

Storm Noa was the second named storm of the 2022-23 season that affected Ireland. It was the twelfth named storm on the official list of storm names by the South-western group (Portugal, Spain, France, Belgium and Luxemburg meteorological agencies). The impact date for Ireland was Wednesday 12 April 2023.

Storm Noa was an unusually strong storm for the time of year with storm force 10 winds observed at Sherkin Island on Wednesday 12 April. It was part of a complex broad trough of low pressure with two distinct low centres that circulated around each other. The low centre associated with storm Noa crossed Ireland from west to east between Galway and Dublin during the day on Wednesday 12 with the strongest wind to the south of the low centre.

- The highest daily sustained (10-minute mean) wind speed during storm Noa was a west-southwest Storm Force 89 km/h (48 kt | 55 mph) at Sherkin Island, Co Cork around 03 UTC (4 am local) on Wednesday 12 April 2023.
- The highest gust (3-minute mean) observed was a west-southwest 122 km/h (66 kt | 76 mph) at Sherkin Island, Co Cork with 122 km/h (66 kt) around 03 UTC (4 am local) on Wednesday 12 April 2023.
- The highest 24hr rainfall total of 19.6 mm Athenry, Co Galway on 11th April 2023.
- The lowest land-station MSLP was 977.2 hPa observed at Shannon Airport, Co Clare on Wednesday 12 April 2023 at around 07:00 UTC (8 am local).
- The highest individual wave recorded was on Wednesday 12 April 2023 when 17.3 m was recorded at the M3 Buoy 117.3 M.

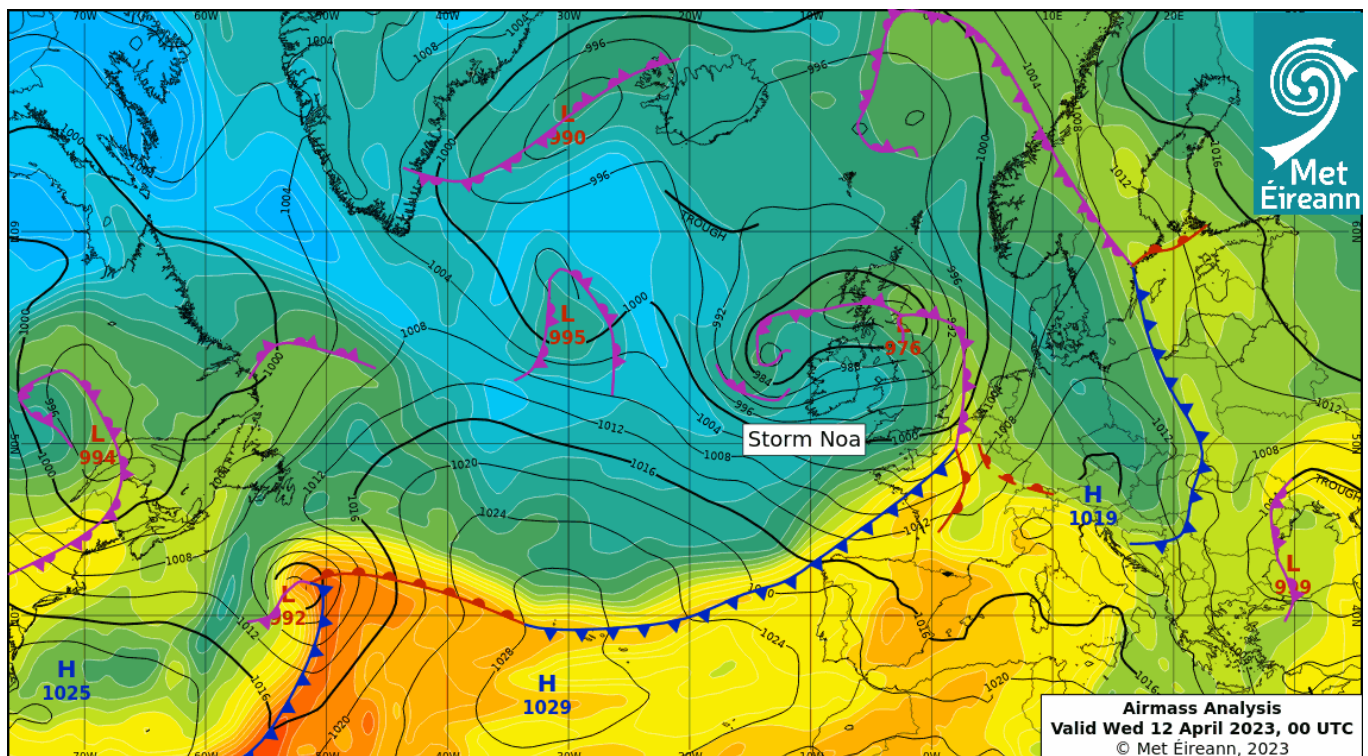


Figure 1. Analysis Chart at the hour (00 UTC) on Wednesday 12 April 2023 closest to when the lowest mslp was reported (977.2 hPa 07 UTC at Shannon Airport, Co Clare)

Wednesday 12 April 2023

On Wednesday 12 an area of low pressure with a central pressure of 975 hPa over Scotland and western and northern parts of Ireland directed an unstable strong to gale force west to southwest airflow over the country. Very windy day with strong to gale force winds countrywide and some severe or damaging gusts. Showers merged to longer spells of rain at times, with local downpours and some hail and isolated thunderstorms. Clear spells developed from the west through the afternoon and evening, with sunny spells and just isolated showers following. The winds eased from the southwest through the evening. Overnight a mix of clear spells and scattered showers developed, the showers mostly in the West and North.

Thursday 13 April 2023

On Thursday 13 a depression of 988 hPa, which was named Storm Noa, was situated near the east coast of England. It maintained an unstable, fresh to strong airflow over Ireland. The airflow continued to moderate during the morning and afternoon. A mix of sunny spells and scattered showers followed during the day, some heavy with hail, especially in the North where there was longer spells of rain near the coasts. There were some dry periods in the East. Showers became confined to northern coastal areas into the night, as elsewhere stayed mostly dry with clear spells.

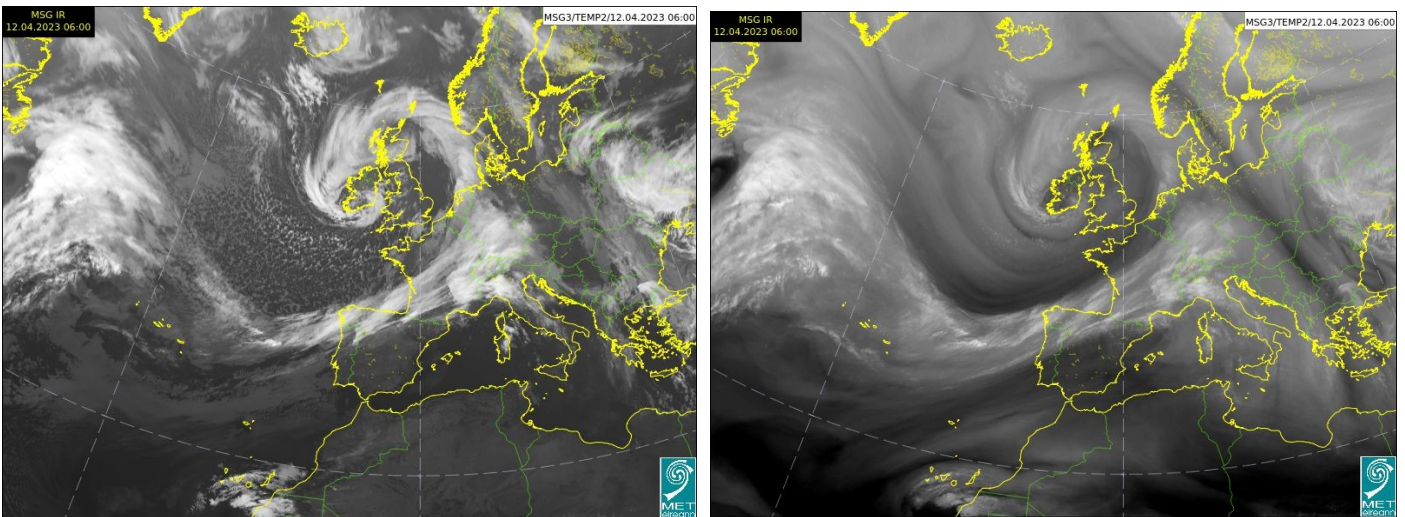


Figure 2 and 3. Infrared satellite & water vapour images closest to hour (0600 UTC) of the lowest mean sea level pressure **977.2 hPa** at Shannon Airport, Co Clare on Wed 12 Apr 2023.

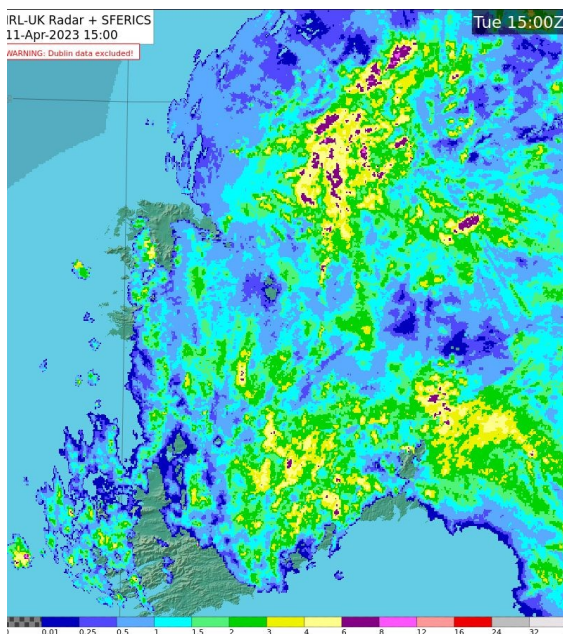


Figure 4. On Tue 11 Apr 2023 in the hour ending 15 UTC 8.1 mm of rain fell at Roches Point, Co Cork

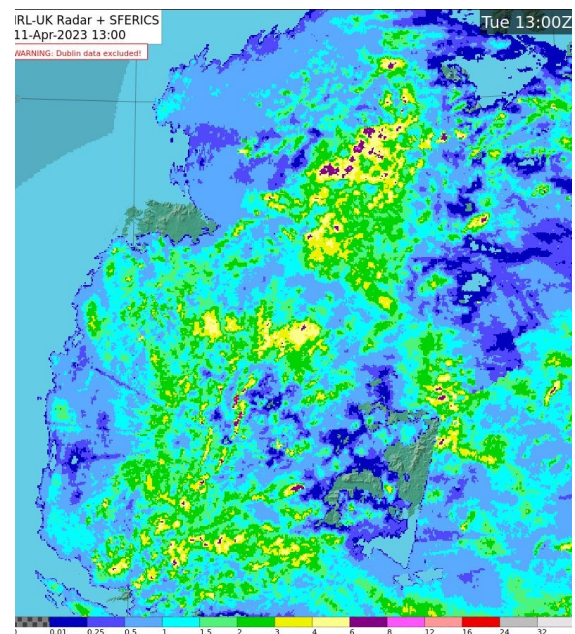


Figure 5. On Tue 11 Apr 2023 in the hour ending 13 UTC 6.1 mm of rain fell at Athenry, Co Galway

Atmospheric Pressure

The minimum mean sea level pressure (MSLP) observed in Ireland during storm Noa was at Shannon Airport, Co Clare with 977.2 hPa on Wednesday 12 April at the hour nearest 07 UTC (8 am local).

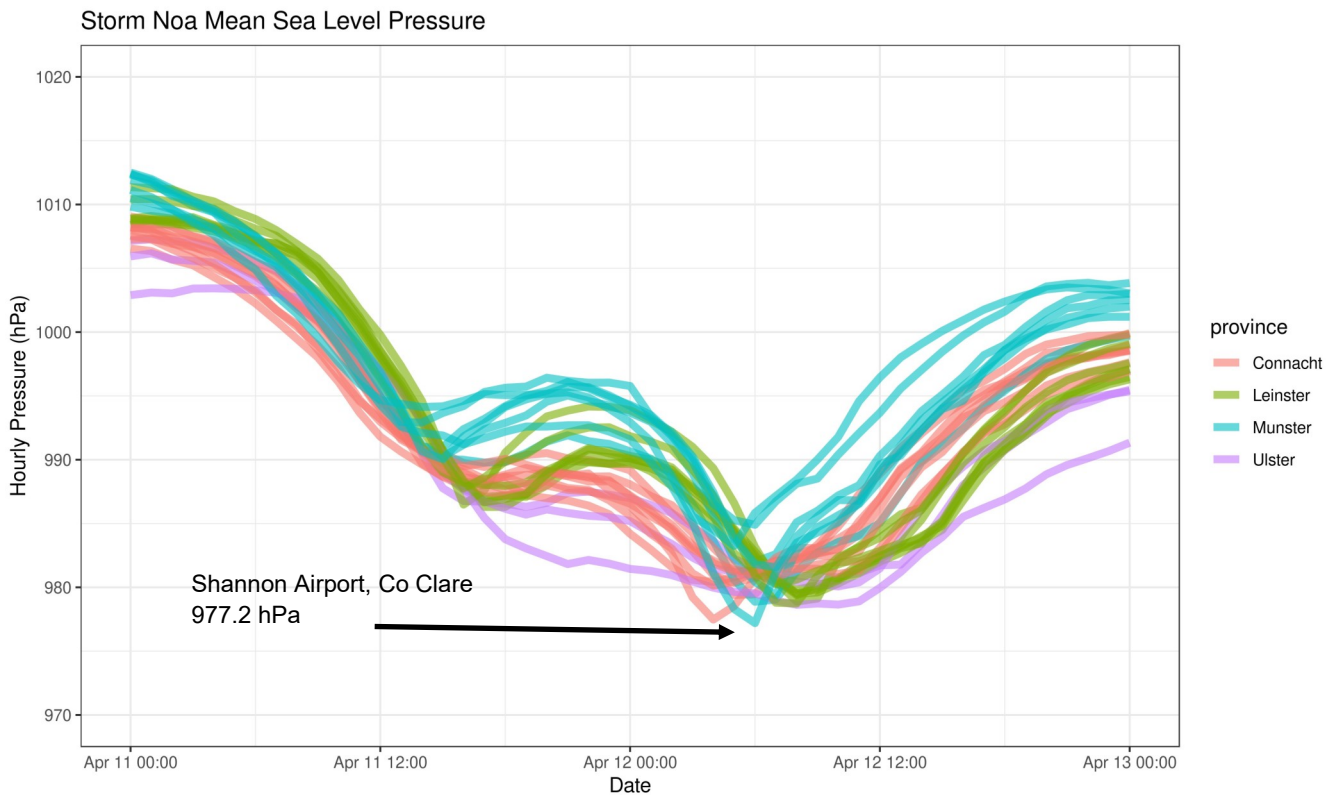


Figure 6: Hourly Mean Sea Level pressure (MSLP) by county (coloured by province) between Tues 11 and Thu 13 April 2023

Marine Observations

Table 1. Buoy Observations - Tues 11 to Thu 13 April 2023

Buoy	Max Mean Winds	Max Gust	Max Sig. Wave	Max Individual Wave
M2	31.9 Knots 59.0 km/h 36.7 mph 11-April-2023 19:00:00	42.8 Knots 79.2 km/h 49.2 mph 11-April-2023 19:00:00	3.2 M 11-April-2023 22:00:00	5.3 M 11-April-2023 21:00:00
M3	33.5 Knots 62.0 km/h 38.5 mph 12-April-2023 03:00:00	56.2 Knots 104.0 km/h 64.6 mph 12-April-2023 08:00:00	10.3 M 12-April-2023 09:00:00	17.3 M 12-April-2023 09:00:00
M4	43.1 Knots 79.8 km/h 49.5 mph 12-April-2023 10:00:00	55.1 Knots 102.0 km/h 63.4 mph 12-April-2023 10:00:00	7.0 M 12-April-2023 12:00:00	13.1 M 12-April-2023 12:00:00
M5	38.6 Knots 71.4 km/h 44.4 mph 12-April-2023 09:00:00	52.4 Knots 96.3 km/h 59.8 mph 12-April-2023 08:00:00	6.7 M 12-April-2023 09:00:00	10.3 M 12-April-2023 10:00:00
M6	36.8 Knots 68.1 km/h 42.3 mph 11-April-2023 21:00:00	48.7 Knots 57.0 km/h 35.4 mph 11-April-2023 20:00:00	7.9 M 12-April-2023 07:00:00	13.9 M 12-April-2023 07:00:00

The following table contains wind speeds and rainfall observations for the SYNOPTIC stations for 3 days, Tuesday 11 April 2023 and Thursday 13 April 2023. Some of the observations have weather warning thresholds and these are highlighted. See the weather warnings page on <https://www.met.ie/weather-warnings>

Table 2. Observations at synoptic stations reaching warning level wind speeds or rainfall totals

Station location	Sustained (10-min mean) Wind Speed	Date highest mean	Wind Direction Highest sustained	Gust (3-sec mean) Wind Speed	Date Highest Gust	Wind Direction Highest Gust	Daily Rain (mm)	Total Rain (mm)
Sherkin Island Co Cork	89 km/h Storm Force (48 knots or 55 mph)	Wed 12 Apr 2023 03UTC	240° (WSW)	122 km/h (66 knots or 76 mph)	Wed 12 Apr 2023 0312 UTC	250° (WSW)	16.4 Tue 11 Apr 2023	28.1
Roches Point Co Cork	83 km/h Strong Gale Force (45 knots or 52 mph)	Wed 12 Apr 2023 13UTC	310° (NW)	107 km/h (58 knots or 67 mph)	Wed 12 Apr 2023 1417 UTC	300° (WNW)	16.8 Tue 11 Apr 2023	24.2
Mace Head** Co Galway	80 km/h Strong Gale Force (43 knots or 49 mph)	Wed 12 Apr 2023 09UTC	310° (NW)	117 km/h (63 knots or 72 mph)	Wed 12 Apr 2023 0947 UTC	320° (NW)	15.8 Tue 11 Apr 2023	22.0
Cork Airport Co Cork	72 km/h Gale Force 8 (39 knots or 45 mph)	Wed 12 Apr 2023 15UTC	290° (WNW)	98 km/h (53 knots or 61 mph)	Wed 12 Apr 2023 1232 UTC	280° (W)	16.3 Tue 11 Apr 2023	24.5
Valentia Observatory Co Kerry	72 km/h Gale Force 8 (39 knots or 45 mph)	Wed 12 Apr 2023 05UTC	280° (W)	98 km/h (53 knots or 61 mph)	Wed 12 Apr 2023 0523 UTC	270° (W)	15.6 Tue 11 Apr 2023	31.3
Malin Head* Co Donegal	69 km/h Gale Force 8 (37 knots or 43 mph)	Wed 12 Apr 2023 18UTC	310° (NW)	91 km/h (49 knots or 56 mph)	Wed 12 Apr 2023 1901 UTC	300° (WNW)	12.8 Tue 11 Apr 2023	22.5
Finner Co Donegal	67 km/h Gale Force 8 (36 knots or 41 mph)	Wed 12 Apr 2023 12UTC	330° (NNW)	89 km/h (48 knots or 55 mph)	Wed 12 Apr 2023 1255 UTC	320° (NW)	10.3 Tue 11 Apr 2023	19.8
Newport Co Mayo	63 km/h Gale Force 8 (34 knots or 39 mph)	Wed 12 Apr 2023 12UTC	300° (WNW)	102 km/h (55 knots or 63 mph)	Wed 12 Apr 2023 0949 UTC	320° (NW)	14.3 Tue 11 Apr 2023	27.5
Shannon Airport Co Clare	63 km/h Gale Force 8 (34 knots or 39 mph)	Wed 12 Apr 2023 13UTC	310° (NW)	93 km/h (50 knots or 58 mph)	Wed 12 Apr 2023 1240 UTC	290° (WNW)	9.6 Tue 11 Apr 2023	17.6
Knock Airport Co Mayo	61 km/h Near Gale (33 knots or 38 mph)	Wed 12 Apr 2023 12UTC	320° (NW)	104 km/h (56 knots or 64 mph)	Wed 12 Apr 2023 1100 UTC	320° (NW)	13.3 Tue 11 Apr 2023	24.5
Belmullet Co Mayo	59 km/h Near Gale (32 knots or 37 mph)	Tue 11 Apr 2023 22UTC and Wed 12 Apr 2023 9UTC	250° (WSW) and 330° (WSW)	87 km/h (47 knots or 54 mph)	Wed 12 Apr 2023 0910 UTC	330° (NNW)	11.5 Tue 11 Apr 2023	19.3
Claremorris Co Mayo	57 km/h Near Gale (31 knots or 36 mph)	Wed 12 Apr 2023 11UTC	320° (NW)	87 km/h (47 knots or 54 mph)	Wed 12 Apr 2023 1133 UTC	310° (NW)	15.5 Tue 11 Apr 2023	29.3
Gurteen Co Tipperary	56 km/h Near Gale (30 knots or 35 mph)	Wed 12 Apr 2023 16UTC	280° (W)	80 km/h (43 knots or 49 mph)	Wed 12 Apr 2023 1612 UTC and Tue 11 Apr 2023 1808 UTC	290° (WNW) and 240° (WNW)	7.2 Tue 11 Apr 2023	14.6

Table 3. Observations at synoptic stations reaching warning level wind speeds or rainfall totals

Station location	Sustained (10-min mean) Wind Speed	Date highest mean	Wind Direction Highest sustained	Gust (3-sec mean) Wind Speed	Date Highest Gust	Wind Direction Highest Gust	Daily Rain (mm)	Total Rain (mm)
Dublin Airport Co Dublin	54 km/h Near Gale (29 knots or 33 mph)	Wed 12 Apr 2023 18UTC	300° (WNW)	78 km/h (42 knots or 48 mph)	Wed 12 Apr 2023 1546 UTC	300° (WNW)	9.5 Tue 11 Apr 2023	15.1
Johnstown Castle Co Wexford	52 km/h Near Gale (28 knots or 32 mph)	Tue 11 Apr 2023 16UTC and Wed 12 Apr 2023 16UTC	230° (SW) and 280° (SW)	89 km/h (48 knots or 55 mph)	Wed 12 Apr 2023 1446 UTC	280° (W)	8.3 Tue 11 Apr 2023	12.1
Mount Dillon Co Roscommon	50 km/h Strong Breeze (27 knots or 31 mph)	Wed 12 Apr 2023 12UTC	300° (WNW)	80 km/h (43 knots or 49 mph)	Wed 12 Apr 2023 1305 UTC	310° (NW)	15.0 Tue 11 Apr 2023	24.0
Oak Park Co Carlow	50 km/h Strong Breeze (27 knots or 31 mph)	Wed 12 Apr 2023 15UTC	290° (WNW)	78 km/h (42 knots or 48 mph)	Wed 12 Apr 2023 1432 UTC	300° (WNW)	11.7 Tue 11 Apr 2023	18.4
Athenry Co Galway	50 km/h Strong Breeze (27 knots or 31 mph)	Wed 12 Apr 2023 12UTC	320° (NW)	76 km/h (41 knots or 47 mph)	Wed 12 Apr 2023 1401 UTC	310° (NW)	19.6 Tue 11 Apr 2023	31.1
Casement Aerodrome Co Dublin	50 km/h Strong Breeze (27 knots or 31 mph)	Tue 11 Apr 2023 20UTC and Wed 12 Apr 2023 16UTC	250° (WSW) and 280° (WSW)	72 km/h (39 knots or 45 mph)	Tue 11 Apr 2023 1921 UTC and Wed 12 Apr 2023 1514 UTC	250° (WSW) and 300° (WSW)	9.4 Tue 11 Apr 2023	17.1
Moore Park Co Cork	46 km/h Strong Breeze (25 knots or 29 mph)	Wed 12 Apr 2023 11UTC	290° (WNW)	81 km/h (44 knots or 51 mph)	Wed 12 Apr 2023 1517 UTC	280° (W)	12.7 Tue 11 Apr 2023	21.5
Dunsany Co Meath	43 km/h Strong Breeze (23 knots or 26 mph)	Tue 11 Apr 2023 20UTC	240° (WSW)	67 km/h (36 knots or 41 mph)	Wed 12 Apr 2023 1449 UTC	290° (WNW)	9.8 Tue 11 Apr 2023	15.3
Mullingar Co Westmeath	39 km/h Fresh Breeze (21 knots or 24 mph)	Wed 12 Apr 2023 13UTC	300° (WNW)	72 km/h (39 knots or 45 mph)	Wed 12 Apr 2023 1457 UTC	310° (NW)	11.7 Tue 11 Apr 2023	18.4
Ballyhaise Co Cavan	30 km/h moderate breeze (16 knots or 18 mph)	Wed 12 Apr 2023 14UTC	300° (WNW)	67 km/h (36 knots or 41 mph)	Wed 12 Apr 2023 1317 UTC	290° (WNW)	10.7 Tue 11 Apr 2023	19.2

Impacts

- **Power Outages:** No significant power outages reported on the morning of Wednesday 12 April 2023.
- **Flooding:** No significant flooding events reported.

Definitions

- Gust wind speeds are an average of 3-second wind speeds.
- Sustained wind speeds are an average of 10-minute wind speeds.
- Beaufort Scale: www.met.ie/forecasts/marine-inland-lakes/beaufort-scale
- Buoy locations: www.met.ie/forecasts/marine-inland-lakes/buoys/buoy-locations
- This report is based on the data observed at Met Éireann's weather stations and available on [Saturday 26 August 2023].
- Synoptic station data is midnight to midnight UTC.
- Long-Term Averages (LTAs) and 'normal' refer to the observations being averaged over the period 1981-2010.

Caution: Malin Head wind speeds are observed (using an anemometer) at a non-standard height of 23m while all others are at 10m. This will cause Malin Head's wind speeds to be higher in a strong air flow.
Caution: Mace Head anemometer is situated above exposed rock at the coast line.*

For more information, contact Met Éireann: enquiries@met.ie