



# Autumn 2023

(September, October & November)

## Warm and wet overall. Heatwaves in September, flooding in October, four named storms

Autumn 2023 was the tenth consecutive season with above average temperatures at most stations. September was warm, sunny and wet. The first third of the month saw a tropical continental air mass over the country leading to heatwaves and the majority of stations reporting their highest temperatures of the year. Atlantic low pressure systems gradually became more dominant as the month progressed bringing spells of heavy rain and strong winds. The first named storm of the 2023/24 season, named storm Agnes by the Met Office (UK), brought widespread heavy rain and strong winds on the 27th. October was another mild month, especially during the first third of the month, with record October maximum temperatures in places. It was also very wet in the Midlands, South and East, especially during the second half of the month. Storm Babet, named by the Met Office (UK), brought several days of intense rainfall, which led to flooding in places. The South of the country saw record high October rainfall. November was mild overall but finished cold. It was wet in the Northwest and dry in the Southeast. Atlantic low pressure was dominant for the first two thirds of the month. The direct impacts from Storm Ciarán, named by the Met Office (UK), mostly missed Ireland to the south at the beginning of the month. Storm Debi, named by Met Éireann, brought heavy rain and strong winds as it crossed Ireland from southwest to northeast on the 13th. The final third of the month saw it turn progressively colder and drier with high pressure more dominant. The season finished cold with an arctic air mass bringing widespread frost.

### Rainfall: Above average in most places, wettest in the South

Nearly all rainfall totals were above their Long-Term Average 1981-2010 (LTA) for the season. Percentage of seasonal rainfall values ranged from 83% (seasonal rainfall total of 316.9 mm) at Belmullet, Co Mayo to 166% at both Cork Airport, Co Cork and Johnstown Castle, Co Wexford (*its wettest autumn on record, length 82 years*) (seasonal rainfall total of 586.8 mm and 540.1 mm respectively). Seasonal rainfall totals ranged from 269.7 mm (125% of its LTA) at Casement Aerodrome, Co Dublin to 607.4 mm (128% of its LTA) at Valentia Observatory, Co Kerry. The highest daily rainfall total was 57.9 mm at Mace Head, Co Galway on Sunday 24th September. The number of rain days ranged from 55 days at Phoenix Park, Co Dublin to 76 days at Sherkin Island, Co Cork. The number of wet days<sup>1</sup> ranged from 41 days at Phoenix Park, Co Dublin to 59 days at Valentia Observatory, Co Kerry. The number of very wet days<sup>3</sup> ranged from 7 days at Malin Head, Co Donegal to 23 days at Valentia Observatory, Co Kerry. Along with Johnstown Castle, Roches Point, Co Cork also had its wettest autumn on record with 474.6 mm (164% of its LTA). Cork Airport, Co Cork had its highest daily fall for autumn since 1995 with 55.6 mm on Wednesday 18th October during storm Babet.

### Temperature: Above average everywhere

All mean air temperatures across the country were above their LTA for the season. Deviations from mean air temperature ranged from 0.6 °C (10.6 °C mean temperature) at Markree, Co Sligo to 1.5 °C (11.6 °C mean temperature) at Phoenix Park, Co Dublin. Mean temperatures for the season ranged from 10.2 °C (1.2 °C above its LTA) at Knock Airport, Co Mayo to 12.8 °C (0.8 °C above its LTA) at Sherkin Island, Co Cork. The season's highest temperature was reported at Oak Park, Co Carlow on Friday 8th September with a temperature of 28.5 °C (*its highest autumn temperature on record (record length 18 years)*). Both the season's lowest air and grass minimum temperatures were recorded on Thursday 30th November at Mount Dillon, Co Roscommon. The lowest air minimum was -5.1 °C while the lowest grass minimum was -9.0 °C. More than half of stations reported ground frost. The number of days with ground frost ranged from zero days at Malin Head, Co Donegal to 30 days at Mount Dillon, Co Roscommon. More than half of stations reported air frost. The number of days with air frost ranged from zero days at a few stations to 15 days at Mount Dillon, Co Roscommon. Along with Oak Park, thirteen other stations broke their autumn maximum temperature record with record lengths between 12 and 81 years.

### Sunshine: Above average, sunniest in the Southeast

All available sunshine totals were above their LTA for the season. Percentage of seasonal sunshine values ranged from 106% (seasonal sunshine total of 310.4 hours) at Casement Aerodrome, Co Dublin to 112% (seasonal sunshine total of 300.7 hours) at Shannon Airport, Co Clare. Seasonal sunshine totals ranged from 255.9 hours (No LTA comparison\*) at Valentia Observatory, Co Kerry to 345.0 hours at Johnstown Castle, Co Wexford (No LTA comparison\*). The highest number of daily sunshine hours recorded this season was 12.6 hours at Malin Head, Co Donegal on Monday 4th September. The number of dull days<sup>2</sup> ranged from 21 days at Casement Aerodrome, Co Dublin to 29 days at Malin Head, Co Donegal.

### Wind: Storm force winds reported. Strong gales reported in September during storm Agnes and in November during storm Debi

Seasonal mean wind speeds ranged from 5.4 knots (10.0 km/h) at Moore Park, Co Cork and Ballyhaise, Co Cavan to 15.5 knots (28.7 km/h) at Malin Head, Co Donegal. Gales were reported on numerous days with up to strong gales reported on Wednesday 27th September during storm Agnes, Friday 20th October and Monday 13th November during storm Debi. Storm force winds were reported on Wednesday 1st November (associated with a secondary low to storm Ciarán). The number of days with gales ranged from zero days at a few stations to 12 days at Malin Head, Co Donegal. The number of days with up to strong gales ranged from zero days at most stations to 2 days at a few stations. The season's highest gust was reported at Sherkin Island, Co Cork on Wednesday 27th September during storm Agnes with 63 knots (117 km/h). The season's highest 10-minute mean wind speed was 48 knots (88 km/h) at Mace Head, Co Galway on Wednesday 1st November.

## EXTREME VALUES FOR AUTUMN AT SYNOPTIC STATIONS

### Rainfall

Highest seasonal total: 607.4 mm at Valentia Observatory, Co Kerry (128% of its LTA)  
Lowest seasonal total: 269.7 mm at Casement Aerodrome, Co Dublin (125% of its LTA)  
Highest daily rainfall: 57.9 mm at Mace Head, Co Galway (52% of its monthly LTA) on Sun 24th Sep

### Temperature

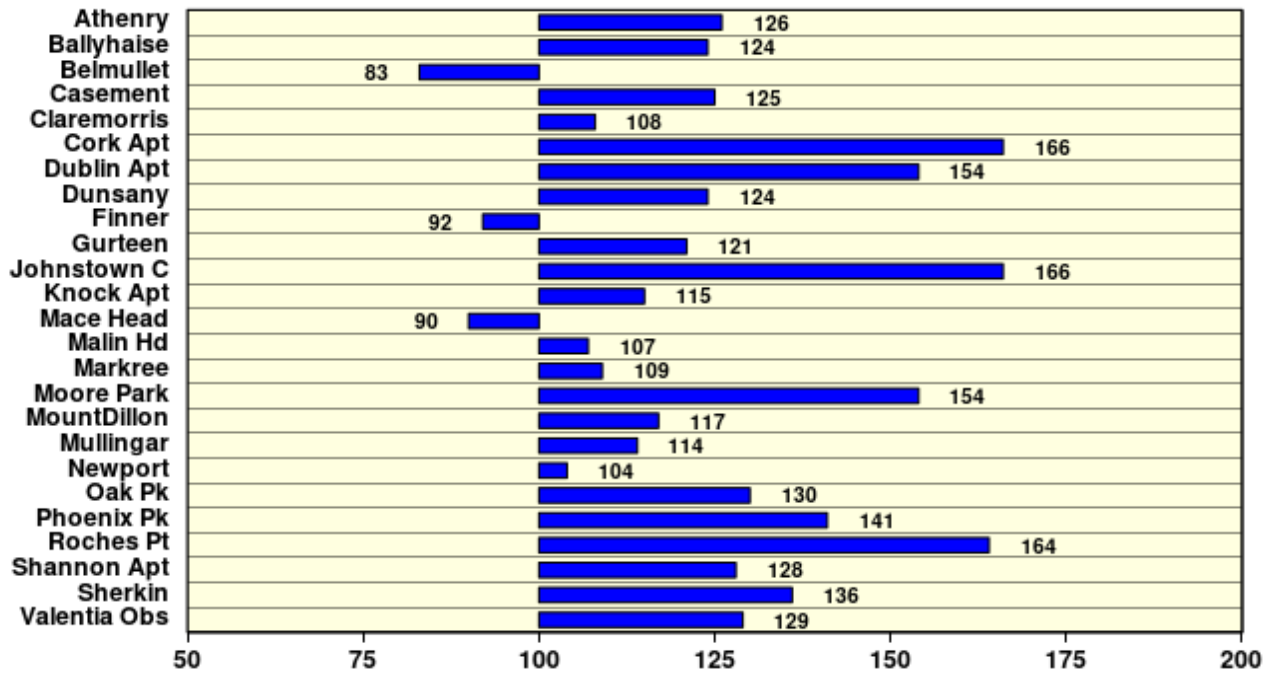
Highest mean seasonal temperature: 12.8°C at Sherkin Island, Co Cork (0.8°C above its LTA)  
Lowest mean seasonal temperature: 10.2°C at Knock Airport, Co Mayo (1.2 above its LTA)  
Highest air temperature for the season: 28.5°C at Oak Park, Co Carlow (11.0°C above its monthly LTA) on Fri 8th Sep (*its highest autumn temperature on record (record length 18 years)*)  
Lowest air temperature for the season: -5.1°C at Mount Dillon, Co Roscommon (8.8°C below its monthly LTA) on Thu 30th Nov  
Lowest grass minimum for the season: -9.0°C at Mount Dillon, Co Roscommon on Thu 30th Nov

### Sunshine

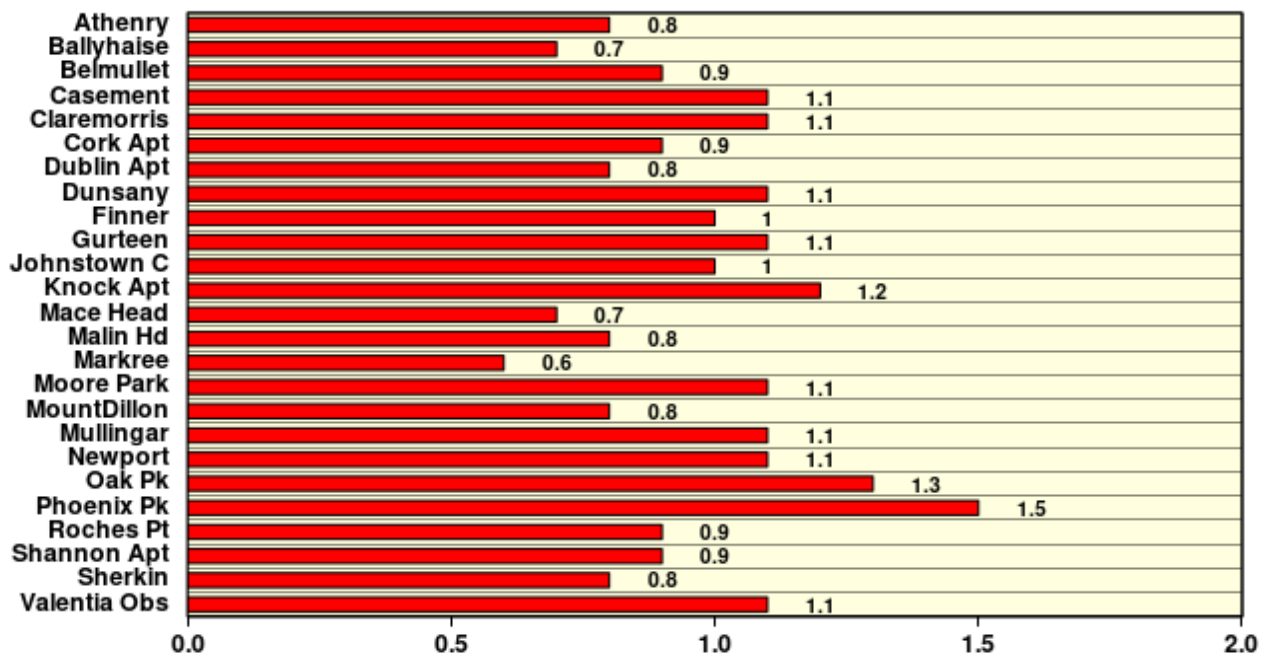
Highest seasonal total: 345.0 hrs (daily mean 3.79 hrs/day) at Johnstown Castle, Co Wexford  
Lowest seasonal total: 255.9 hrs (daily mean 2.81 hrs/day) at Valentia Observatory, Co Kerry  
Highest daily sunshine for the season: 12.6 hours at Malin Head, Co Donegal on Mon 4th Sep

Autumn 2023

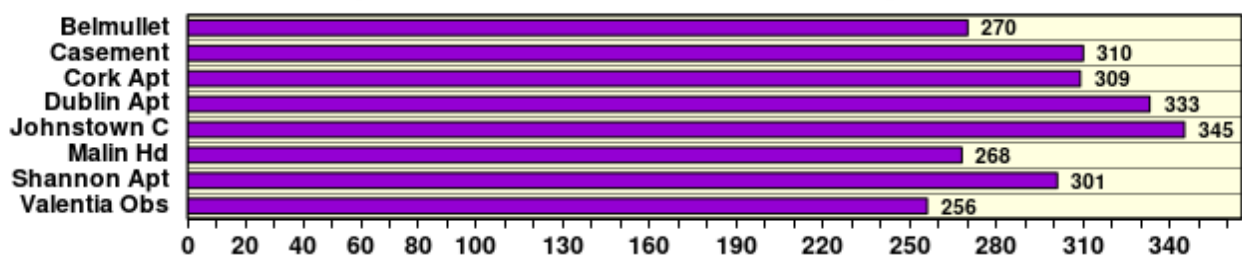
**Rainfall** (% of average for period 1981-2010) on whole season basis



**Temperature (°C)** (difference from average for period 1981-2010)



**Sunshine** (Number of seasonal sunshine hours)



Issued by the Climatology and Observations Division of Met Éireann on Tuesday 5th December 2023. This report is based on available preliminary data from 25 principal weather stations operated by Met Éireann. Synoptic station data is midnight to midnight UTC. Long-Term Averages (LTAs) and “average” refer to the period 1981-2010. <sup>1</sup>A wet day is a day with 1.0 mm or more of rainfall. <sup>2</sup>A dull day is a day with less than 0.5 hours of sunshine. <sup>3</sup>A very wet day is a day with 10.0 mm or more of rainfall. <sup>4</sup>An absolute drought is a period of 15 or more consecutive days to none of which is credited 0.2 mm or more of precipitation. <sup>5</sup>A partial drought is a period of at least 29 consecutive days, the mean daily rainfall of which does not exceed 0.2 mm. <sup>6</sup>A dry spell is a period of 15 or more consecutive days to none of which is credited 1.0 mm or more of precipitation (i.e. daily tot < 1.0 mm). <sup>7</sup>A heatwave occurs at a Met Éireann station when the daily maximum shaded air temperature is greater than twenty-five degrees Celsius (> 25.0°C) for five or more consecutive days. \*Sunshine data is from the Autosol Network. LTAs for these sites are currently not used for comparison purposes. For more information, contact Met Éireann at 01-8064200 or e-mail: enq@met.ie