



Weather Front.

April 2024/1924

April 2024

Observers Notes.

Lowdham: The 27th was the wettest April day in the Nottingham area since the 23rd April 1971. There were 112.2 hours of sunshine (75%) at Radcliffe-on-Trent; the dullest April since 2018.

Ely: Mainly mild for the first half of the month, but cool during the second half, overall marginally above normal. Rainfall was frequent but light, apart from 18.0 mm on the 27th. A rare month with not a single day when calm, or clear skies, at 0900.

Middleton: The first four months of 2024 were the wettest on record with 494.2 mm. The previous wettest January-April was 2018 with 465.5 mm.

Mountsorrel: A line squall on the 15th produced 5 mm of rain in 20 minutes, with winds up to 41 mph. A possible tornado was reported from West Bridgeford, 15 miles north of the station. 30 mm of rain fell on the 28th as an intense belt of rain moved north over eastern England.

April was a slightly milder month than normal, with the cold of the last week off setting the mild first fourteen days. Rainfall was again significantly above average, mainly due to an intense downpour on the 28th. Once again there were serious flooding issues in the Soar Valley. The familiar, recent, pattern of a duller, wetter, but milder than usual month was repeated.

Derby: In spite of becoming progressively cooler, it was the mildest April for four years. The early month was 2.5 C above normal.

Mickleover: A dull and wet and, at times, below average temperatures.

Saltfleetby:

Date	10 Day Mean Temperatures.		
	Mean Max	Mean Min	Mean
1-10	15.7	7.4	11.6
11-20	14.0	5.7	9.9
1-20	14.9	6.6	10.7
21-30	11.6	4.7	8.1

Desford: Often wet with river still running high at times, also some rather cool and gloomy days without sunshine.

Coton-in-the-Elms: Another warm month, with temperatures slightly above average, mainly because of the very warm first half. Overall, this was the warmest April since 2020. Frost was fairly infrequent, but a couple of late ones did some damage in the garden! Rainfall was well above average, the highest in April since 2012.

UK overview, April 2024.

April continued the theme of the previous few months, being unsettled, wet and dull. The April showers were present from the beginning of the month, with frontal systems bringing persistent rain across the UK. The eleventh named storm of the season, Kathleen, arrived on the 5th/6th, bringing heavy rain to Scotland, Wales, parts of Northern Ireland, and the west coast of England. Kathleen also brought strong winds across the UK, with gales along coasts, particularly in the north and west of the UK. However, the southerly source of the wind led to mild temperatures, particularly along the south-east coast of England: Santon Downham, Suffolk recorded 20.9°C on the 6th. After a warm start to the month, temperatures dropped, with the last two weeks of April cooler than average. A high-pressure system moved over the UK on the 20th, bringing some drier weather but cool temperatures to much of the UK. By the 25th, low pressure was back, and the showers increased. The cooler second half of the month balanced out the warmer first half of the month, resulting in a provisional average mean temperature of 8.3°C for the UK, only 0.4°C from the 1991-2020 long-term average. It was a wet month, with all countries provisionally recording over 100% of the average monthly rainfall. The UK overall recorded a provisional 111.4mm of rain, 155% of the long-term average. Scotland and northern England were particularly wet, recording 160% and 176%, respectively, of the average April rainfall. Edinburgh received over 200% of the average April rainfall, provisionally the second wettest April on record in a series from 1836. The month has overall been quite dull, with the UK provisionally recording only 122.9 hours of sunshine, 79% of the average. Reference climatology used for calculating anomalies is the period 1991-2020 unless otherwise stated.

Weather impacts, April 2024.

- **Heavy rain and strong winds from storms Kathleen and Pierrick led to flooding and travel disruption.**
- **Significant coastal flooding affected the south coast as strong winds coincided with high spring tides.**

April started with a complex low-pressure area over or close to the UK with appreciable rainfall observed on a daily basis. Surface flooding across the Lothian district led to road closures and delays on the rail network. Storm Kathleen arrived on the 4th, bringing adverse road and rail conditions across Scotland due to the rain and snow in higher elevations. Strong winds associated with Storm Kathleen fringed the western UK during the 6th and led to various impacts, including a car swept into the sea by large waves in Fife and the roof of the Titanic Centre in Belfast being damaged. A few localised power outages were also reported across Northern Ireland. Low and medium impact yellow warnings for wind and rain were issued for the 7th, several of them associated with the low-pressure system that was named storm Pierrick by Meteo France. Strong winds affected primarily the Channel Islands and the south coast, coinciding with high spring tides that led to significant coastal flooding. A coastal holiday village at Bracklesham in West Sussex experienced severe flooding that injured as many as 100 people and triggered a major rescue operation. Persistent frontal rain affected NE England and E Scotland on the 9th and resulted in road flooding and the temporary closure of the East Coast Main Line between Newcastle and Morpeth. Coastal flooding risk moved north from the south coast to North Wales, where strong winds brought coastal flooding to several communities. The weather was generally much less impactful from mid-month onwards and no further warnings were issued for the second half of the month.ⁱⁱ

Abroad, April 2024.

South-eastern Australia had continuous heavy rain from the 4th to the morning of the 6th. New South Wales was badly affected with cumulative totals along the coast reaching 150-200 mm. Hourly totals were expected to reach 10-20 mm at times with worst affected areas reaching 50 mm in three hours. Strong winds were expected in the heavier downpours. This was a result of cooler air moving in from the south meeting tropical air from the north. After the main rain band had formed an area of low pressure was expected to form in the Sydney area and was expected to intensify the rainfall and flooding risk. The centre was then expected to push south introducing rain and thunderstorms to eastern Victoria.ⁱⁱⁱ

Storm Kathleen brought strong winds to Ireland and the UK during the 6th and 7th causing disruption to travel and power. The storm developed in the Atlantic on the 4th, deepened, and moved north to western Ireland. Gusts of 40-60 mph were recorded on the 6th, with some Irish Sea regions experiencing gusts over 70 mph. The storm drove very warm air from North Africa into western and central Europe. Temperatures in parts of Spain, France, the

Netherlands, Belgium, Switzerland, and Germany reached the low 20's C, and maxima in south-west France were above 30 C.^{iv}

Storm Pierrick affected France during the week of the 13th. During this period a tornado was reported in the Pas-de-Calais region of northern France, damaging about 15 houses in the village of Lestrem. The tornado formed a series of thunderstorms in the region during the night of the 8th, winds reaching 75 mph. A second line of thunderstorms developed later that night and extended from the Belgian border to Spain.

New Zealand was affected by a severe weather system during the same week. A deep area of low pressure over the Tasman Sea brought strong winds, heavy rain, and thunderstorms during the night of the 10th/11th. Thunderstorm, and strong wind warnings were issued, together with heavy rain warnings, for both North and South Islands.^v

Intense thunderstorms affected many parts of the Arabian Peninsula during the 16th, bringing extensive flooding to the United Arab Emirates. Low pressure over the peninsula was expected to deepen, with moist tropical air moving into the region. Up to 259.5 mm of rain fell on Dubai and was "a historic weather event that surpassed anything documented since the start of data collection in 1949."^{vi}

Melting snow in the Ural Mountains swelled the level of the rivers Ural and Tobol, in the areas of Siberia and Kazakhstan, forcing over 100,000 people to evacuate the area. The Ural, Europe's third largest river, burst through an embankment, flooding the city of Orsk, south of the Ural Mountains, water levels in Orenburg also rose to nearly 10 metres. Water levels on the Tobol also rose to affect the city of Kurgan where 19,000 people were at risk. Rising water on Siberia's Ishim River, a tributary of the Irtysh, was also expected. The most severely hit areas were in east and north Kazakhstan and Pavlodar, which border Russia.^{vii}

Heavy rain fell in Pakistan and Afghanistan during the week of the 20th, with flooding causing widespread damage. At least 135 people were killed, including 21 farmers in the Punjab region who were struck by lightning while harvesting wheat.

The winter had been uncommonly dry in Afghanistan, which had about 50% of its usual rainfall, and Pakistan fared little better. The dry soil struggled to absorb the rain and exacerbated the flooding. The worst affected province was Baluchistan which received more than three times its average rainfall, while Pakistan, as a whole received, almost double.^{viii}

Mexico experienced its first heatwave of the season. It started on the 14th, when Mexico City recorded a maximum of 32.9 C, passing the previous record of 32 C set in 1998. Anticyclonic conditions over the area stopped cloud forming and allowed temperatures to rise significantly. These conditions persisted during the week ending the 20th, and temperatures rose to 35-45 C across much of the country. On the 21st a cold front moved southwards bringing temperatures down, considerably below average. A prefrontal trough was expected

to develop ahead of the front, leading to heavy rain and thunderstorms across south-eastern parts of the country.^{ix}

The Spanish-German Cava producer Freixenet, known for its black glass bottles of sparkling wine, is expected to temporarily lay off 80% of its workers in Catalonia, as the north-eastern Spanish region struggles with a drought that has lasted for more than three years, and has seriously affected the grape harvests.^x

East Africa experienced heavy rain, with flooding in Kenya, Tanzania, and Burundi. About 100,000 people have been affected, with 32 deaths in Kenya, and 58 in Tanzania. Large areas of standing water could spread waterborne disease. Nairobi has, so far, had around 200-300 mm of rain compared to the April average of 150 mm. The increased rainfall has been linked to a positive Indian Ocean dipole which has combined with a powerful El Niño event.^{xi}

The US National Hurricane Centre has issued its first advisory of the year, more than a month before the official start of the Atlantic hurricane season. An above average season is being forecast and has been, partly, attributed to the very high Atlantic Sea surface temperatures. They were 1.2 C above normal in the main tropical storm development area in February, which is a record for the month. Forecasters are predicting a weakening of El Niño, reducing wind shear, and consequently enhancing hurricane formation.^{xii}

April 1924.

Observers Notes.

Copdock (Suffolk): A wet April, the special feature being the heavy snowstorm on the 10th. Sunshine and temperature not far from normal, but earth temperatures very low.

Skegness: Fairly dry at the beginning of the month, with strong winds; wet at the end with light winds. The maximum of 67 F [19.4 C] on the 20th was the highest during April since 1990.

Torquay: Like the three preceding months April was notable for cold winds, low night temperatures and showers of hail, snow, and sleet. There was a lack of sunshine for the first nine days.

Walton-on-Naze: A month of extreme temperatures.

Jardington (Dumfries): Typical April weather throughout the month.

St Andrews: Dry and cold with some beautiful sunny days occasionally. East winds very piercing. Vegetation very backward.

Dublin City: Unduly cold till the 17th. The 18th to 21st was very fine and spring like, but the remainder of the month was cloudy and wet.

Derby/Burton-on-Trent: The rainfall totals were in close agreement during April 1924, being around 55 mm +/- 5 mm or so, about 30% above the 1891-1920 mean. There were frequent frosts during this rather cold month, with 15 instances at Burton-on-Trent. Temperatures varied between a minimum of -4 C on the 10th, and a maximum of 19 C on the 20th. The overall mean was 7.4 C.

Louth (Westgate): Total rainfall for April 1924 was 1.65 in [41.9 mm] or 99% of average.

Brocklesby:

10 Day Mean Temperatures.

Date	Max	Min	Mean
1-10	50	32	41
11-20	55	35	45
1-20	52	33	43
21-31	56	41	49

Comments from other sources.

Cold wet Spring- 9th to 15th April: cyclonic spell: "April, heavy snowfall 20 cm [8 in] in Shetland, deep drifts, 2 metres [17 ft].^{xiii}

April, cool, cloudy, and wet, with gales and thunderstorms.^{xiv}

Overview of UK, April 1924.^{xv}

April 1924 was generally cloudy and cool, apart from a warm and sunny spell at Easter (20th and 21st). During the first week an anticyclone moved east across Scotland towards Scandinavia, then collapsed westwards introducing cool northerly winds and light precipitation, mainly in the form of sleet and hail. On the 7th a narrow ridge of high pressure over southern England produced warm weather, but cold air from the Arctic spread down from the western coasts of Europe producing the renewal of low temperatures. Secondary depressions developed near the Hebrides producing considerable rain, snow, sleet, and local thunderstorms as they moved south-east. Further depressions moved north from the Azores, and by the 13th low pressure extended from the Azores to Norway. Rain fell from the 8th to the 14th, but from the 16th to the 21st anticyclonic conditions prevailed and the weather was sunny and warm. The weather gradually deteriorated and the last few days were rough, with rain, local gales, and thunderstorms.

During the first three weeks the temperature was below average throughout the country, the first week being the coldest generally. The fourth week was warm, but temperatures fell again towards the end of the month. Easter Sunday and Monday, 20th and 21st, were the warmest days.

At Hodsock Priory (Nottinghamshire) there was a rapid fall of temperature on the 21st. The morning was fine and hot, maximum of 72.6 F [22.6 C] just before 1400. At 1400 cloud increased rapidly, and by 1500 the temperature had fallen to 53 F [11.7 C].

Ground frosts were reported generally throughout the month, exceeding 20 at some stations. At Rounton (Yorkshire) the grass temperature fell to 11 F [-12 C] on the 9th, and 12 F [-11 C] on the 17th, while at Renfrew and Eskdalemuir 15 F [-9 C] was recorded on the 23rd. Earth temperatures were abnormally low. At Dumfries the 4 ft [120 cm] was lower than in any April in the previous 10 years, apart from April 1917.

The amount of precipitation, compared to the average, varied throughout the country; under 50% in the area of Inverness, and over 200% in an area extending from southern Cambridgeshire to Surrey and northern Hampshire, including London. In England precipitation was above average everywhere, apart from parts of the north and east. The majority of Scotland was below average apart from a large area in the south-west. In Ireland, apart from the extreme southern and western coasts, precipitation was above average.

The first week was the driest. However, from the 8th to the 14th, the total fall at Kew was above average, but there was no rain at Kew during Easter. During the previous 25 years this had happened only five times, the total for the month being 87 mm, which had been exceeded only once, in April 1870, since 1866. Other large totals were 189 mm at Cray (Brecon) and 164 mm at Blaenau (also Brecon). Large daily falls were, 71 mm at Holne (Devon), and 52 mm at Tynywaun (Glamorgan), both on the 13th.

Snow fell at many stations throughout the country; West Linton (Peebles) had 11 days. "Days of snow lying" were also noted in many areas; Braemar recorded 7. Snow, sleet, and hail was recorded generally during the period 6th to 12th. During the night of 8th-9th, 3 in [8 cm] of snow fell at Achnashellach, followed by 2.5 in [6 cm] overnight 10th-11th. At Lerwick the worst snowstorm recorded at that station occurred on the 11th. The depth of snow was, on average, 6 to 8 in [15-20 cm], but the snow was light, and the strong winds caused drifting to a height of 7 ft [over 2 meters] in places.

Four days of thunder were reported at a number of stations, particularly between the 8th to 12th, and on the 26th. Southern and eastern England were the areas mainly affected, but there was a significant storm on the 15th in Scotland.

"A waterspout, in the whirling spray stage, was noted travelling towards the sea at Stornoway at 1130 GMT on the 16th, height 50 ft [1500 m], and base 10 ft [30 m]."^{xvi} The Meteorological Magazine noted that the weather had been very wild during the previous few days, and that on the day of observation hail showers had occurred in the NNW wind, force 8 or 9, with squalls. A double waterspout was observed at Armagh from 0500 to 0515 GMT on the 23rd.

Sunshine was generally below average, the period 13th to 19th being the sunniest, and the 20th to 26th being the dullest.

A thick fog covered parts of the Channel Isles on the 22nd and 23rd seriously delaying cross channel traffic. This fog was said to be the densest fog for many years.

In summary, a mainly cool and dull month.

Abroad, April 1924.^{xvii}

At the end of March, the heavy rain and floods, that occurred over Europe and America, continued into April. In Italy heavy rain and hailstorms caused considerable damage, and the River Po rose steadily. In Switzerland heavy snow produced obstructions in many Alpine passes, but the floods, caused by melting snow at the end of march, were checked by low temperatures at the start of April. Torrential rains in Spain, reported during March, caused extensive landslides in Granada; olive groves moved downhill and many buildings collapsed. Seville was flooded and many lives lost. At Rio de Janeiro nine and a half inches [241.3 mm] of rain were reported to have fallen in five hours on the 4th. Lives were lost during the floods, and through the collapse of buildings.

Bengal suffered from exceptionally early hot, and dry, weather during March, and no relief was felt during April, very high temperatures being recorded during the first week. In Calcutta [Kolkata] the shade temperature exceeded 110 F [43 C] on occasions. On the 25th, at Pikani, in the Hardoi district of Oudh, Northern India [near the Nepalese border] a tornado, about 300 yards in diameter [about 275 meters], swept from west to east for a distance of six miles [about 9.5 km]. Three villages were destroyed and many people killed.

Towards the end of the month there were severe storms along the north-western and northern coasts of Europe, while on the 30th a series of tornadoes swept across the American states from Louisiana to Virginia. The storms were particularly violent in South Carolina, Alabama, and Georgia, while the town of Fickling, Georgia, was entirely destroyed, with the loss of many lives.

Reports from Brazil noted that in the north rainfall was significantly below average in the Amazon and Para states, but elsewhere in the north rain fall was unusually heavy, being over 200 mm above average. Significant flooding occurred, with much loss of life in all states, including the drough region. In central and southern Brazil the rainfall was irregular, being 17 mm below average and 32 mm above respectively. The cotton crop was badly affected by the Boll Weevil. At Rio de Janeiro the temperature was 0.8 C above average.

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

Mean Maximum Temperature: 11.0 C. Average: 12.0 C.

Mean Minimum Temperature: 2.8 C. Average: 3.7 C.

Mean Temperature: 6.9 C. Average: 7.9 C.

England and Wales Rainfall: 72.9 mm. Average: 55.8 mm, 131%.

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

Midlands Mean Maximum Temperature: 11.2 C. Average: 11.7 C.

Midlands Mean Minimum Temperature: 2.0 C. Average: 2.8 C.

Midlands Mean Temperature: 6.6 C. Average: 7.2 C.

Midlands Rainfall: 67.3 mm. Average: 50.1 mm, 134%.

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

Mean Maximum Temperature: 13.4 C. Average: 13.3 C.

Mean Minimum Temperature: 5.8 C. Average: 4.6 C.

Mean Temperature: 9.6 C. Average: 9.0 C.

England and Wales Rainfall: 95.4 mm. Average: 63.2 mm, 151%.

Midlands Data.

Mean Maximum Temperature: 13.1 C. Average: 13.1 C.

Mean Minimum Temperature: 5.3 C. Average: 4.1 C.

Mean Temperature: 9.2 C. Average: 8.6 C.

Midlands Rainfall: 79.4 mm. Average: 55.1 mm, 144%.

Sunshine: 123.1 hours. Average: 155.8 hours. 79%.

ⁱⁱ Weather Summary, April 2024, Meteorological Office, HMSO, May 2024.

ⁱⁱⁱ The Guardian, 6/4/2024.

^{iv} The Guardian, 9/4/2024.

^v The Guardian, 13/4/2024.

^{vi} The Guardian, 16/4/2024, 18/4/2024, 19/4/2024, and New Scientist, 27/4/2024.

^{vii} The Guardian, 10/4/2024.

^{viii} The Guardian, 20/4/2024.

^{ix} The Guardian, 23/4/2024.

^x The Guardian, 24/4/2024.

^{xi} The Guardian, 27/4/2024 and 30/4/2024.

^{xii} The Guardian, 30/4/2024.

^{xiii} Climate and Weather, Kington J, Harper Collins, 2010, p. 403.

^{xiv} Agricultural Records, AD 220-1977, Stratton J and Houghton Brown J, ed. Whitlock R, John Baker, 2 ed. 1978, p. 141.

^{xv} Monthly Weather Report, April 1924, Meteorological Office, HMSO, June 1924, p. 43.

^{xvi} Meteorological Magazine, May 1924, Meteorological Office, HMSO, June 1924, p. 96.

^{xvii} Meteorological Magazine, May 1924, Meteorological Office, HMSO, June 1924, p. 97.

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