernsey, and 6.86 hr at Ramsgate. Many daily durations exceeded 12 hr, and a number over 13 hr, were reported; Guernsey having 14.2 hr on the 2nd.

Fog was infrequent, and in many cases did not occur at the morning observation. However, Aberystwyth noted 10 occasions, and Bellingham (Northumberland) 6. Finally, a waterspout was seen at Ventnor around 100 on the 20th.^{xvii}

Generally, August 1924 was cool and dull, with frequent rain.

The World, August 1924.^{xviii}

The first half of the month over Europe was mainly fair, with thunderstorms being reported in many places. On the 7th a violent thunderstorm was reported over the central plateau and eastern departments of France, which disrupted communications, produced considerable damage to the harvest, and to vineyards. Temperatures were high at the beginning of the month but, by the 12th the weather had deteriorated and remained unsettled to the end of the month, with most places having lower temperatures, and more rain, than usual. In parts of Spain the drought continued, Madrid having been without rain for 100 days by the 16th. In Andalusia, Aragon, and Catalonia crops were reported to be failing through lack of rain. In Finland, due to heat and drought, considerable areas of forest were reduced to ash through forest fires. However, at the start of the month the river Isar, near Munich, was reported to be in flood, and in southern Poland, floods had destroyed a number of bridges and houses. In Hungary it was reported that the wine crop was far below average because of the poor weather, but other crop yields were normal. In Switzerland the severe weather continued, and a party of tourists were trapped on the Matterhorn from the 10th to the 15th. On the 28th fresh snow covered the Bernese Oberland down to 3,000 ft, and the temperature fell to freezing at Davos and St Moritz on the 29th. Very heavy rain was reported around Lake Maggiore and Varese on the 15th. In central and southern Norway floods produced considerable damage, with a number of people being made homeless.

In India, the rains in Madras caused considerable flooding, with large areas being inundated. At Mercara [Madikeri] in the eastern Ghats [78 miles NW of Mysore] Karnataka state, the rainfall for June and July was over 100 in [2540 mm], 24 in [609.6 mm] falling on one day alone. In Bombay [Mumbai] the harvest had been almost destroyed by drought, but the monsoon rain had eased the problem. In China, flooding continued to be a problem as intermittent rain topped up the water in the flooded areas, however, the floods in the Tientsin [Tianjin, Hebei province] area had eased. Flooding had also been reported in Formosa [Taiwan] with 700 people reported to have drowned.

The eastern USA was reported to have suffered a heat wave at the beginning of August, with Washington having a maximum temperature of 102 F [39 C] on the 6th. There were also reports of destructive thunderstorms from many places. Because of the heat, and lack of rain in the south-eastern states, the cotton harvest was considered to be “unfavourable”. During the evening of the 26th a hurricane was reported in the Western Atlantic with several ships reporting injuries to passengers, [and crew?], and damage to ships. During the 28th/29th another hurricane passed over the Leeward Islands, causing considerable damage to property, crops, and leaving more than 100 casualties.

In Australia much needed rain had fallen on the wheat producing areas, but less welcome were the floods which followed in the low-lying areas of Victoria.

In Brazil it was reported that the winter rains were plentiful in the north-east, and were 62 mm above the average for the month. However, elsewhere rain fall was 20 mm, 25 mm, and 60 mm below average in the northern, central, and southern districts respectively. The mean temperature was 3.6 F [1.8 C] below average; a cold spell occurring in the middle of the month. It is understood that many well developed anticyclones continued to cross the country. The lack of rain and low temperatures was proving unfavourable to the cane and coffee crops.

Central England Data.^{xix} (Averaging period is 1891 to 1920.)

Mean Maximum Temperature: 17.7 C. Average: 19.5 C.

Mean Minimum Temperature: 10.5 C. Average: 11.3 C.

Mean Temperature: 14.1 C. Average: 15.4 C.

England and Wales Rainfall: 98.5 mm. Average: 89.6 mm.

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

Midlands Mean Maximum Temperature: 17.7 C. Average: 19.8 C.

Midlands Mean Minimum Temperature: 9.4 C. Average: 10.4 C.

Midlands Mean Temperature: 13.5 C. Average: 15.1 C.

Midlands Rainfall: 83.8 mm. Average: 75.3 mm.

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

Mean Maximum Temperature: 21.4 C. Average: 20.9 C.

Mean Minimum Temperature: 12.6 C. Average: 12.1 C.

Mean Temperature: 17.0 C. Average: 16.5 C.

England and Wales Rainfall: 48.8 mm. Average: 82.3 mm.

Midlands Data.

Mean Maximum Temperature: 21.4 C. Average: 20.9 C.

Mean Minimum Temperature: 12.0 C. Average: 11.6 C.

Mean Temperature: 16.7 C. Average: 16.3 C.

Midlands Rainfall: 33.5 mm. Average: 71.3 mm.

Sunshine: 171.7 hours. Average: 175.2 hours.

ⁱ Courtesy of T Scholey.

ⁱⁱ Monthly Weather Summary, August 2024, Meteorological Office, HMSO, September 2024, pp. 2-4.

ⁱⁱⁱ The Guardian, 3 August 2024.

^{iv} The Guardian, 6 August 2024.

^v The Guardian, 10 August 2024.

^{vi} The Guardian, 13 August 2024.

^{vii} The Guardian, 17 August 2024.

^{viii} The Guardian, 20 August 2024.

^{ix} The Guardian, 24 August 2024.

^x The Guardian, 27 and 31 August 2024.

^{xi} Monthly Weather Report, August 1924, Meteorological Office, October 1924, HMSO, p. 99.

^{xii} Climate and Weather, Kington J, Harper Collins 2010, pp. 403-404.

^{xiii} Agricultural Records, AD 220-1977. Stratton J M and Houghton Brown J, ed. Whitlock R, Second edition, John Baker, 1978, p. 141.

^{xiv} MWR, August 1924, p. 99.

^{xv} Meteorological Magazine, September 1924, Meteorological Office, HMSO, October 1924, p. 187.

^{xvi} Observers Handbook, Meteorological Office, HMSO, 1982, 4th edition, p.138.

^{xvii} MWR, August 1924, p.99.

^{xviii} Meteorological Magazine, September 1924, Meteorological Office, HMSO, October 1924, pp 196 and 197.

^{xix} Hadley Centre, Central England and Midlands, Meteorological Office.