



Weather Front.

May 2024/1924.

May 2024.

Observers Notes.

Derby: There were no less than 24 instances of 10 C or higher during May 2024, by far a new record. The average is 8. There were 12 maxima of 20 C or higher, and the 26 C max was the highest for May for four years. The early and mid-month periods were in the 3.5 C to 4 C above normal category, while the late month was normal.

Mountsorrel: May was the warmest recorded in 23 years of record, and back to 1836 in the Leicester record. It was a wet and dull month. The month contained a very warm and sunny spell between the 5th and the 20th when temperatures peaked at 24.5 C. The last 10 days were much cooler and wetter, thus giving the idea that the month was not as good as it actually was.

Coton-in-the-Elms: This was the warmest May on the 33-year station record. In spite of this, the highest temperature was a modest 25.3 C, the highest in May since 2020. Nights were especially warm, but with no real cold nights, and only one ground frost. Rainfall was well above average; the total was the second highest on record. The wettest 24 hours was on the 21st, and was the wettest May day on the whole 33 year record.

Bablake: This has been the warmest May since before 1892.

Middleton: The warmest May on record despite a fairly cool end to the month. The mean minimum temperature was the highest on record by a margin of 1.6 C. The mean maximum was the second highest on record behind 2018.. It was the 5th wettest May on record, and the dullest since 1983.

Ely: May 2024 saw the highest mean temperature for 53 years, but only the highest mean maximum since 2022, and the highest mean minimum since 2017. The total rainfall for the year so far is 336 mm, the highest on the station record.

Mickleover: The third wettest May since 1986, 32% of the monthly total fell on one day. The mean temperature for the month was the highest on the station record, making May 2024

the mildest, and locally since at least 1952. The lowest minimum temperature was the highest for May since at least 1981.

Lowdham: The mean minimum and grass minimum temperatures were the highest on the station record (1991). The January to May rainfall total of 387.2 mm is the highest in the Nottingham area since 1840. 148.4 hours of sunshine (80% 1991-2020 average) were recorded at Radcliffe-on-Trent, making it the dullest May since 2021.ⁱ

Saltfleetby:

10 Day Mean Temperatures			
Date	Max	Min	Mean
1-10	16.9	8.7	12.8
11-20	16.9	10.4	13.6
1-20	16.9	9.3	13.1
21-31	16.8	10.2	13.5

UK overview

May started with thunderstorms across southern England, and the weather continued to be unsettled for the first week. Low pressure systems brought scattered showers across the UK, some of them locally heavy. However, a high-pressure system covered England and Wales on the 8th and brought more settled weather, extending up towards Scotland by the 10th. The clear weather coincided with a large solar flare on the 10th that led to the aurora borealis being visible across the entire UK. However, low pressure systems returned towards the middle of the month, bringing further unsettled weather and more thunderstorms across the UK. Rainfall was at times heavy, especially in northern England on the 21st and 22nd, but otherwise patchy and light, with some bright, sunny spells. This pattern of unsettled weather continued for the rest of the month. The UK experienced its warmest May on record, in a series going back to 1884. The UK provisionally recorded a mean temperature of 13.1°C, 2.4°C above the average May temperature and 1°C above the previous record (12.1°C in 2008). England, Scotland, and Northern Ireland all provisionally experienced their warmest Mays on record, while Wales experienced its equal-warmest May. Although the first half of the month saw average rainfall, amounts increased for many by the end of the month, resulting in the UK recording a provisional 82.5mm of rain (116% of the average May rainfall). Much of this was concentrated in England, especially northern England, which saw 155% of its average May rainfall. Provisionally, the 22nd was the wettest spring day on record for northern England, and some stations in the area experienced record-breaking amounts of rainfall: for example, Keswick received provisionally 94.8mm of rain on the 22nd, doubling its previous May record of 44.6mm. Northern Ireland was the driest country, provisionally recording just 63% of its average May rainfall. Sunshine hours were slightly below average, with the UK provisionally recording 159.3 sunshine hours (83% of the average for May). Reference climatology used for calculating anomalies is the period 1991-2020 unless otherwise stated.

Weather impacts

- Warmest May on record for the UK, England, Northern Ireland, and Scotland, and the equal-warmest May for Wales.
- Thunderstorms led to lightning damage and surface water flooding.
- Heavy rain on the 21st to 23rd led to flooding and travel disruption especially in Cumbria.

May started with thunderstorms in Wales, the Midlands and southern England, leading to reports of lightning damage to the rail electricity supply in Wiltshire and damage to homes and power supply in Sussex. Some areas in Devon and Somerset saw travel disruption due to surface water flooding and fallen trees. Further scattered heavy downpours over the first week of May led to surface water flooding in Aberdeenshire, Leeds, and Bradford.

Settled weather moved in from the 7th as a high-pressure centre took up residence close to the UK. Clear weather across the UK coincided with a major geomagnetic disturbance which led to widespread sightings of the aurora on the 10th. However, thunderstorms returned on the 12th, with reports of marble-sized hail in Coleford, Gloucestershire and surface flooding in Wales. Around 3000 homes in Ballymoney, Northern Ireland lost power as the storms moved north, and surface water flooding was reported from the centre of Ross-on-Wye. In Manchester, a large cascade of water poured through the Old Trafford roof towards the end of the Man United/Arsenal Premier League game, while at Manchester Airport a similarly spectacular leak was reported from the duty-free lounge. The storms continued north into Scotland where significant surface water flooding was reported in Greenock town centre.

Between the 21st and 23rd, a low-pressure system that had moved from the Netherlands towards the UK across the southern North Sea brought persistent rain to northern Wales, northern England, and southern/central Scotland. Initially impacting south/east England, the rain caused flash flooding and damage to railway signalling that led to travel disruption in Norfolk. As the system moved north, prolonged heavy rain across north Cumbria saw multiple reports of surface water flooding in Carlisle and households were temporarily cut off by rapidly rising rivers in and around the hamlet of Stockdalewath. Across north Cumbria the heavy rain severely disrupted rail travel. The system continued northwards and on the 23rd caused flooding across the Edinburgh area and in the city centre.

The last week of the month saw low pressure continuing to dominate, with outbreaks of heavy showers and thunderstorms across the UK. Some surface water impacts were observed, including short-term closures of roads and rails in parts of Cheshire, Lancashire, Greater Manchester, and West Yorkshire on the 26th and over north-east England and south/central Scotland on the 27th/28th. The 29th saw further flooding reported from Fife and Tayside, with a funnel cloud observed over Dundee. On the 30th/31st, strong northerly winds caused damage to trees in west Norfolk that caused travel disruption.

From the Press.

Torrential rain was reported in the southernmost state of Brazil, Rio Grande do Sul. This caused the worst flooding the country had experienced in 80 years. Many deaths, and the displacement of thousands was noted. The area has been hit by flooding three times in the past year purely because tropical and polar air masses meet around this latitude and result in long periods of dry weather alternating with bursts of heavy rain. The increase in rainfall is attributed to a combination of Global Warming and El Nino activity.

El Nino is considered to be partially responsible for the heavy rain in East Africa, which began in March, and has caused the flooding in Kenya, Somalia, Rwanda, Tanzania, and Burundi. In this area more than 400 deaths have been reported over the five countries. On the 3rd a powerful tropical storm hit Tanzania. The storm, Hidaya, strengthened to tropical cyclone status as it approached the coast and making it the most powerful storm recorded in the region.ⁱⁱ

During the week ending the 18th an unusually heavy snowfall was recorded in the eastern mountains of Gangwon province of South Korea. Between 1730 local time on the 15th and 0900 local time on the 16th, 40 cm [15 inches] of snow fell at Socheong shelter in Seoraksan national park, while 20 cm [7.9 inches] was recorded at the Jungcheong shelter. The snow severely damaged farm crops.

In south-west Australia a tornado, width 60 meters and windspeeds exceeding 90 mph, hit the city of Bunbury during the afternoon of the 17th. Damage to buildings was reported. A roof was blown off part of the regional prison and one prisoner was taken to hospital. The storm also brought down power lines leaving around 3,300 homes without power.

Storms developed across the southern USA leaving more than 200,000 people, across five states, without power, while Texas experienced hail stones of around 13 cm [5 inches] in diameter.ⁱⁱⁱ

After a lull in recent weeks, the storm season in the USA began to intensify once again, with winds of 100 mph and "tennis-ball-sized" hail being reported on the 19th. Low pressure moved across central USA and combined with moist air moving in from the Gulf of Mexico. This situation was thought to continue the threat of tornadoes, and large hail, across many states. The low pressure system was also likely to increase the temperature gradient across the USA and Canada. In eastern Canada and north-eastern USA temperatures were expected to be 10 C above the average, Ottawa and Detroit were expecting maxima of 30 C on the 22nd. However, western Canada and the USA were expecting a temperature drop of 20 C in the rear of the cold front.^{iv}

On the 25th an area of low pressure, located in the Bay of Bengal, intensified and was named Cyclone Remal. The cyclone made landfall between Sagar Island, West Bengal, and the Khepupara region of Bangladesh on the 26th. Warnings for heavy rain, strong winds, storm

surges, and rough seas were issued. Damage to power, and communication, lines were expected, together with flooding, flying debris, uprooted trees, and traffic disruption. The National Disaster Response Force was placed on standby, together with the armed forces and coastguard. Kolkata airport suspended all flight for 21 hours from the 26th, affecting 63,000 passengers, and an evacuation of nearly 800,000 people in the coastal region of Satkhira and Cox's Bazar, Bangladesh, was ordered.^v

During the weekend of the 25/26th violent storms were recorded in the USA, with the 26th being the worst day so far this year. Over 600 reports of damage were noted in 20 states. Storms developed over central and southern areas on the 25th and spread east on the following day, with more than 60 confirmed tornadoes resulting in at least 26 deaths. Northern Texas, Oklahoma, and Kentucky being the worst affected; wind speeds of up to 135 mph were recorded. With 1,063 tornadoes being recorded by the 29th, this makes it one of the most active seasons, the average being 771 by the 29th of May.

In northern and central parts of India an intense heatwave continued with temperatures reaching the mid-40s C each day, and maxima around 50 C in some places. The 26th saw temperatures above 45 C in 37 cities. An observing station to the north of Delhi recorded 52.3 C on the 29th and, if confirmed, would beat the existing record of 51 C set at Phalodi [about 80 miles NW of Jodhpur, near the edge of the Thal Desert border with Pakistan] in 2016.^{vi}

May 1924

Observers Notes.^{vii}

Branxholme (Roxburgh): Cold and wet month. Vegetation backward.

Aberdeen: The cloudiest May on record.

Perth: The wettest May on record.

Blundellsands (Lancashire): The wettest May since readings were commenced in this district 48 years ago.

Walton-on-Naze: The thunderstorm of the 18th was the heaviest for 20 years. The month was wet and thundery with freakish temperatures. Most of the rain fell at night so that work in agriculture was only slightly hindered.

Ipswich: The wettest month recorded at this station.

Skegness: The wettest and dullest May since 1912.

Torquay: The heaviest rainfall recorded for the month of May during the past 48 years.

Totland Bay: With the exception of May 1898, this month has been the wettest during the past 28 years.

Morwenstowe (Cornwall): A very cold month. Very heavy rain and much fog. The most sunless May I can remember.

Cheltenham: Rainfall the heaviest ever recorded during the 58 years records have been kept.

Louth (Westgate): Total rainfall for the month was 2.50 in (63.5 mm), 123% of 1891-1920 average.

Derby/Burton-on-Trent: A relatively normal rainfall for much of May was overturned right at the end when, for example, 34 mm fell at Burton on the 31st. All local gauges yielded high totals for the month, with most in the 90-95 mm range. Byrkley Gardens had “only” 79 mm and one of the Burton sites 104.4 mm; the normal for May, at that time, was close to 50 mm. Temperatures varied between 1 or 2 C on the 2nd, 5th, and 9th, possibly with ground frost, to 23 C to 26 C, shown in the handwritten record as 84 F, but this could be an error for 74 F. The mean temperature at Burton was 11.8 C to 12 C (CET 11.6 C). The 30 year mean for May on the CET record, at that time, was 11.3 C.

Brocklesby:

10 Day Mean Temperatures.

Date	Max	Min	Mean
1-10	53	40	47
11-20	64	45	55
1-20	59	43	51
21-31	66	48	57

Overview of the Weather in the UK, May 1924.^{viii}

A trough of low pressure covered the country at the start of the month and, by the 3rd, was centred over the North Sea. Rain fell over a wide area, with thunderstorms occurring locally; in one or two places, particularly Bristol and Stansted, the storms were short lived but intense. On the 4th, in the rear of the depression, the temperature fell, with sleet and snow occurring locally in the north of England, and Scotland, and thunderstorms being reported in eastern England. Associated with the depression, dull, cold, and showery weather, with occasional right intervals, dominated the British Isles until the 9th. During the next few days fair weather alternated with dull, rainy weather which was associated with a secondary depression tracking over the country. On the 14th a secondary depression moved north from the Bay of Biscay, and was accompanied by further thunderstorms in many parts of south-east England.

During the day the weather improved and, for the first time in the month, temperatures exceeded 70 F [21 C] in places. By the morning of the 17th an anticyclone became centered near the Straits of Dover, and the weather over southern districts was fine, but, a depression to the west of Ireland saw the fine weather replaced once again by unsettled conditions. From the 25th to the 28th, a ridge of high pressure moved in from the Atlantic producing fair weather, and on the 28th temperatures once again reached 70 F [21 C] or more in many parts of south-east England. On the evening of the 29th, a well developed line squall, accompanied by widespread thunderstorms, and darkness, was associated with the passage of a secondary depression across southern England. Very heavy rain, and local thunderstorms, were also associated with another depression which crossed the British Isles on the 31st.

Day-time temperatures were frequently low, however, during the second half of the month temperatures at night were generally above average so, except in Scotland and Northern Ireland, the mean temperature for the month was above average, the largest excess being 2.7 F [1.3 C] in eastern England. The mean for the week ending the 10th was generally below average but, the mean for each of the succeeding weeks was above average, except for the week ending the 17th in the north-west and south-west of England, western Scotland, Ireland, and in Scotland during the week ending 31st, where the average was slightly below normal.

Ground frost occurred in all parts of the country, particularly in Scotland, and north-east England where the number of days of ground frost exceeded ten in some places. At Renfrew, on the 9th, the grass temperature fell to 18 F [-7.8 C].

Rainfall was above average in all areas. Heavy falls of rain, associated with thunderstorms, were the most significant feature of the month. The greatest excess, over 300%, was in two small areas, the Severn Valley, and part of Kent, while the least rainfall occurred in the extreme north of Scotland. Thunder was heard on over twenty days. Thunderstorms were recorded in London and surrounding counties in the early hours of the 14th, and were general in southern England and the Midlands on the 18th, 19th, and 20th. Those on the 19th and 20th were accompanied by, in some cases, sudden, short, heavy downpours of rain, which cause flooding, and crop damage, in Bedfordshire, Hertfordshire, Buckinghamshire, Essex and Suffolk. In Berkhamstead 34 mm fell in 35 minutes on the 19th. The observer noted "that the hail which accompanied the storm was about the size of marbles. Some of the hailstones had the appearance of an elongated acid drop with an extra marble shaped stone attached, and measured three quarters of an inch in length [about 19 mm]."^{ix}

Lightning damage during the storms occurred in many places. The heaviest rainfall occurred on the 31st.

Floods occurred in Worcestershire, Shropshire, Herefordshire, and in Sunderland. The heaviest fall was recorded at Humber Rectory (Leominster) where 76 mm, out of a total of 95 mm, occurred in 1.75 hours. At Durham the total for the 31st was 70 mm and had been exceeded only once in 83 years (13 November 1901). At Ludlow 123 mm fell in 24 hours.

The heavy falls brought monthly totals way above the average. At Seathwaite 400 mm was recorded, and at Talymaes (Brecon) over 250 mm, while at Cheltenham, Blundellsands (Lancashire), and at Ross-on-Wye the totals were 179 mm, 140 mm, and 123 mm respectively, and were the largest May totals at these places since, 1866, 1876, and 1886 respectively.

Sunshine was below average in all areas, except for south-east England where it was slightly above. The dullest area was western Scotland with a daily average of 2.03 hours, or 26% of possible duration. There were occasional bright periods where sunshine exceeded 14 hours at several stations, particularly on the 16th and 28th. The week ending the 17th was the sunniest week of the month.

The number of days of fog during the month was small. Fog was reported on two or three days at several stations, while at Southampton, which reported the greatest number, there were ten days.

The observer at Motenstow reported a waterspout, at 1500 on the 5th, which lasted about seven minutes.

Abroad, May 1924.^x

The flooding on the continent, reported during April, continued during early May. At Strasbourg the Rhine rose 6 feet [about 1 metre] in 48 hours, and in Cologne many houses were flooded, and land inundated. In northern Italy warmer conditions prevailed until the 10th, when heavy rain and hail destroyed crops. Snow fell on the Treviso Alps, and abnormally low temperatures were reported in Bergamo and Piacenza on the 12th. From the 10th to the 24th high temperatures were reported from Central Europe, with violent thunderstorms being reported in many districts. On the 22nd a disastrous hail storm was noted in Upper Silesia [noe part of SW Poland and the Czech Republic]. Hailstones as large as walnuts stripped fruit trees of all blossom and, after 15 minutes, hail stones were lying at depths between one to six feet [1 to 2 metres]. People caught in the open were injured, many severely, from hail, and thousands of birds lay dead in the fields. Although the storm occurred in the early afternoon it was extremely dark at the time. Two hours later a violent thunderstorm, with torrential rain, was reported. Many deaths occurred from lightning, and roads, railways, and bridges, were destroyed by the water.

Severe floods were recorded in Virginia and Maryland, the worst for 50 years. The Ohio River at Pittsburgh rose 26 feet [about 9 metres]. At the end of the month the Southern States were swept by wind storms, and many casualties were reported.

High temperatures were reported in the Arctic during May, the mean at Spitsbergen being 29 F [-1.7 C], or 7 F [3 C] above the average.

The rainfall over Brazil, except for the Minas Geraes and Rio Gran do Sul states, was exceptional, being 123 mm, 41 mm, and 67 mm above average in the northern, central, and southern districts respectively. Numerous secondary depressions passed over the south of the country, similar to the situation during April.

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

Mean Maximum Temperature: 15.5 C. Average: 15.8 C.

Mean Minimum Temperature: 7.7 C. Average: 6.7 C.

Mean Temperature: 11.6 C. Average: 11.3 C.

England and Wales Rainfall: 122.4 mm. Average: 57.8 mm. 212%.

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

Midlands Mean Maximum Temperature: 15.3 C. Average: 16.7 C.

Midlands Mean Minimum Temperature: 6.7 C. Average: 6.3 C.

Midlands Mean Temperature: 10.9 C. Average: 11.5 C.

Midlands Rainfall: 127.6 mm. Average: 55.7 mm. 229%.

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

Mean Maximum Temperature: 18.3 C. Average: 16.5 C.

Mean Minimum Temperature: 9.9 C. Average: 7.3 C.

Mean Temperature: 14.1 C. Average: 11.9 C.

England and Wales Rainfall: 91.3 mm. Average: 62.7 mm.

Midlands Data.

Mean Maximum Temperature: 18.1 C. Average: 16.3 C.

Mean Minimum Temperature: 9.4 C. Average: 6.8 C.

Mean Temperature: 13.8 C. Average: 11.6 C.

Midlands Rainfall: 81.0 mm. Average: 58.3 mm.

Sunshine: hours. 160.2 Average: 193.0 hours.

ⁱ T Scholey, thanks for the sunshine data.

ⁱⁱ The Guardian, 7/5/2024.

ⁱⁱⁱ The Guardian, 18/5/2024.

^{iv} The Guardian, 21/5/2024.

^v The Guardian, 28/5/2024.

^{vi} The Guardian, 1/6/2024.

^{vii} Monthly Weather Report, May 1924, Meteorological Office, HMSO, July 1924, p. 57.

^{viii} Monthly Weather Report, May 1924, Meteorological Office, HMSO, July 1924, p. 57.

^{ix} MWR, May 1924, p. 57, col. 2.

^x May 1924, Meteorological Magazine, Meteorological Office, HMSO, June 1924, p. 124.

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