



Weather Front.

October 2022/1922

October 2022.

Observers Notes.

Mickleover: The mean air temperature was equal to that set in October 2006.

Bablake: October 2022 was the warmest October in Coventry since 2001 (13.7 C), and the only October since before 1892. It was the third successive October with rainfall totals greater than 100 mm. October 2022 was also the sunniest since 2008 (128.7 hrs), and there have been only five sunnier since 1894. It has been a remarkable first ten months of the year, having been the warmest in over 130 years, at 12.7 C, the driest (432.6 mm) since 2011 (355.0 mm), and the sunniest (1322.7 hrs) since 2003 (1627.0 hrs); there have been only four sunnier periods since 1894.

Derby: Mathematically, this works out as being the third warmest October on record since 1952. The mean temperature for the period January to October 2022 also continues to be the highest on record.

Middleton: The lowest maximum temperature of 11.7 C was the highest on record for October.

Coton-in-the-Elms: October 2022 was the warmest October since 2005, and the third warmest on the 30-year record. The mean maximum temperature was the warmest for October on record, and the lowest maximum was also the highest on record. It was a noticeably mild month throughout without any exceptionally high individual maxima.

Mountsorrel: October was the second warmest October, only October 2001 was warmer (13.5 C). It was the fourth successive wet October, the previous three having rainfall totals over 100 mm.

Lowdham: The lowest maximum set on the 7th (13.1 C) was the highest for October on the station record. There were 145.8 hours of sunshine (142% of 1991-20 average) at Radcliffe-on-Trent and was, locally, one of the sunniest months since 1921.ⁱ

Ely: October 2022 had the highest mean maximum temperature on the station 52-year record, but it was only the 7th warmest for mean temperature. The maximum temperature on the 30th (15.1 C) was also the highest for October on the station record. Thunder was heard on the 23rd and was the first in October since 2014.

Desford: Very mild, and wet at times, with above average rainfall.

Pitsford: Rather changeable through the first fortnight, with some chilly mornings emerging. Remaining unsettled in the second half of the month but turning milder. Very mild to the end of the month. The 22nd and 23rd was a wet 48 hours, culminating in a torrential, and thundery, downpour during the evening of the 23rd giving rise to localised flash flooding. [The observer has indicated that there have been some problems with the grass minimum thermometer and readings are considered suspect. Therefore, there is no Grass minimum data and Ground frost data for October.]

Saltfleetby: Heavy rain and thunder was noted during the evening of the 22nd. It was very mild during the last week of the month.

Review of October 2022

The averaging period used for the following assessment was 1991-2020.

Most of October was warmer than average, though the second week was rather cooler, and the last ten days were especially mild relative to average, with a notable lack of frosts. At the same time, the month was predominantly unsettled in most regions, with no dry spells longer than a couple of days. However, sunshine was above average for most of the country, especially central and eastern areas. The provisional UK mean temperature was 11.5 °C, which is 1.8 °C above the long-term average. Maximum temperatures were nearly 3 °C above average in parts of south-east England, while minimum temperatures were furthest above average in central Scotland. This was provisionally the 7th warmest October in a series from 1884. Rainfall was broadly near or above average overall, but it was rather dry in many east-coast locations, while parts of Northern Ireland were much wetter than average. The UK as a whole had 115% of average rainfall. It was a sunnier than average month for most of England, parts of Wales and the east coast of Scotland, but rather dull over western Scotland, with an overall sunshine figure of 114% of average. The UK monthly extremes were as follows: A maximum temperature of 22.9 °C was recorded at Kew Gardens (Greater London) on the 29th. A minimum temperature of -3.8 °C was recorded at Aboyne (Aberdeenshire) on the 15th. In the 24 hours ending 0900 UTC on the 5th, 102.6 mm of rain fell at Honister Pass (Cumbria). A wind gust of 96 knots (110 mph) was recorded at Needles (Isle of Wight) late on the 31st.

Weather impacts

Early in the month various weather systems prompted a number of warnings. Localised flooding was reported on the ScotRail network on the 4th, which disrupted services between Glasgow and Perth. On the same day in mid-Wales the A478 was closed for several hours due to flooding. On the 7th there was further disruption to road and rail travel in various parts of Scotland following heavy rain the previous night; trains between Perth and Inverness were suspended due to flooding of the line at Dalwhinnie, whilst in and around Glasgow some railway lines were flooded, and some city bus routes were diverted. After a relatively quiet period, the last 11 days were dominated by frequent bands of rain and showers moving north across the UK, often heavy and thundery. On the 20th, areas of very heavy thundery rain drifted slowly northwards across eastern England, with significant surface water flooding to property and roads around Bedford, as well as in parts of Essex, Kent, Nottinghamshire, and Wiltshire, whilst Network Rail reported lightning damage to signalling on the East Coast Main Line between Grantham and Newark causing service disruption on that section of line. Early on the 23rd there were reports of surface water flooding on roads in the Birmingham area; also, an organised band of locally severe thunderstorms moved north-eastwards into central southern and south-east England including London, the likely cause of one or two small tornadoes including one at Marwell Zoo near Winchester. Trees were brought down by the gusty winds in both central London and Brentwood, Essex. Heavy rainfall in Northern Ireland on the 28th was followed by incidences of surface water flooding, with Derry City, Coleraine and Enniskillen amongst those locations cited. Further heavy rain on the 31st across the UK brought renewed reports of traffic disruption in Northern Ireland, especially around Belfast where several key routes were affected.ⁱⁱ

Further Afield.

Hurricane Ian hit Cuba during the latter part of September with gusts of 155 mph. It was accompanied by heavy rainfall, which amounted to 250-500 mm, and storm surges of 12-15 ft. About 10,000 people were unaccounted for, and around 1.7 million people had to be evacuated. By 1 October Ian had moved into the Western Atlantic before veering north-west into South Carolina. Gusts of 50 mph were recorded in the Central and Southern Appalachians on the 3rd, before the storm weakened and dissipated near the border of North Carolina and Virginia.

Even though Ian had dissipated, record river levels continued during the following week across Florida. Damage costs are expected to be in the region of £37 bn, which would make Ian the most expensive hurricane since Hurricane An drew in 1992.ⁱⁱⁱ

It is understood that, during the recent summer, Dengue fever gained a foothold in France. The viral infection, which is spread by mosquitoes, has previously been confined to more tropical regions, such as Asia and the Caribbean, but Global Warming has allowed these

mosquitoes to establish themselves in France. Additionally, more than 500 cases of West Nile virus, another mosquito transmitted virus, have been recorded in Europe, with most in the Veneto, northern Italy.^{iv}

During the early part of October Tropical Storm Julia progressed from the Atlantic into the Caribbean, and was upgraded to a category 1 hurricane, with windspeeds above 74 mph. It eventually made landfall on the east coast of Nicaragua, with windspeeds of 85 mph, and a strong storm surge. The hurricane crossed the country and returned to tropical storm status. It then travelled north-west along the Pacific coast of El Salvador and Honduras, before making landfall, and dissipating, on Guatemala. Rainfall totals of 75-100 mm were widely recorded and, locally, approached 150 mm. The death toll stands at 25, the majority due to flooding, mudslides, and landslides across Central America.

It is understood that the remnants of Julia formed the Tropical Storm Karl in the Gulf of Mexico and was expected to move south towards Mexico.^v

At least two people were killed and many more injured after torrential rain hit Crete on the 15th. The thundery rain turned streets into rivers, with the worst affected area being around Heraklion. Cars were washed into the sea, and the beaches covered in debris, Agia Pelagia, on the north coast, being particularly affected. It was an area of low pressure, moving south-east from Italy, which brought the torrential rain and thunderstorms to the island. Rainfall amounts of 130 mm were recorded in 30 mins, and about 300 mm within 3 hours, in northern and eastern areas; the average in a full year is only 300-400 mm.^{vi}

Nigeria experienced devastating floods in the week beginning the 17th. Poor preparation by local authorities is partly to blame for the damage. At least 600 people are understood to have died, around 1.3 million have been displaced, and a quarter of a million homes destroyed. The floods are a culmination of months of above average rainfall, with the first occurring during the summer.

In the USA the positioning of the jet stream produced an extension to summer in the west, with record breaking temperatures. However, in the east a blast of winter came early. In the Great Lakes records were broken owing to the cold; parts of Michigan and Wisconsin reported more than 40 cm of snow on the 17th and 18th.^{vii}

In the USA 60% of the country was declared a drought zone on the 20th, with 34% in a severe, or deepening, drought. While it is not unusual for such conditions to exist within the country, with approximately 14% having experienced severe to extreme drought, the extent of the current situation is. Western states and parts of the Great Plains are experiencing the most severe drought. Some central states recorded 25 mm of rain in the past month compared to an average of 70-100 mm in September. After a warmer than average July to September parts of the Mississippi are looking like a creek, also large wildfires have been

reported in Washington, Oregon, and New Mexico. The driving force behind this worsening drought is a rare “triple dip”, or three consecutive La Nina winters.^{viii}

During the week beginning the 24th a complex area of low pressure remained to the west of the British Isles, with associated south westerlies transporting warm air from North Africa. This resulted in anomalously higher temperatures in parts of Europe. Across Spain and France temperatures more than 10 C above average were recorded. On the 27th maxima exceeding 30 C were widely reported in Spain, and 35.2 C being reported at Moron de la Frontera, south-east of Seville.

Parts of western USA had an early taste of winter when a cold front tracked south across the Rocky Mountains and surrounding regions on the 22nd. This brought the warm conditions of mid-October to an end as temperatures fell, and snow fell at low levels; maxima in Salt Lake City fell from 25 C on the 21st to 7 C on the 23rd. The winter sports season opened early in the mountains, east of the Salt Lake Valley, with 26 in of snow falling at the Alta resort in the Warsatch Front.^{ix}

Tropical Storm Nalgae passed through the Philippines on the 29th bringing windspeeds of 60 mph. Heavy rain, flooding, and landslides caused the most damage, dozens of people died, and 170,000 sought shelter in evacuation centres. It is estimated that between 200 and 300 mm of rain fell over a twenty-four-hour period, which is more than six times the October daily average. It was the sixteenth tropical cyclone to have affected the Philippines this season and was noted to be tracking across the East China Sea.^x

October 1922.

Observers Notes.

Derby/Burton-on-Trent: A very dry month; the lowest total recorded was 9.9 mm, and the highest was 24.3 mm. For some of the local sites, it was the driest October since 1888, and for one or two, even longer.

It was quite a cold month. The mean temperature was just 7 C, compared to the Central England Temperature (CET) of 8.2 C. At that time the CET was around 1 C below normal. [See temperature and rainfall data at the summary end]. The highest maximum temperature was around 18 C on the 4th, and the lowest minima between -1 C and -2 C. The dates for these low minima were the 11th, 28th, 29th, and 30th. For comparison, the coldest October in the Derby area, in more recent times, occurred in 1974 (mean 7.4 C) – still nearly fifty years ago!^{xi}

Cranford (Aberdeen): Wet and cold.

Arisaig (Inverness): An exceptionally fine, calm, sunny month.

Rothesay (Bute): The month of October has been one of the best month's we have had for a considerable time.

Ipswich (Suffolk): The total rainfall for the month just ended is 8.82 in [20.8 mm], which is the smallest in my records, except [for] 1920.

Hodsock Priory (Nottingham): A very dry and rather cold month.

Totland Bay (Isle of Wight): I have never before known more than 14 consecutive days without rain in October. This year the absolute drought lasted from October 6th to 26th.

Tenbury (Worcester): Very dry, cold, sunny month.

Meltham (Yorkshire): The smallest rainfall in October in my record of 42 years.

Blundellsands (Lancashire): The least rainfall in October ever recorded during 47 years.

Torquay (Devon): The principal climatic features of the month were the exceptional number of rainless days, the prevalence of an easterly wind, chilly days and nights, low percentage of humidity, and an abundance of sunshine.

Redruth (Cornwall): Absolute drought, October 6th to 24th.

Dublin (City): The latter half of the month was severely cold, and on the 28th and 29th, the higher range of the Dublin and Wicklow hills were snow-capped.

Review of October 1922.

Throughout the month, much of the British Isles was abnormally dry, with rainfall totals well below average. The mean temperature was low, particularly during the latter part of the month. Snow was recorded over a wide area around the 28th and 29th, with falls being noted as far south as Falmouth and Jersey. Sunshine was well above average, the second week being particularly fine with almost continuous bright sunshine being observed at many English stations on successive days.

At the beginning of the month a belt of high pressure extended from Madeira to Scandinavia, producing mild weather with south-westerly winds and above average temperatures in England. In Scotland, the passage of a depression north-eastwards, on the 3rd, produced heavy rain, Aberdeen measuring 14 mm and Castlebeg 13 mm.

A second depression centred north-west of Ireland on the 4th gave 23 mm at Plymouth and 17 mm at Falmouth. This depression moved rapidly across northern England on the 5th, reaching the Netherlands by the morning of the 6th. Pressure rose in the north and, with north-easterly winds, temperatures decreased. By the 7th an anticyclone became established over the country and conditions became drier with little light rain, apart from some drizzle along the east coast. The high pressure then moved east, and unsettled

conditions spread over Scotland and the north-west. Temperature maxima, with almost continuous sunshine, rose steadily. On the 14th the temperature at Llandudno and Colwyn Bay reached [21 C]. In Scotland, Gordon Castle and Kelso reached similar temperatures on the 15th.

The anticyclone moved east, winds once again came from the north-east, and temperatures fell. However, the weather remained dry with cloudy skies in the east. On the 20th, and again on the 26th, 28th, and 29th, temperatures failed to rise above [7 C] in London. On the morning of the 26th the frost was unusually severe for October, a minimum of [-2 C] being recorded at Kew. This was the lowest recorded for October since 1905. In the north-west minima below freezing were recorded on several nights; Renfrew on the 25th [-4 C], and Eskdalemuir [-6 C].

Snow and sleet occurred in the north on the 27th and extended south during the following day. London had a slight snow shower, and a heavy fall was recorded in the south-west of England on the 29th, when a depression over France moved north-east. This also gave rise to gales in the English Channel.

The weather then improved, the 31st being fine, with average temperatures over England. By the same evening however, a large depression off the west coast of Scotland was producing south-westerly winds which reached gale force accompanied by almost continuous rain in the west and north.

The rainfall of the month was practically everywhere below average and was most marked in the centre of England and Wales where less than 25% was recorded over a very large area. This was also the case on the west of Ireland. Only 10% was recorded on the Cheshire Plain, Wallasey had only 0.6 mm between the 6th and 30th. There were only small areas with above 50%, east Kent, the extreme north-east of England, and part of the north of Ireland being of note. However more than 75% was recorded over much of Central and Eastern Scotland.

The driest Octobers since 1865 [up to 1922] were those of 1879, 1888, 1897, and 1904. In the two driest Octobers, 1879 and 1904, the heaviest rain fell in the north-west. In 1922 the October was noted as, "probably as dry over the country as any October of which we have any record".

The percentage of average for all areas was England and Wales 33%, Scotland 59%, Ireland 37%, and the British Isles 42%.^{xii}

Further Afield, October 1922.

The weather in the North Atlantic was again stormy and several liners were delayed. Shipping also suffered in the ay of Biscay and off the Brittany coast.

On the 18th the island of Barbuda, in the West Indies, was hit by a severe hurricane, which was described as the worst in living memory. The maximum frequency of hurricanes in the region is between August and September, and between 1876 and 1919 only four hurricanes originated, or passed near, Barbuda during the month of October.

On the 24th heavy rain in Tangiers caused walls, in the native part of the town, to collapse. It is understood that there were some casualties, but no figures were made available.

The Indian monsoon was weak during October, and there were no cyclones reported in the Bay of Bengal. As a result of heavy rain at the end of September, the whole country from Jamalganj to Santahar was flooded, house and cattle being swept away. The loss of life was small, although 1500 square miles was inundated, and a population of a million and a half was involved. Heavy rain was reported around the head of the Bay of Bengal, while Orissa, Chota Nagpur, and upper Burma were also affected.

A typhoon in the Wenchow district of China caused widespread damage.

A severe snowstorm was reported at Puente del Inca, located in the Andes at a height of 8,927 feet. The snow fell during a severe gale and reached a depth of 4 feet. It was the worst fall of the winter and was unusual so late in the season. A feature of the winter and spring months (June to October) in the Argentine was the unusual rapidity which cyclonic and anticyclonic systems crossed the country.

In Brazil, temperatures were well below average in the south, and several frosts were recorded. On the south coast storms were reported on the 6th and 26th. Crops were generally satisfactory except that, in the south, vines were killed by the late frost.^{xiii}

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

Mean Maximum Temperature: 11.7 C. Average: 13.2 C.

Mean Minimum Temperature: 4.7 C. Average: 6.1 C.

Mean Temperature: 8.2 C. Average: 9.4 C.

England and Wales Rainfall: 33.4 mm. Average: 102.4 mm. (33%).

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

Midlands Mean Maximum Temperature: 11.7 C. Average: 12.7 C.

Midlands Mean Minimum Temperature: 3.8 C. Average: 4.8 C.

Midlands Mean Temperature: 7.7 C. Average: 8.7 C.

Midlands Rainfall: 20.8 mm. Average: 74.3 mm. (28%).

2022 (Provisional)

Central England (Averaging period is 1991-2020).

Mean Maximum Temperature: 16.5 C. Average: 14.3 C.

Mean Minimum Temperature: 9.2 C. Average: 7.5 C.

Mean Temperature: 12.8 C. Average: 10.9 C.

England and Wales Rainfall: 89.9 mm. Average: 102.9 mm. (87%).

ⁱ T Scholey, email from Lowdham observer.

ⁱⁱ Weather Report for October 2022, Meteorological Office, HMSO, November 2022.

ⁱⁱⁱ The Guardian, 4 October 2022.

^{iv} The Guardian, 6 October 2022.

^v The Guardian, 15 October 2022.

^{vi} The Guardian, 18 October 2022.

^{vii} The Guardian, 22 October 2022.

^{viii} The Guardian, 25 October 2022.

^{ix} The Guardian, 29 October 2022.

^x The Guardian, 1 November 2022.

^{xi} D J Stanier, by email, 1 November 2022.

^{xii} Meteorological Magazine, November 1922, and monthly Weather Report, October 1922, Meteorological Office, December 1922.

^{xiii} Meteorological Magazine, November 1922, pp. 288, 289, and 294.

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