



## Weather Front.

**April 2023/1923**

**April 2023**

### Observers Notes.

**Derby:** The maximum highest temperature for the month was the highest for the year, so far! The highest minimum was the only instance of a 10 C minimum this month. Otherwise, there was nothing particularly noteworthy to report other than “a very blossomy Derby”!

**Saltfleetby:** A brief, sharp, blustery shower on the afternoon of the 10<sup>th</sup>, with lightning, thunder, and hail. A spell of very fresh winds from the NE and E between the 18<sup>th</sup> and 21<sup>st</sup>.

**Ely:** A run-of-the-mill April, although slightly cooler than average due to some chilly nights. All days achieved a maximum temperature in double figures, only the 4<sup>th</sup> time this has happened in 52 years. The wettest April since 2018, and the first thunder of the year on the 15<sup>th</sup>.

**Mickleover:** The wettest April since 2018 and the second wettest since 2012. The 5<sup>th</sup> coolest April since 2008.

**Mountsorrel:** A very wet April and the wettest in five years. It was a cool month with the maximum reaching only 18.6 C, so no real warmth. It was also a duller month than normal.

**Middleton:** An uneventful month being the dullest and wettest in five years.

**Lowdham:** The wettest March/April period in the Nottingham area since 1840. 138.6 hours of sunshine were recorded at Radcliffe-on-Trent. This was 93% of average.<sup>i</sup>

**Pitsford:** Changeable during the first fortnight as more settled conditions linked to high pressure alternated with the more unsettled conditions of Atlantic lows. The third week became more settled with some welcome Spring sunshine. Some warmth arrived in the final week.

**Coton-in-the-Elms:** An average April, in terms of temperature, and significantly cooler than last year! The absolute maximum was achieved right at the end of month and was the lowest such figure since 2021. There were a few sharp frosts, although the lowest air temperature

was the highest such figure for April since 2020. Rainfall was slightly higher than average, and the wettest April for five years.

**Desford:** Changeable, often cool, and cloudy after a bright start to the month with some frosty nights.

## **UK overview<sup>ii</sup>**

April was a predominantly unsettled month, with little in the way of consistent warmth, though it was more settled for a time around mid-month, when it became warmer especially over Scotland. This was followed by a return to rather chilly and unsettled conditions until just before month-end. Temperatures fluctuated somewhat, but averaged out to around normal, with Northern Ireland warmest relative to average, and with maximum temperatures a little below normal over most of England. The provisional UK mean temperature for the month was 7.8 °C, which is 0.1 °C below average. Rainfall was close to average overall, but with regional variations, most parts of Scotland being drier than average, but southern and eastern parts of England being rather wet, most notably in Kent, and for the UK overall rainfall was 97% of average. Sunshine was also close to normal overall, but with northern areas generally brighter relative to average than the south and west, giving 102% of average for the UK overall. Reference climatology used for calculating anomalies is the period 1991-2020 unless otherwise stated.

## **Weather impacts**

- **April was a mostly unremarkable spring month across the UK. There was relatively little in the way of impactful weather, and severe weather warnings were few.**
- **At times there was high pressure blocking to the north and east of the UK, giving settled weather, but there were also spells of rather disturbed Atlantic weather, making it a rather wet month in the south and east of England.**

The most noteworthy adverse weather came around the 11th and 12th, when the interaction between a pair of low-pressure centres over the UK brought strong winds to South Wales and southern England in particular during the 12th, these winds also extending into northern France where MeteoFrance named the storm 'Noa'. Wind warnings were issued for various parts of the UK, and on the night of the 11th/12th there were reports of HGVs overturning in high winds on the M6 near Carlisle and also on the M62 close to the Greater Manchester/West Yorkshire border. The morning of the 12th saw the temporary closure of the Cleddau Bridge in Pembrokeshire, with short-term closures also affecting the M48 Severn crossing and a section of the M4 in South Wales because of the high winds. Across parts of Devon and Cornwall there was disruption due to the strong winds, with the Taw Road bridge

in Barnstaple closed for a time and several hundred properties losing their electricity supply. In Plymouth a number of cars were damaged by falling tree debris next to the Guildhall.

### **Europe and beyond.**

Tornadoes affected several states in the USA at the end of March, particularly Iowa, Arkansas, and Tennessee, causing deaths and severe damage. As of the 2<sup>nd</sup> of April, 385 tornadoes had occurred across the USA this year, and the number was likely to increase during the week ending 8<sup>th</sup> April.

The Canary Islands had an exceptionally hot end to March, with temperatures above 34 C. The state Meteorological Service had issued an orange warning for temperatures exceeding 37 C, the first time this has happened in March. On the 29<sup>th</sup> the maximum temperatures at La Aldea de San Nicolas was 37.8 C, breaking a 72-year-old record; this was broken the following day with 38.2 C.

Antarctica also experienced unusually high temperatures. The South Pole had a mini heatwave, with temperatures above -40 C for more than two days, and reached a maximum of -33 C. Though just shy of the March record, this was about 20 degrees above the seasonal average of -53.7 C.<sup>iii</sup>

Skiers have experienced an epic winter, with more than 16 meters of snow being recorded at the Donner Pass in the Sierra Nevada, USA. However, for many the stormy winter has resulted in homes being submerged in snow and causing widespread flooding and landslides.<sup>iv</sup>

Severe tornadoes hit the USA again during the week ending the 8<sup>th</sup>, with at least seven being reported on the 4<sup>th</sup> in Illinois, while on the 5<sup>th</sup> a powerful tornado tore through south-eastern Missouri, causing widespread damage and at least five deaths.

An unusually long period of La Nina came to an end with forecast models suggesting a transition to El Nino during the coming months. Previous El Nino events have seen unsettled conditions over north-west Europe in July, with, drier, hotter weather across Central Europe.<sup>v</sup>

A tropical low in the Timor Sea moved WSW into waters north of the Kimberly, Western Australia, during the 8<sup>th</sup>/9<sup>th</sup>, deepening as it moved, and developing into a tropical cyclone on the night of the 9<sup>th</sup>. It introduced winds of up to 56 mph [48 kt] to the coast. It was expected to reach category 3 by the 11<sup>th</sup>, to turn south by the 12<sup>th</sup>, and deepen to category 4. The cyclone was expected to bring strong winds and heavy rain to South Australia by the 14<sup>th</sup> before dissipating.

In Canada, a severe ice storm hit the provinces of Quebec and Ontario on the 5<sup>th</sup>. Three people were killed and almost a million were without power at the peak of the disruption.<sup>vi</sup>

Fort Lauderdale experienced a historic rainfall event during the week ending the 15<sup>th</sup>. Low pressure developed across the Gulf of Mexico on the morning of the 12<sup>th</sup>, and a warm front

moved slowly north across southern Florida. Multiple thunderstorms developed, each following similar tracks. Fort Lauderdale airport, provisionally, recorded 65.8 mm during the 24 hours ending 7 am on the 13<sup>th</sup>, most of which fell within 12 hours. Daily rainfall exceeding [250 mm] fell across south-eastern Broward County and north-eastern Miami-Dade County causing widespread flooding.

In Indonesia, severe Tropical Cyclone Ilsa, which started as a tropical low on the 5<sup>th</sup>, made landfall as a category 5 storm on the night of the 13<sup>th</sup>, east of Port Headland in Australia. Just before reaching the mainland a gust of [157 kt] was registered on Bedout Island.<sup>vii</sup>

The heatwave that had affected the Indian states of West Bengal, Bihar, and Andhra Pradesh was expected to continue throughout the week commencing the 17<sup>th</sup>. Daytime temperatures of 40 C had been recorded for several consecutive days in the three states, which is about 5 C above average. People were advised to stay hydrated, wear breathable clothing, and avoid street food which could easily go off in these conditions. Schools and universities were closed for the week.

In China, sandstorms, which had affected parts of the country were expected to spread elsewhere in Asia. Much of the sand and dust originated in the Gobi Desert, which straddles the border between Mongolia and China. Shanghai was particularly badly affected with concentrations of particles more than 46 times the World Health Organisations recommended safe level.<sup>viii</sup>

For much of Europe, April was rather cold and reasonably wet. However, Spain remained dry and warm from the subtropical air that led to forest fires and a widespread drought.

Intense storms developed across parts of the central US on the 19<sup>th</sup>, with numerous tornadoes being recorded, particularly across Oklahoma. At least two people were confirmed as dead just south of Oklahoma City, from a tornado that had flattened buildings. The storms across the plains brought large hailstones, some the size of tennis balls being reported north of Kansas City.<sup>ix</sup>

The heatwave over Spain originated as a plume of hot, dry, air over northern Africa, where it produced record April temperatures. As it spread over Iberia, a temperature of 38.7 C was recorded at Cordoba on the 27<sup>th</sup>, which was the highest temperature for April in Europe. Portugal also recorded its highest April temperature on that day.

In the US, an area of low pressure brought heavy rain and severe weather across parts of the central and southern plains on the 26<sup>th</sup>. A cold front, moving from west to east across Texas, induced thunderstorms, with hail stones between 5-7 cm diameter, and a gust of [50 kt] was also recorded. One hailstone, found east of Waco, Texas, was reported to be larger than a grapefruit!<sup>x</sup>

## April 1923

### Observers Notes.

**Alfriston (Sussex):** A very cold month, but snow fell only on the 9<sup>th</sup>. Severe frost on this date damaged fruit blossom considerably; 34 mm of rain fell on the 25<sup>th</sup>, this being the heaviest day's rainfall during the last 15 months.

**Bromyard (Herefordshire):** Plum blossom was injured by frost on the 23<sup>rd</sup>, 24<sup>th</sup>, 27<sup>th</sup>, and 28<sup>th</sup>.

**Copdock (Suffolk):** A very dry April with rainfall less than half the 20-year's average. Other elements were very close to their normal values.

**Southport:** The month was rather dull and wet. It was an even more strikingly "easterly" month than March had been and the sequence of the two was very exceptional.

**Torquay:** Typically, April in character, showers of rain alternating with sunny periods. The duration of sunshine was much below the average and the month was one of the cloudiest ApriIs during the past 23 years. Nevertheless, April 1923 was a considerably better month than April 1922.

**Totland Bay (Isle of Wight):** During 37 years of observation there have never previously been more than 18 rain-days in April; this year the number was 20. Only once during this period, in 1907, has April rainfall been greater.

**Cargen (Kirkcudbright):** Vegetation, although less forward than March, would lead one to expect was well up to the average. Five degrees of frost on the 24<sup>th</sup>, however, did considerable damage.

**Cranford (Aberdeenshire):** Cold with very little sunshine.

**Glenelg Manse (Inverness-shire):** Fine dry sunny weather during first three weeks. Last week wet and cold.<sup>xi</sup>

**Derby/Burton-on-Trent:** Typical rainfall amounts for Derby were a little either side of a near normal 45 mm, whereas the Burton-on-Trent area was a little wetter and more variable, in the 50-70 mm range. The overall mean temperatures were between 6.7 C and 7.8 C locally. The month was about 1 C below normal for the thirty-year average ending 1920. Extremes were 15 C- 17 C on the 4<sup>th</sup>, and -2 C on the 23<sup>rd</sup> and 24<sup>th</sup>. Burton had five air frosts.<sup>xii</sup>

## UK April 1923.

The first fortnight saw the warmest days of the month, particularly on the 4<sup>th</sup> and 12<sup>th</sup> when the temperature rose to around [15 C] in the midlands and south but did not reach the high

temperatures of late March. Between the 4<sup>th</sup> and 12<sup>th</sup> an anticyclone, centred over Scandinavia, spread west to Iceland allowing easterly winds to dominate the British Isles, and were strongest on the 8<sup>th</sup> and 9<sup>th</sup> over the English east coast. They were accompanied by slight snow showers in London and many other places. The easterly airstream continued from the middle of the month until the 25<sup>th</sup> when there was a change to a warmer, south-westerly. Gales were reported on the 25<sup>th</sup>, along parts of the English Channel and in the north of the country. During the cold period maximum temperatures seldom exceeded [13 C] and night minima frequently fell below freezing on the grass. Rainfall was above average in some parts of the country, but below average elsewhere. Thunder was reported on several occasions but more generally on the 11<sup>th</sup> and 12<sup>th</sup>. Sunshine was rather poor, and, in some instances, the duration was only about 75% of average.

The mean temperature of eastern and south-eastern England, the Channel Isles, and The Isles of Scilly were less than a degree above average however, the remaining areas were well below average. The greatest deficit was in eastern Scotland, the mean being [5.0 C] and was [1 C] below average. At a few Scottish stations the month was colder than January. In eastern and central Scotland, the mean daily temperature range was the lowest for April for at least sixty years, and the mean maximum was lower only in 1879 and 1917, the mean minimum differing little from the average. Throughout much of the country each week of the month was colder, relative to the average, than the preceding one, and between the 22<sup>nd</sup> and 28<sup>th</sup> the departure from average ranged from [-1 C] in eastern England, the Channel Isles, and the Isles of Scilly, to [2.4 C] in northern Scotland. The extremes for the month were, for England and Wales [21 C] at Eye and Norwich on the 12<sup>th</sup>, and [-4 C] at South Farnborough on the 10<sup>th</sup>, also at four other stations on the 24<sup>th</sup>. In Scotland, a maximum of [16 C] was reported at Ruthwell on the 11<sup>th</sup>, and a minimum of [-8 C] at Leadhills on the 9<sup>th</sup>. In Ireland a maximum of [17 C] was noted at several stations on the 30<sup>th</sup>, and a minimum of [-4 C] at Markree Castle on the 24<sup>th</sup>. There were numerous ground frosts, particularly between the 22<sup>nd</sup> and 28<sup>th</sup>, the lowest being [-11 C] at Blackpool, [-10 C] at Renfrew on the 24<sup>th</sup>, and [-10 C] at Rhayader on the 23<sup>rd</sup>.

Rainfall was above average, generally, except in northern Scotland, north-east and eastern England. There were two large areas below average. The first was north-western, and part of central, Scotland, and the second was the east coast of England, part of Cumbria, and the whole of East Anglia. Eastern Suffolk was the driest part of the country with less than 50% of average rainfall; the wettest was southern Hampshire, and part of the Sussex coast, where over 200% of average rain fall was recorded.

Except for northern Scotland the period 8<sup>th</sup> to 14<sup>th</sup> was the wettest of the month. The greatest falls were, 46 mm at Burnley on the 12<sup>th</sup>, 38 mm at Tongue (Sutherland) on the 30<sup>th</sup>, 33 mm at Eskdalemuir on the 12<sup>th</sup> and at Valencia Observatory on the 17<sup>th</sup>. From the 15<sup>th</sup> to the 22<sup>nd</sup> no rain was recorded at many Scottish stations. On the 11<sup>th</sup>, during a severe thunderstorm at Alfriston (Sussex) 14 mm of rain fell in about 15 minutes. Slight falls of snow were reported at many English stations on one or two days, mainly on the 9<sup>th</sup> and 10<sup>th</sup>. Snow was reported

on several days in Scotland, mainly on the 9<sup>th</sup> and 10<sup>th</sup>, and between the 20<sup>th</sup> and 25<sup>th</sup>. In the early morning of the 25<sup>th</sup> snow depths of several inches were noted over a large area, but quickly melted during the day.

Thunderstorms were reported generally in England and Wales, and in southern Scotland, on the 12<sup>th</sup>, and widely reported in Scotland on the 28<sup>th</sup>, although local thunderstorms were not infrequent. A particularly noteworthy display of lightning was seen in Sussex and parts of Kent during the evening and night of the 11<sup>th</sup>, which was associated with a thunderstorm around Brighton. Some hail fell during the month, mainly towards the end, but no severe storms were reported.

Except for northern Scotland, sunshine was well below average. Aberdeen had a total of only 90 hours, while the Channel Isles and the Isles of Scilly had only 36% of the possible duration, eastern England 35%, and eastern Scotland only 24%. The first three weeks were the duller, but during the last week sunshine was above average over most of the country, and several stations reported 13 hours or more.

Fog occurred locally but was less prevalent than in March.

Stratton, in Agricultural Records suggests that April was “warm at first; then cool”<sup>xiii</sup>, while the headline in the Monthly Weather Report for April 1923 is “Cold and rather Wet”<sup>xiv</sup>. Taken together they provide a good summary of the month.

### **Europe and beyond, April 1923.**

There were several periods of severe weather in Western Europe during April 1923. Unusual cold weather was reported in Andalusia on the 10<sup>th</sup>, together with snow in Granada, and fog at Seville. On the 18<sup>th</sup> the vineyards of south-west Germany suffered from severe frost, and there were heavy falls of snow in the Swiss Alps around the same date. Towards the end of the month heavy snow was also reported in the Belgian area of the Ardennes. Severe ice was being reported in the North Atlantic, and the “Blutha” was locked in drifting ice. The ship was abandoned at 41N 47W, which was well outside the usual ice limits.

On the night of the 4<sup>th</sup>/5<sup>th</sup> tornadoes were reported in Louisiana, North Carolina, and Texas, with heavy rain and hailstorms. This was associated with a depression, which had moved south-east from the Pacific into northern Texas, and then north-east. The weather in the eastern states became mainly dry and, towards the end of the month, forest fires were noted. In Canada considerable amounts of ice remained on the rivers.

On the 14<sup>th</sup> a report from Cairo noted that, while the level of the Mountain Nile was abnormally low, rain in north-west Abyssinia [Ethiopia] had produced a considerable rise in the upper Blue Nile. It was being suggested that the rains would restore the main river to its normal level and that irrigation prospects were promising.

On the 21<sup>st</sup> heavy rain was reported in Western Australia and, on the 23<sup>rd</sup>, light rain had fallen in parts of the Riverina district of New South Wales, which is to the west of the Great Dividing Range. However, there was no general break-up of the weather in the east.

A severe storm was observed in the Cordoba district of Argentina at the beginning of April. During this storm 130 mm of rain fell in about thirty-six hours, rivers overflowed, and many people were made homeless. During the night of the 8<sup>th</sup>, Bahia Blanca was flooded by a heavy swell from the sea and partially destroyed the sea wall; the weather was fine and calm at the time. Rainfall in Brazil was very irregular throughout the country but was mainly above average. There had been a very active circulation in the south and centre of the country with temperatures well above average. The coffee and cotton harvests were expected to be excellent.<sup>xv</sup>

### **April 1923**

#### **Central England Data.<sup>xvi</sup> (Averaging period is 1891 to 1920.)**

Mean Maximum Temperature: 11.2 C. Average: 12.4 C.

Mean Minimum Temperature: 4.0 C. Average: 3.7 C.

Mean Temperature: 7.6 C. Average: 7.9 C.

England and Wales Rainfall: 70.6 mm. Average: 55.8 mm. 126%

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

Midlands Mean Maximum Temperature: 11.0 C. Average: 11.7 C.

Midlands Mean Minimum Temperature: 3.0 C. Average: 2.8 C.

Midlands Mean Temperature: 7.0 C. Average: 7.3 C.

Midlands Rainfall: 63.4 mm. Average: 50.1 mm. 126%

### **April 2023 (Provisional)**

#### **Central England (Averaging period is 1991-2020).**

Mean Maximum Temperature: 13.0 C. Average: 13.3 C.

Mean Minimum Temperature: 4.3 C. Average: 4.6 C.

Mean Temperature: 8.7 C. Average: 9.0 C.

England and Wales Rainfall: 76.9 mm. Average: 63.2 mm. 122%.



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- <sup>i</sup> Sunshine data courtesy of T Scholey.
- <sup>ii</sup> Monthly Weather Survey, April 2023, Meteorological Office, May 2023, Crown Copyright.
- <sup>iii</sup> The Guardian, 4 April 2023.
- <sup>iv</sup> The Guardian, 6 April 2023.
- <sup>v</sup> The Guardian, 8 April 2023.
- <sup>vi</sup> The Guardian, 11 April 2023.
- <sup>vii</sup> The Guardian, 15 April 2023.
- <sup>viii</sup> The Guardian, 18 April 2023.
- <sup>ix</sup> The Guardian, 22 April 2023.
- <sup>x</sup> The Guardian, 29 April 2023.
- <sup>xi</sup> Monthly Weather Report, April 1923, Meteorological Office, HMSO, July 1923, P. 43.
- <sup>xii</sup> D J Stanier, by email 2 May 2023.
- <sup>xiii</sup> Agricultural Records AD 220-1977, Stratton J M and Houghton Brown J, ed Whitlock R, John Baker, 1978, p. 141.
- <sup>xiv</sup> MWR, April 1923, p. 43.
- <sup>xv</sup> The Meteorological Magazine, May 1923, Meteorological Office, HMSO, June 1923, pp. 92-93.
- <sup>xvi</sup> Hadley Centre, Central England and Midlands, Meteorological Office.