



## Weather Front

2021/1921

October 2021

### Observers Notes.

**Desford:** Very mild with exceptionally mild nights for the time of year, which boosted the monthly average temperature. It was also very wet at times.

**Pitsford:** Unsettled through the first week, then turning drier and warmer. The second half of the month saw increasingly unsettled conditions returning once again.<sup>i</sup>

**Coton in the Elms:** A mild, but not exceptional, October and frost free, with above average rainfall.

**Ely:** The third consecutive wet October.

**Middleton:** On the whole an uneventful month.

**Bablake:** Another warm and wet October.

**Mountsorrel:** Another mild and wet October. Most of the rain fell in the first week, and then during the last ten days. Once again, no air, or ground, frost in October Days were mostly mild, with the nights milder still, and continues the recent pattern of mild and wet Octobers.

**Derby:** 46% of the monthly rainfall total fell during the last two days of the month.

### Items of interest.

#### Weather Impacts.<sup>ii</sup>

In the first week of the month, strong winds and rain caused flooding on roads in parts of South Wales and Pembrokeshire, with about 30 homes affected in Rhondda Cynon Taff. Overnight rain brought flooding to parts of London on the 5th. Prolonged rain fell across western Scotland but caused minimal impacts during the second week. Unsettled weather prevailed during the second half of October. Some roads were closed in Swansea and Carmarthenshire on the 20th due to flooding, including the M4 and parts of the Fabian Way into Swansea. In Merseyside and Greater

Manchester, a possible tornado resulted in damage to houses and vehicles. Heavy rain affected the south of England overnight 20th/21st. Essex Fire Services reported over 120 flood-related incidents including the rescue of a pensioner from their car. Several roads were impacted by flood water including the A127 and the B1014. Several bus routes were disrupted, and trains between Dartford and Gravesend were delayed due to a landslip. Both Southend seafront and Huntingdon High Street were temporarily closed due to flooding, and London saw widespread flooding on roads, with disruption to numerous rail services due to flooded platforms, stations, or lines. Vehicles were stranded in flood water in Ashington, West Sussex, and a mini tornado was reported in Worthing causing some minor damage to gardens. Devon and Somerset Fire and Rescue reported an extremely busy night due to flooding incidents, logging almost 300 calls. Four people were rescued from St Kew Ford in Cornwall, and five people were rescued from a flooded cave in Priddy, Cheddar. Many roads were flooded across Devon and Cornwall including the A30, A303, and A390. The last five days of the month brought further issues. Widespread flooding in parts of Scotland on the 27th and 28th caused problems, including on parts of the M8. Some drivers were stranded in cars on flooded roads, and a landslip affected the railway line between Carstairs and Carlisle. A major incident was declared in Hawick with school closures, widespread travel disruption, and plans to evacuate residents. There were similar reports of disruption and flooding across Cumbria, with impassable roads, cancelled bus services, several cars stranded in floodwater on the A592, and major disruption to rail services to and from Carlisle. Widespread flooding in Cocker mouth meant flood defences and pumping were in operation. On the 29th, the Rhondda South Wales and Bangor to Holyhead railway lines were flooded, followed by flooded roads, and fallen trees elsewhere across Wales on the 30th and 31st. There were a number of fallen trees in Northamptonshire, and fire crews dealt with over 130 incidents. Rail services were also impacted by fallen trees. There were some reports of flooding on the A205 and A20 in London. In Oxfordshire fallen trees blocked roads and railway lines and brought down power lines, the latter causing some power cuts. There were also flooded roads in Woking and Farnham.

### **Pitsford Weather Centre.<sup>iii</sup>**

31 October 2021.

Widespread reports of a tornado, or series of tornadoes, during the morning as windspeeds increased rapidly, accompanied by torrential downpours. Several roads rendered impassable due to fallen trees and branches and reports were received of damage to properties to the north of Wellingborough. Many places saw temporary disruption to electrical, as well as water, supplies. Peak gusts at Pitsford reached 51 mph [44 kts] at 1019 GMT. [A similar situation affected Lincoln around 1040 GMT. This may well have been a squall associated with the passage of a cold front.]

### **The Guardian.<sup>iv</sup>**

**2 October 2021.**

The erupting volcano on La Palma, in the Canary Islands, has brought a new and unwelcome weather effect: vog, or volcanic smog. Vog causes eye and throat irritation, coughing and increased susceptibility to respiratory conditions. It is particularly dangerous to asthma sufferers, as it can cause tightening of the airways...

Fortunately, vog dissipates in time with wind and rain. Although it is unpleasant, studies have not found any evidence that vog exposure causes long-term health effects. [Unlike the fogs, or smog's, of the 1950's. I can remember walking back from the Met Office Training School at Stanmore just as the fog, or smog, began to form; rather disturbing!]

### **12 October 2021.**

The Met Office has confirmed that the heatwave that started on 7 August 2020 broke records in terms of maximum temperatures reached, and the duration. One striking effect was that some roads melted like chocolate, resulting in ridges, ruts, and other permanent damage...

### **28 October 2021.**

Late monsoon rains have caused significant damage in parts of Nepal, as well as the Indian state of Uttarakhand and Kerala.

Landslides swept away homes, bridges and roads after heavy rain and flash floods. Uttarakhand saw some of the heaviest rainfall, with more than 300 mm recorded in 24 hours. Almost 200 people are known to have died. The Indian monsoon was delayed this year. Meanwhile, a deep area of low pressure named by Meteo-France as Strom Aurore brought strong winds and heavy rainfall to parts of Europe last week. Four people were killed in Poland, and power outages and transport disruption were reported in France, Germany, and the Netherlands. There were 250,000 homes left without electricity in France, and the Deutsche Bahn cancelled all long-distance trains in North Rhine Westphalia state.

After drought conditions across the US Pacific coast, the past few days have seen some relief for parts of California and the Pacific north-west in the form of heavy rainfall and snow. However, the National Oceanic and Atmospheric Administration foresees drought conditions continuing well into 2022.

## **October 1921.**

### **Observers Notes.**

**Derby/Burton on Trent:** The month appears to have been a little below normal for rainfall, with Derby gauges yielding mainly 55 -65 mm totals, while in Burton the amounts were rather variable with one as low as 30.2 mm [this may have been a printing error, but inspection of the MWR Rainfall analysis suggests that isohyets below 50 mm were possible in that area], and as high as 70-77 mm, but one of the sites is a higher level one at around 425 feet above sea level, on the Needwood Plateau.

It was a mild month, with overall means around 13 C and, by coincidence, close to the 2021 mean. In 1921 however, this warmth was 3.4 C above the 1891-1920 average; October did not achieve a comparable mean value until 1969, 1995 and then in the early 21<sup>st</sup> century.

The temperature extremes were 26 C on the 6<sup>th</sup> and 9<sup>th</sup>, very high for October, and unusual to record it twice. The lowest minimum was around -1 C on the 30<sup>th</sup>, so a not unusual October air frost.<sup>v</sup>

**Huddersfield (Yorkshire):** Mildest October on the record of fifty years.

Meltham (Yorkshire): Much the warmest in the record of forty-three years.

**Hodsock Priory (Nottingham):** By far the warmest October in my record. Sunshine more than in any of the previous forty years, with the exception of 1893.

**Tenbury (Worcester):** Remarkably fine, mild, and dry month. The ninth successive month with the rainfall less than average.

**Ipswich (Suffolk):** The temperature of the month just ended is probably more remarkable than anything we have experienced so far during this wonderful year. In twenty years, there have been in all eighteen days in which the thermometer has reached [21 C] in October, and of these no less than ten have been during this month.

**Southport (Lancashire):** This was much the warmest October since records commenced in 1871 and was warmer than the great majority of Septembers.

**Sheepstor (Devon):** Between May 31<sup>st</sup> and October 23<sup>rd</sup> the temperature in the screen failed to reach [16 C] on two days only; an occurrence at this altitude (730 feet) probably without precedent.

**Tavistock (Devon):** The driest October ever registered.

**Redruth (Cornwall):** Mean temperature [2.8 C] above average of twenty years, being the highest for the whole period of observations.<sup>vi</sup>

## Overview of October 1921

October 1921 was unusually warm in the south of the country, particularly during the early part of the month. This was associated with an anticyclone which dominated much of Central Europe, and persisted, unbroken, for the first three weeks of the month. However, in the north and west depressions were the driving force of the weather, which was unsettled. The final week saw the anticyclone move slowly west and brought fine weather to the whole of the country.

At the start of the month a belt of low pressure extended from the Azores to the north-west of Scandinavia. During the 2<sup>nd</sup> a shallow depression moved east into Scandinavia and was accompanied by gales and sleet. This proved to be the only break in the fine weather of the south-east. Between the continental anticyclone and another, situated to the north of Scotland, lay an area of relatively low pressure. This system remained stationary for around twelve hours and produced considerable rainfall; 44 mm at Cranwell, 25 mm at Nottingham,

and 14 mm at Manchester, during the night of the 3<sup>rd</sup> and 4<sup>th</sup>. A southerly airstream, associated with this synoptic situation, brought air up from North Africa contributed to the high temperatures in its' wake; [34 C] at Biarritz on the 4<sup>th</sup>, [28 C] at Kew on the 5<sup>th</sup> and 6<sup>th</sup>, and [27 C] on the 9<sup>th</sup>. These were the highest October temperatures ever recorded at Kew, the previous being [25 C] in 1886. There were also abnormally high minima; [17 C] at Kew and [16 C] at Falmouth on the night of 3<sup>rd</sup>-4<sup>th</sup>, and [17 C] at Valencia on the night of the 5<sup>th</sup>-6<sup>th</sup>. These minima were records for these stations for the time of year.

There was heavy rain and strong winds associated with a secondary depression to the west and south-west of Ireland on the 10<sup>th</sup> and 11<sup>th</sup>. Rain also fell in south-eastern England, with thunder being reported locally. Cooler air eventually arrived in south-east England and local frosts were reported on the night 14<sup>th</sup>-15<sup>th</sup>, and some on succeeding nights. Unsettled weather began to dominate in the west with the arrival of more depressions. A secondary low moved up the English Channel on the 20<sup>th</sup> and thunder was reported locally. A violent storm was noted at Shanklin (Isle of Wight) on the 20<sup>th</sup> but was not accompanied by thunder or lightning; 33 mm of rain were recorded. Much damage was done to roads, and low-lying streets were flooded. The evening of the 22<sup>nd</sup> saw the end of the mild weather, with the passage of a depression across the country, and by morning of the 23<sup>rd</sup> it was located over Denmark. It produced a fall in temperatures with minima of [-6 C] and [-2 C] at Renfrew and Benson respectively, on the 24<sup>th</sup>. An anticyclone to the south-west of the country dominated the weather over southern districts for the remainder of the month, while a depression near Iceland caused unsettled weather in the extreme north and north-west during the same period.

The mean temperature for the month was well above average throughout the country, ranging from [+3.6 C] in north-west England to [+2.3 C] in northern Scotland.<sup>vii</sup>

The lack of rain, which persisted over the south-east for many months, was still in evidence during October. An area, from Dorset to the Norfolk coast and the south-east coast from Littlehampton to Margate, had less than [25 mm] of rain, and parts of the coast of Essex and Kent less than [12 mm]. Falls increased towards the north and north-west, but in England and Wales falls of [150 mm] or more were confined to Snowdonia and the Central Lakes. While rainfall in Ireland was unexceptional, the western Highlands were wet, most of which was between the Trossachs and western Sutherland; falls of [250 mm] being recorded, and [500 mm] being noted in western Inverness. Eastern Scotland however recorded less than [50 mm] between Dornoch Firth and the Firth of Forth.

Rainfall was above average in the area enclosed from Galway Bay to North Channel, to Cape Wrath, to the Firth of Forth. There were small areas above average in the Pennines, but most of the east coast of the country, and the whole of southern England and Wales, had less than 50%, with less than 25% falling between Devon and Kent.<sup>viii</sup>

Morning mist and fog were prevalent on the Continental air routes, but during the day visibility was fair to good. Low cloud was also rare with many days with little or no cloud. Winds at 2000 feet were mostly under 25 mph [22 kts].<sup>ix</sup>

### **Notes from Abroad.**

October in western Europe was abnormally warm and dry, with occasional heavy falls of rain. In Belgium the drought became serious with the closure of factories, and limits being imposed on the consumption of water for domestic use. In Beauvais a third crop of hay was cut for the only time "within living memory". In Geneva many fig trees yielded a second crop. In the alps the high temperatures melted the glaciers causing local flooding and high-water levels in the lakes.

In India the start of the month saw a vigorous monsoon in the Peninsula, with rain above average. The harvest had begun early, and the crop was good, except in Baluchistan, where the prospect was poor. By the 26<sup>th</sup> advice from the Peninsula was suggesting "scant rainfall in most places and a weak monsoon".

In North America the month opened with a severe storm in Ontario and Quebec, with trees being blown down, houses unroofed and damage to electric and telephone services, and to orchards. On the 26<sup>th</sup> a violent cyclone hit Florida causing damage of several million dollars. Tampa was hit badly from a wave which swept over the lower part of the town, destroying 500 houses, and killing five people; the orange crop was also severely damaged. On the 28<sup>th</sup> a mining camp in British Columbia was flooded from a swollen mountain stream being temporarily blocked by an avalanche; when this dam gave way a wall of water 70 feet high destroyed 50 houses, some of which finished in the sea.

On the night of 3<sup>rd</sup>-4<sup>th</sup> a severe storm hit parts of Argentina. A deep depression centred over Entre Rios at 0800 on the 4<sup>th</sup> brought heavy rain to the country causing rivers to rise rapidly. There was also a terrific thunderstorm around Buenos Aires, with rainfall totals exceeding 75 mm or more. By the morning of the 4<sup>th</sup> a large part of Buenos Aires was flooded, many houses collapsed, the docks flooded, new works destroyed, and much damage was done to shipping. At the time of the flood, it is understood that there was an exceptionally low tide at Montevideo.<sup>x</sup>

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

Mean Maximum Temperature: 17.1 C. Average: 13.2 C.

Mean Minimum Temperature: 8.5 C. Average: 6.1 C.

Mean Temperature: 12.8 C. Average: 9.4 C.

England and Wales Rainfall: 52.2 mm. Average: 102.4mm.

Midlands. (Averaging period is 1911 to 1920).

Midlands Mean Maximum Temperature: 17.2 C. Average: 12.7 C.

Midlands Mean Minimum Temperature: 7.5 C. Average: 4.8 C.

Midlands Mean Temperature: 12.3 C. Average: 8.7 C.

Midlands Rainfall: 51.9 mm. Average: 74.3 mm

### **2021 (Provisional)**

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

Mean Maximum Temperature: 15.2 C. Average: 14.3 C.

Mean Minimum Temperature: 9.0 C. Average: 7.5 C.

Mean Temperature: 12.1 C. Average: 10.9 C.

England and Wales Rainfall: 145.4 mm. Average: 102.9 mm.

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<sup>i</sup> Headline, Monthly Weather Report, Pitsford Weather Centre.

<sup>ii</sup> Monthly Weather Report, Meteorological Office, October 2021, pp 1 and 2.

<sup>iii</sup> MWR, Pitsford Weather Centre.

<sup>iv</sup> Guardian Newspaper, Various dates as noted.

<sup>v</sup> D J Stanier, by email.

<sup>vi</sup> MWR, Meteorological Office, October 1921, HMSO, p. 127.

<sup>vii</sup> MWR, Meteorological Office, October 1921, HMSO, p. 127.

<sup>viii</sup> British Rainfall 1921, Meteorological Office, HMSO, 1922, pp. 111-113.

<sup>ix</sup> Meteorological Magazine, November 1921, Meteorological Office, HMSO, p. 306.

<sup>x</sup> Meteorological Magazine, November 1921, pp. 306-307 and 313.

<sup>xi</sup> Hadley Centre, Central England and Midlands, Meteorological Office.