



Autumn 2021

(September, October, November)

Very mild and relatively dry, especially in the Midlands and East

Autumn 2021 was very mild everywhere and relatively dry overall, especially in the Midlands and East, with below average sunshine for most. Absolute droughts⁴ were recorded in September and dry spells⁶ were recorded in September and November. A number of stations recorded their highest maximum temperature for autumn on record, with some recording their warmest autumn on record. Ireland stayed on the warmer, southern side of the Jetstream through most of autumn. High pressure to the south of Ireland dominated through much of September and November giving warmer and drier than average conditions, while low-pressure to the west of Ireland dominated through much of October, giving warmer and wetter than average conditions. There were a few cooler periods when Ireland lay on the northern side of the Jetstream, notably for a few days at the end of September and beginning of October, for a few days at the beginning of November and for several days towards the end of November. During these periods, high pressure set up to the west of Ireland, allowing polar maritime air masses from the north and northwest to dominate.

Rainfall: Below average in most places, driest in the East

The majority of seasonal rainfall totals across the country were below their Long-Term Average (LTA). Percentage of seasonal rainfall values ranged from 59% (the season's lowest seasonal rainfall total of 126.1 mm) at Phoenix Park, Co Dublin (*its driest autumn since 2007*) to 123% (the season's highest seasonal rainfall total of 586.0 mm) at Newport, Co Mayo. The highest daily rainfall total was 64.7 mm at Valentia Observatory, Co Kerry on Friday 8th Oct. The number of rain days ranged from 38 days at Casement Aerodrome, Co Dublin to 77 days at Knock Airport, Co Mayo. The number of wet days² ranged from 24 days at Dublin Airport, Co Dublin to 67 days at Newport, Co Mayo. The number of very wet days³ ranged from 1 day at Gurteen, Co Tipperary to 23 days at Newport, Co Mayo. Seven stations had absolute droughts⁴ between Sunday 22nd August and Wednesday 8th September. Fourteen stations had dry spells⁶ between Saturday 21st August and Wednesday 8th September. Two stations had dry spells⁶ between Friday 12th November and Monday 29th November (see monthly statements for more details). Along with Phoenix Park, Co Dublin, it was also the driest autumn since 2007 at Dublin Airport, Co Dublin with 133.7 mm (63% of its LTA) and Casement Aerodrome, Co Dublin with 135.7 mm (63% of its LTA).

Temperature: Above average everywhere

All mean air temperatures across the country were above their Long-Term Average (LTA) for the season. Deviations from mean air temperature ranged from 0.9 °C (12.8 °C the season's highest mean temperature) at Sherkin Island, Co Cork to 1.8 °C (11.9 °C mean temperature) at Phoenix Park, Co Dublin. Mean temperatures for the season were lowest at Knock Airport, Co Mayo with 10.5 °C (1.5 °C above its LTA). The season's highest temperature of 27.9 °C was reported at both Shannon Airport, Co Clare (*its highest maximum temperature for autumn on record (length 75 years)*) and Valentia Observatory, Co Kerry (*its highest maximum temperature for autumn since 1991*), both on Tuesday 7th Sep. Both the season's lowest air and grass minimum temperature were recorded on Monday 22nd Nov at Gurteen, Co Tipperary. The lowest air minimum was -3.1 °C while the lowest grass minimum was -7.9 °C. More than half of stations reported ground frost. The number of days with ground frost ranged from zero days at Newport, Co Mayo to 20 days at both Markree, Co Sligo and Mount Dillon, Co Roscommon. More than half of stations reported air frost, all in November. The number of days with air frost ranged from zero days at a few stations to 6 days at Casement Aerodrome, Co Dublin. Eight stations had their warmest autumn on record (record lengths ranging from 10 to 71 years). Along with Shannon Airport, nine other stations had their highest maximum temperature for autumn on record, all on Tuesday 7th September (record lengths ranging from 11 to 75 years).

Sunshine: Dullest in the Northwest, sunniest in the Southeast

All available sunshine totals were below their Long-Term Average (LTA) for the season. Percentage of seasonal sunshine values ranged from 90% (seasonal sunshine total of 263.3 hours) at Casement Aerodrome, Co Dublin to 98% (seasonal sunshine total of 264.2 hours) at Shannon Airport, Co Clare. Seasonal sunshine totals ranged from 194.6 hours (no LTA comparison*) at Malin Head, Co Donegal to 298.2 hours (no LTA comparison*) Johnstown Castle, Co Wexford. The highest number of daily sunshine hours recorded this season was 13.0 hours at Malin Head, Co Donegal on Wednesday 1st Sep. The number of dull days² ranged from 23 days at Dublin Airport, Co Dublin to 35 days at both Malin Head, Co Donegal and Valentia Observatory, Co Kerry.

Wind: Gales, strong gales and storm force winds reported and one named storm

Seasonal mean wind speeds ranged from 4.9 knots (9.1 km/h) at Moore Park, Co Cork to 15.0 knots (27.8 km/h) at Malin Head, Co Donegal. Gales were reported on numerous days with up to strong gales reported on Sunday 31st Oct and Saturday 27th Nov, with storm force winds reported on Friday 26th Nov. The number of days with gales ranged from zero days at a few stations to 11 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 Malin Head, Co Donegal. The number of days with storm force winds was 1 day at Malin Head, Co Donegal. Both the season's highest gust and 10-minute mean wind speed was reported at Malin Head, Co Donegal on the Friday 26th Nov during storm Arwen. The highest gust was 70 knots (130 km/h) while the season's highest 10-minute mean wind speed was 52 knots (96 km/h), storm force 10.

EXTREME VALUES FOR AUTUMN AT SYNOPTIC STATIONS

Rainfall

Highest seasonal total: 586.0 mm at Newport, Co Mayo (123% of its LTA)
Lowest seasonal total: 126.1 mm at Phoenix Park, Co Dublin (59% of its LTA) (*its driest autumn since 2007*)
Highest daily rainfall: 64.7 mm at Valentia Observatory, Co Kerry (37% of its monthly LTA) on Fri 8th Oct

Temperature

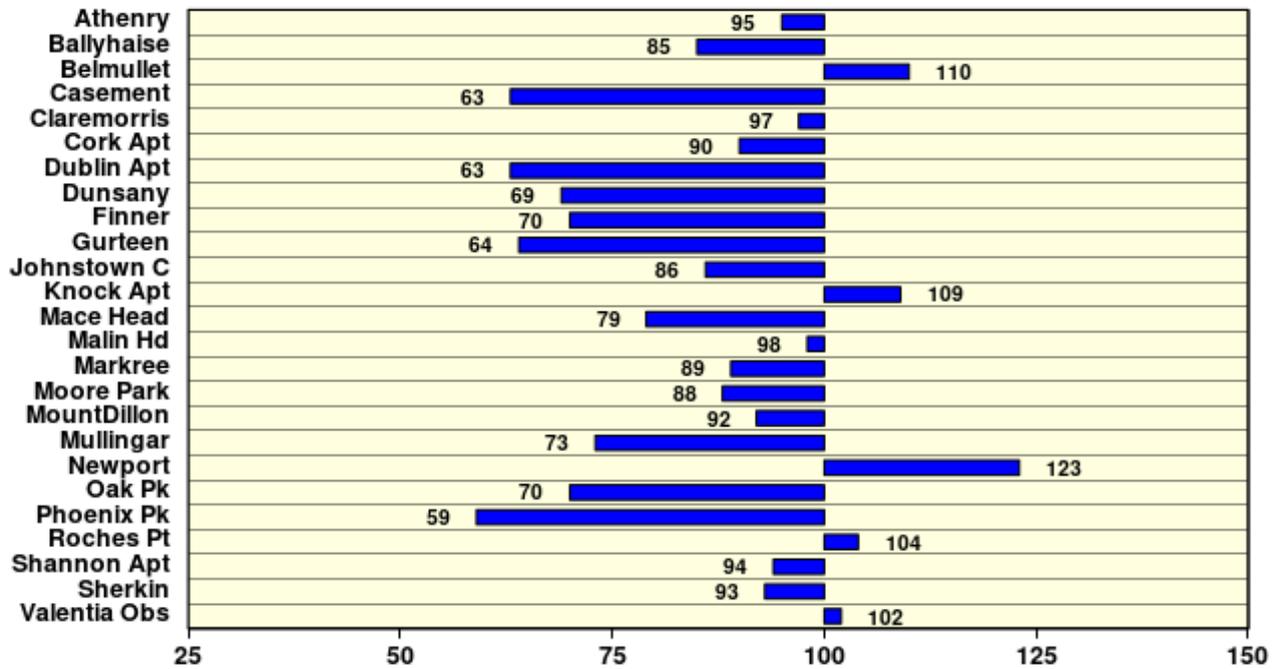
Highest mean seasonal temperature: 12.8°C at Sherkin Island, Co Cork (0.9°C above its LTA)
Lowest mean seasonal temperature: 10.5°C at Knock Airport, Co Mayo (0.4 above its LTA)
Highest air temperature for the season: 27.9°C at both Shannon Airport, Co Clare (10.2°C above its monthly LTA) (*its highest max for autumn on record (length 75 years)*) and Valentia Observatory, Co Kerry (10.9°C above its monthly LTA) (*its highest max for autumn since 1991*), both on Tue 7th Sep
Lowest air temperature for the season: -3.1°C at Gurteen, Co Tipperary (7.3°C below its monthly LTA) on Mon 22nd Nov
Lowest grass minimum for the season: -7.9°C at Gurteen, Co Tipperary on Mon 22nd Nov

Sunshine

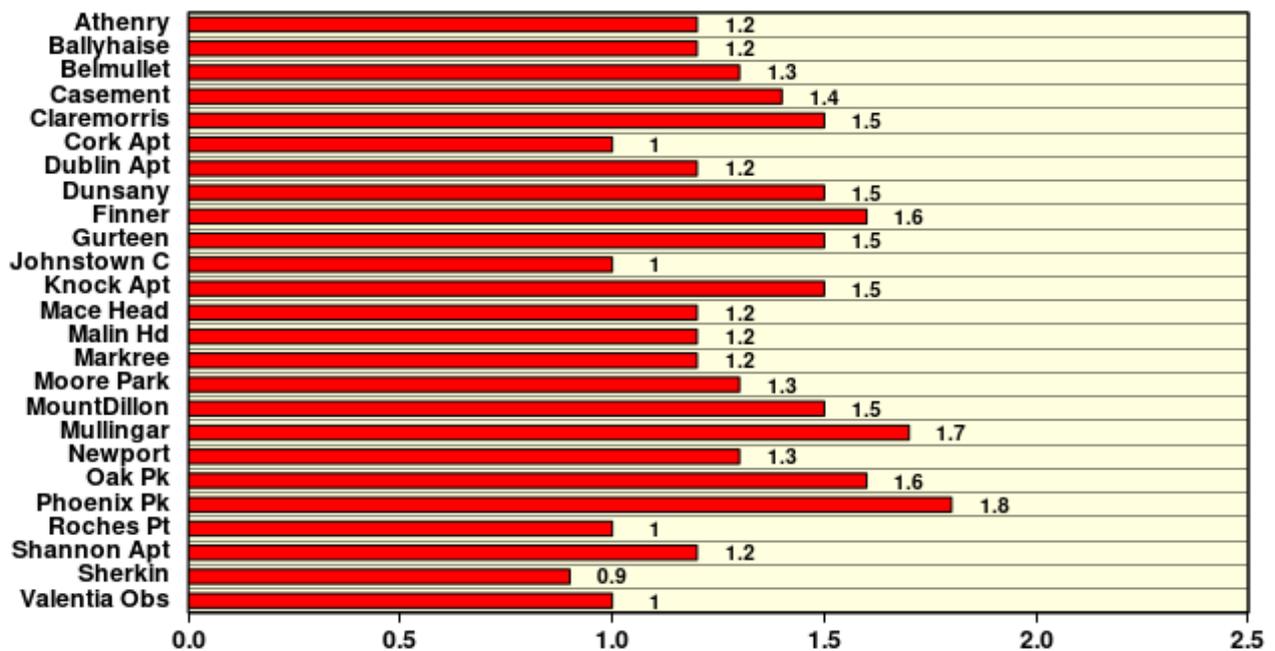
Highest seasonal total: 298.2 hrs (daily mean 3.28 hrs/day) at Johnstown Castle, Co Wexford
Lowest seasonal total: 194.6 hrs (daily mean 2.14 hrs/day) at Malin Head, Co Donegal
Highest daily sunshine for the season: 13.0 hours at Malin Head, Co Donegal on Wed 1st Sep

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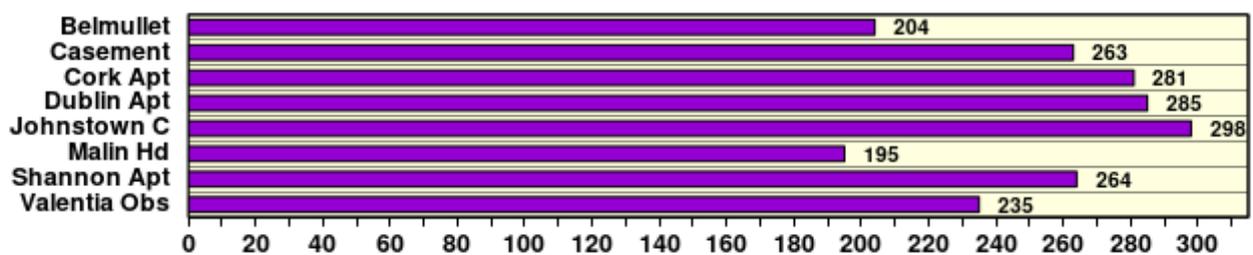
Rainfall (% of average for period 1981-2010) on whole season basis



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 Friday 3rd December 2021. 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. ¹A wet day is a day with 1.0 mm or more of rainfall. ²A dull day is a day with less than 0.5 hours of sunshine. ³A very wet day is a day with 10.0 mm or more of rainfall. ⁴An absolute drought is a period of 15 or more consecutive days to none of which is credited 0.2 mm or more of precipitation. ⁵A partial drought is a period of at least 29 consecutive days, the mean daily rainfall of which does not exceed 0.2 mm. ⁶A 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). ⁷A heatwave occurs where there are 5 consecutive days or more with maximum temperature over 25°C (that is, a daily maximum screen air temperature > 25°C). *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