

STORM FERGUS

Sunday 10 December 2023

Seventh named storm of the 2023/24 season. Named by Met Éireann on Sat 9 Dec 2023.

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Updated Wednesday 19 March 2025

Following storm Elin and powered by the same strong jet stream, storm Fergus developed as a separate low centre well to the south of a large slow moving deep depression over the Atlantic to the west of Canada. Storm Fergus deepened rapidly on Saturday 9th as it swung around the main low centre in the Atlantic and arrived just to the west of Ireland in the early hours of Sunday 10th. By this time the low had disengaged from the jet stream and began to fill as it moved across the north of the country from west to east during the day on Sunday, while the occluded front wrapped around the system. The main frontal rain passed over the country in the early hours on Sunday followed by a very unstable airmass with further heavy rain, associated with the occluded front, and active thundery showers, especially for the northern half of the country. Storm Fergus then pushed eastwards over the Irish sea late on Sunday.

- The highest sustained (10-minute mean) wind speed was a west-southwest storm force 10 as winds up to 91 km/h (49 knots or 56 mph) were observed on Sunday 10 December 2023 around 14 UTC (2 pm local) at Mace Head** (coastal), Co Galway.
- The highest gust (3-second mean) wind speed was a southwesterly 117 km/h (63 knots or 72 mph) on Sunday around 14:41 UTC (2:41 pm local) at Mace Head, Co Galway.
- The lowest land-station hourly mean sea pressure (MSLP) was 974.7 hPa on Sunday at around 15 UTC (3 pm local) observed at Newport, Co Mayo.
- The highest daily (00-00 UTC) rainfall total was 23.7 mm on Sunday at Newport, Co Mayo (12 % of its 1991-2020 Long Term Average (LTA)).
- The highest 24-hour rainfall total was 29.0 mm (09-09 UTC) on Sunday in the Cuilcagh Mountains, Co Cavan (13 % of its LTA) .
- The highest individual wave height was 15.9 m and this was recorded at M3 (off the Cork coast) at around 18 UTC (6 pm local).

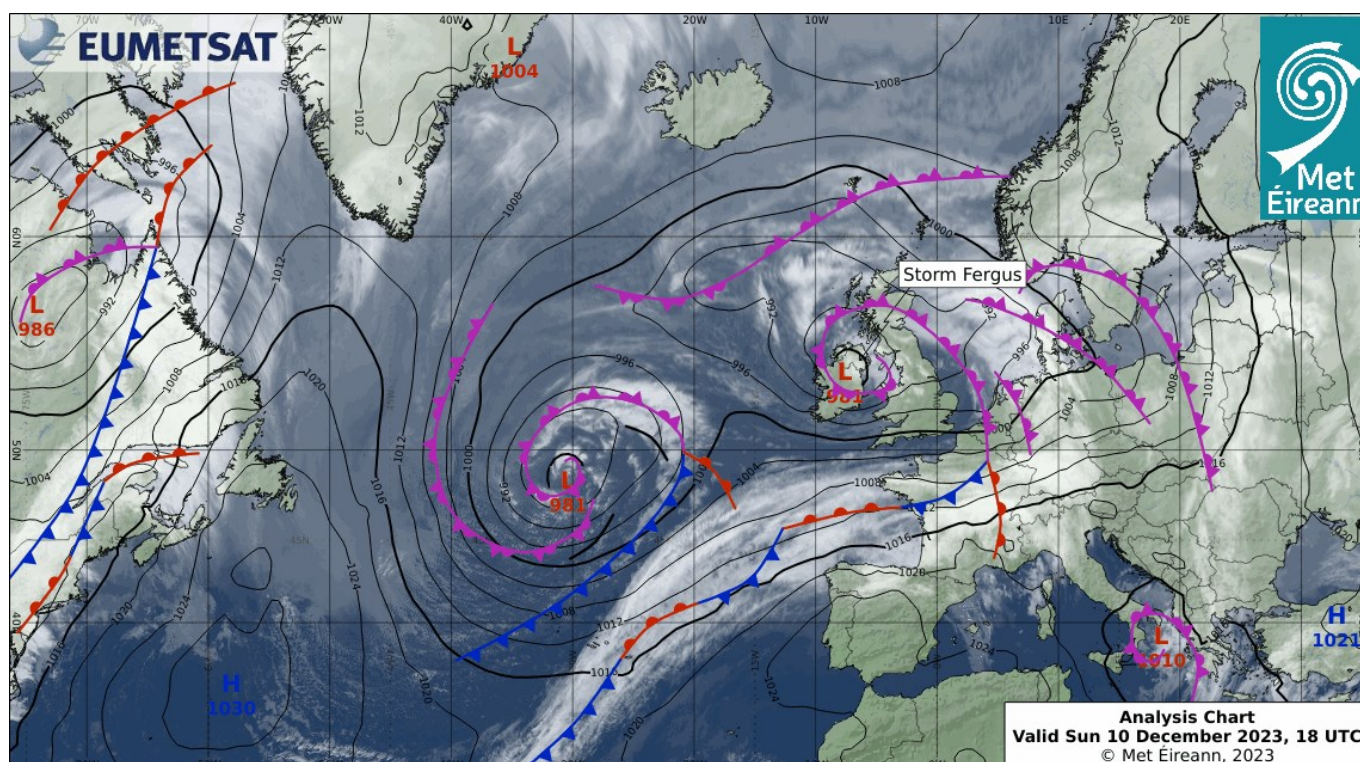


Figure 1. Analysis and Satellite Chart at the hour 18 UTC on Sun 10 Dec 2023

Saturday 9 December 2023

An elongated trough moved in across Ireland during the day and developed into storm Elin, generating gale to storm-force Westerly winds. A temporary ridge built as another deepening low approached from the west later.

Sunday 10 December 2023

Ireland lay in a strengthening southerly airflow, maintained by the depression named Storm Fergus of around 969 hPa located approximately 200 nautical miles west of Galway Bay by 9 am. Wet and breezy morning in the Northeast. Sunny spells with isolated showers for a time. Further outbreaks of rain and some thunderstorms, extended from the west. It turned very windy from the west during the afternoon and early evening, as Storm Fergus approached and moved over Ireland.

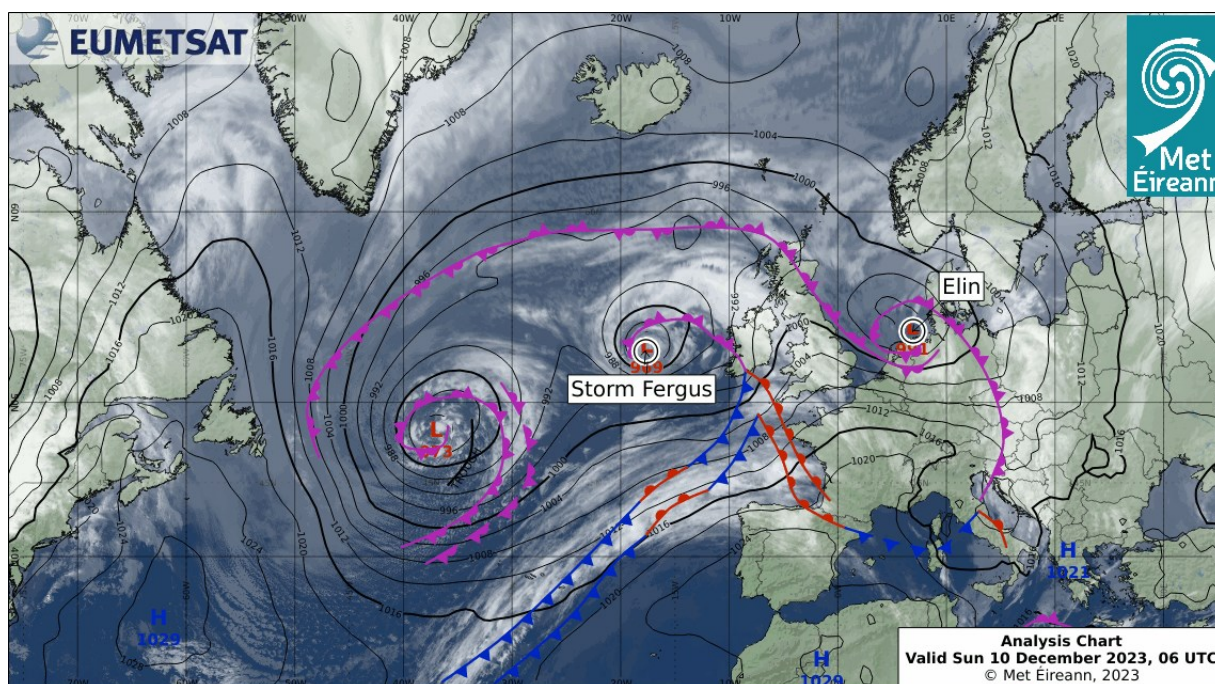


Figure 2. Analysis and satellite chart on Sun 10 Dec 2023 06 UTC

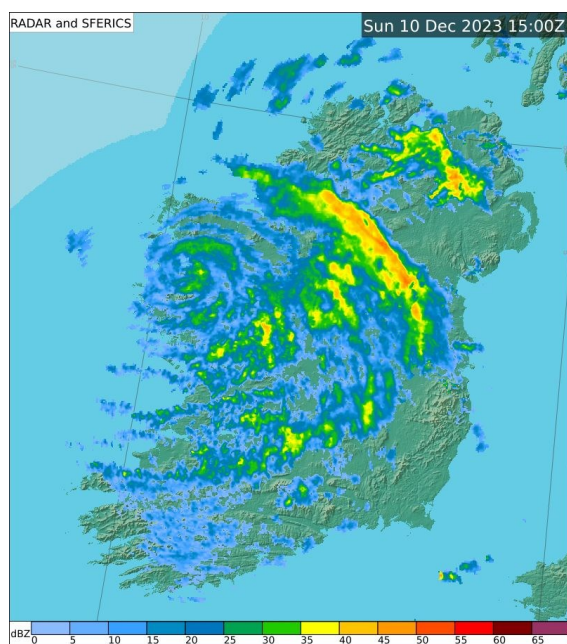


Figure 3. On Sun 10 Dec 2023 in the hour ending 15 UTC
6.0 mm of rain fell at Newport (coastal), Co Mayo

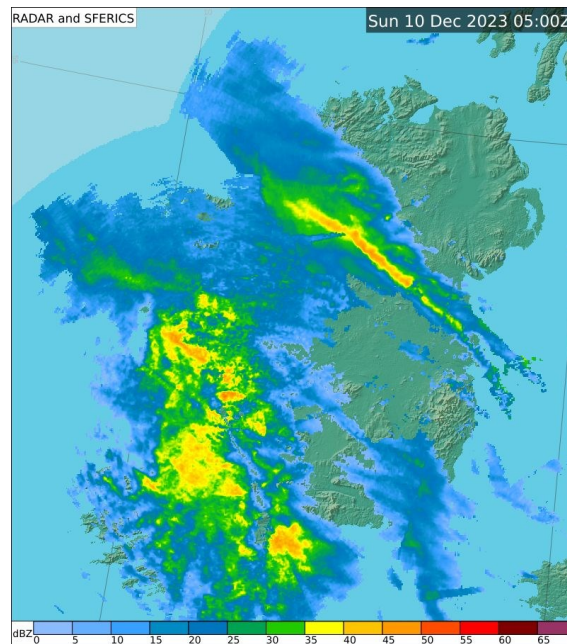


Figure 4. On Sun 10 Dec 2023 in the hour ending 05 UTC
6.6 mm of rain fell at Valentia Observatory, Co Kerry

Monday 11 December 2023

A fresh west-to-northwest airflow was over Ireland during the morning. It moderated as a weak ridge of high pressure built from the west. A depression of 990 hPa and its associated fronts approached from the West and moved eastwards southwest later in the day.

Mean Sea Level Pressure

The minimum hourly mean sea level pressure (MSLP) observed in Ireland during storm Fergus was 974.7 hPa at Newport, Co Mayo around 15 UTC on Sunday.

Named Storm FERGUS

Hourly Mean Sea Level Pressure (hPa) and Highest Gust Wind Speed

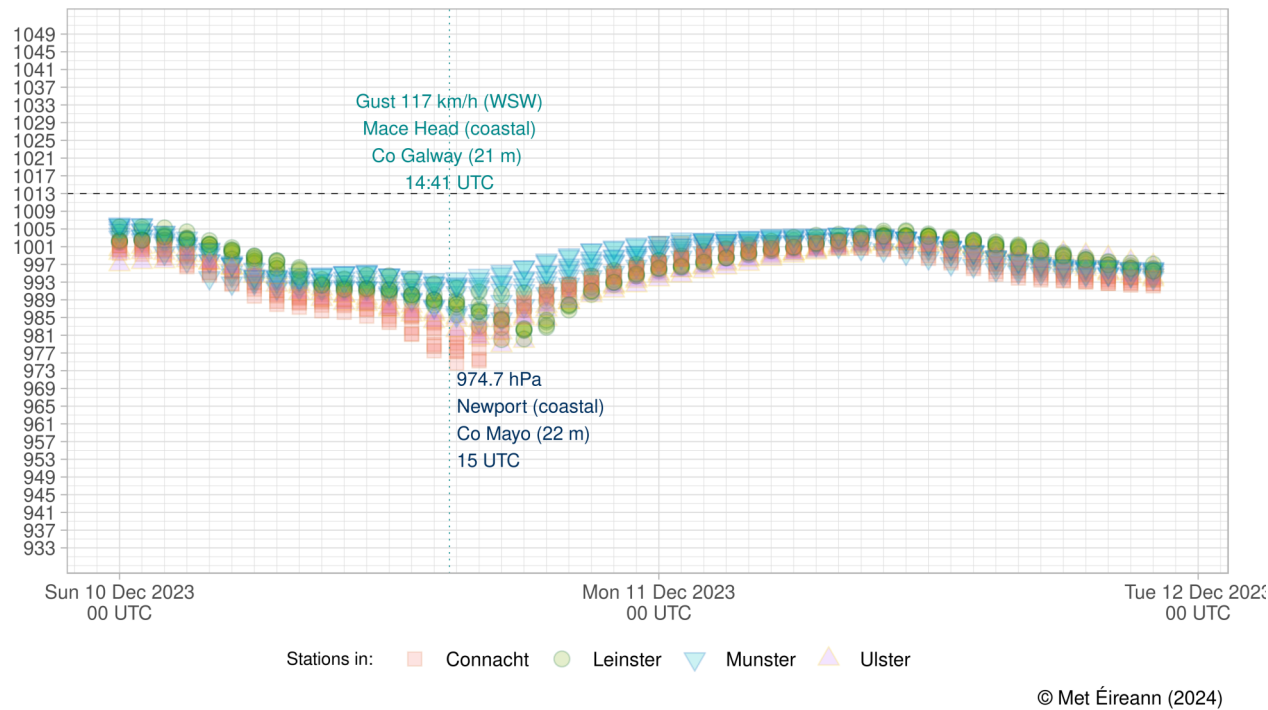


Figure 5: Hourly Mean Sea Level pressure (MSLP) by county (coloured by province) between Sun 10 Dec 2023 and Tues 12 Dec 2023

Marine Observations

Table 1. Extremes of wind speeds and wave heights at buoys from 23 UTC on Sat 9 Dec to 01 UTC on Mon 11 Dec 2023

Buoy (Location)	Sustained Wind Speeds	Gust Wind Speeds	Significant Wave Height	Individual Wave	MSLP (hPa)
M2 (in Irish Sea)	74 km/h (40 knots or 46 mph) 20 UTC Sun 10 Dec 2023	91 km/h (49 knots or 57 mph) 20 UTC Sun 10 Dec 2023	3.9 m 22 UTC Sun 10 Dec 2023	6.3 m 23 UTC Sun 10 Dec 2023	981.8 hPa 19 UTC Sun 10 Dec 2023
M3 (off Cork coast)	67 km/h (36 knots or 42 mph) 13 UTC Sun 10 Dec 2023	89 km/h (48 knots or 55 mph) 15 UTC Sun 10 Dec 2023	10.5 m 18 UTC Sun 10 Dec 2023	15.9 m 18 UTC Sun 10 Dec 2023	993.9 hPa 05 UTC Sun 10 Dec 2023
M4 (off Donegal coast)	45 km/h (24 knots or 28 mph) 08 UTC Sun 10 Dec 2023	67 km/h (36 knots or 42 mph) 08 UTC Sun 10 Dec 2023	6.7 m 23 UTC Sun 10 Dec 2023	11.2 m 22 UTC Sun 10 Dec 2023	981.7 hPa 14 UTC Sun 10 Dec 2023
M5 (off south Wexford coast)	67 km/h (36 knots or 42 mph) 19 UTC Sun 10 Dec 2023	88 km/h (47 knots or 55 mph) 16 UTC Sun 10 Dec 2023	6.6 m 20 UTC Sun 10 Dec 2023	11.4 m 20 UTC Sun 10 Dec 2023	993.3 hPa 16 UTC Sun 10 Dec 2023
M6 (in deep Atlantic)	64 km/h (35 knots or 40 mph) 08 UTC Sun 10 Dec 2023	93 km/h (50 knots or 58 mph) 08 UTC Sun 10 Dec 2023	10.1 m 10 UTC Sun 10 Dec 2023	17.0 m 11 UTC Sun 10 Dec 2023	965.7 hPa 08 UTC Sun 10 Dec 2023

Synoptic stations—highest wind speeds and rainfall totals

The following table contains wind speeds and rainfall observations for the primary (SYNOPTIC) stations during storm Fergus.

Table 2. Extremes of wind speeds and rainfall totals at synoptic stations

Station location	Sustained (10-min mean) Wind Speed	Date highest mean	Wind Direc- tion Highest sustained	Gust (3-sec mean) Wind Speed	Date Highest Gust	Wind Di- rection Highest Gust	Highest Daily Rain (mm)
Mace Head** (coastal) Co Galway	91 km/h Storm Force (49 knots or 56 mph)	Sun 10 Dec 2023 14 UTC	250° (WSW)	117 km/h (63 knots or 72 mph)	Sun 10 Dec 2023 1441 UTC	240° (WSW)	7.4 mm Sun 10 Dec 2023
Sherkin Island (coastal) Co Cork	72 km/h Gale Force 8 (39 knots or 45 mph)	Sun 10 Dec 2023 14 UTC	250° (WSW)	94 km/h (51 knots or 59 mph)	Sun 10 Dec 2023 1537 UTC	240° (WSW)	5.0 mm Sun 10 Dec 2023
Shannon Airport (coastal) Co Clare	70 km/h Gale Force 8 (38 knots or 44 mph)	Sun 10 Dec 2023 16 UTC	220° (SW)	100 km/h (54 knots or 62 mph)	Sun 10 Dec 2023 1611 UTC	250° (WSW)	9.0 mm Sun 10 Dec 2023
Casement Aero- drome Co Dublin	67 km/h Gale Force 8 (36 knots or 41 mph)	Sun 10 Dec 2023 20 UTC	260° (W)	94 km/h (51 knots or 59 mph)	Sun 10 Dec 2023 1829 UTC	220° (SW)	8.5 mm Sun 10 Dec 2023
Roches Point (coastal) Co Cork	67 km/h Gale Force 8 (36 knots or 41 mph)	Sun 10 Dec 2023 14 UTC	230° (SW)	94 km/h (51 knots or 59 mph)	Sun 10 Dec 2023 1452 UTC	230° (SW)	7.7 mm Sun 10 Dec 2023
Dunsany Co Meath	61 km/h Near Gale (33 knots or 38 mph)	Sun 10 Dec 2023 18 UTC	240° (WSW)	85 km/h (46 knots or 53 mph)	Sun 10 Dec 2023 1827 UTC	240° (WSW)	7.1 mm Sun 10 Dec 2023
Valentia Observa- tory (coastal) Co Kerry	59 km/h Near Gale (32 knots or 37 mph)	Sun 10 Dec 2023 15 UTC	250° (WSW)	93 km/h (50 knots or 58 mph)	Sun 10 Dec 2023 1223 UTC	230° (SW)	12.1 mm Sun 10 Dec 2023
Oak Park Co Carlow	59 km/h Near Gale (32 knots or 37 mph)	Sun 10 Dec 2023 18 UTC	240° (WSW)	87 km/h (47 knots or 54 mph)	Sun 10 Dec 2023 1813 UTC	250° (WSW)	10.8 mm Sun 10 Dec 2023
Dublin Airport (coastal) Co Dublin	56 km/h Near Gale (30 knots or 35 mph)	Sun 10 Dec 2023 20 UTC	270° (W)	87 km/h (47 knots or 54 mph)	Sun 10 Dec 2023 1859 UTC	250° (WSW)	7.2 mm Sun 10 Dec 2023
Athenry Co Galway	54 km/h Near Gale (29 knots or 33 mph)	Sun 10 Dec 2023 15 UTC	230° (SW)	89 km/h (48 knots or 55 mph)	Sun 10 Dec 2023 1509 UTC	230° (SW)	8.7 mm Sun 10 Dec 2023
Gurteen Co Tipperary	54 km/h Near Gale (29 knots or 33 mph)	Sun 10 Dec 2023 17 UTC	230° (SW)	81 km/h (44 knots or 51 mph)	Sun 10 Dec 2023 1706 UTC	240° (WSW)	8.2 mm Sun 10 Dec 2023
Cork Airport (coastal) Co Cork	52 km/h Near Gale (28 knots or 32 mph)	Sun 10 Dec 2023 14 UTC	230° (SW)	80 km/h (43 knots or 49 mph)	Sun 10 Dec 2023 1433 UTC	230° (SW)	9.4 mm Sun 10 Dec 2023

Table 2. Cont'd

Station location	Sustained (10-min mean) Wind Speed	Date highest mean	Wind Di- rection Highest sustained	Gust (3-sec mean) Wind Speed	Date Highest Gust	Wind Di- rection Highest Gust	Highest Daily Rain (mm)
Claremorris Co Mayo	50 km/h Strong Breeze (27 knots or 31 mph)	Sun 10 Dec 2023 15 UTC	250° (WSW)	78 km/h (42 knots or 48 mph)	Sun 10 Dec 2023 1541 UTC	220° (SW)	11.9 mm Sun 10 Dec 2023
Johnstown Castle (coastal) Co Wexford	44 km/h Strong Breeze (24 knots or 28 mph)	Sun 10 Dec 2023 17 UTC	240° (WSW)	78 km/h (42 knots or 48 mph)	Sun 10 Dec 2023 1650 UTC	230° (SW)	8.3 mm Sun 10 Dec 2023
Knock Airport Co Mayo	44 km/h Strong Breeze (24 knots or 28 mph)	Sun 10 Dec 2023 18 UTC	300° (WNW)	65 km/h (35 knots or 40 mph)	Sun 10 Dec 2023 1420 UTC	170° (S)	15.1 mm Sun 10 Dec 2023
Belmullet (coastal) Co Mayo	44 km/h Strong Breeze (24 knots or 28 mph)	Sun 10 Dec 2023 11 UTC	190° (S)	57 km/h (31 knots or 36 mph)	Sun 10 Dec 2023 1303 UTC	190° (S)	12.4 mm Sun 10 Dec 2023
Mullingar Co Westmeath	43 km/h Strong Breeze (23 knots or 26 mph)	Sun 10 Dec 2023 17 UTC	220° (SW)	69 km/h (37 knots or 43 mph)	Sun 10 Dec 2023 1746 UTC	250° (WSW)	11.0 mm Sun 10 Dec 2023
Malin Head* (coastal) Co Donegal	43 km/h Strong Breeze (23 knots or 26 mph)	Sun 10 Dec 2023 00 UTC	260° (W)	56 km/h (30 knots or 35 mph)	Sun 10 Dec 2023 0001 UTC	270° (W)	4.8 mm Sun 10 Dec 2023
Mount Dillon Co Roscommon	41 km/h Strong Breeze (22 knots or 25 mph)	Sun 10 Dec 2023 16 UTC	220° (SW)	80 km/h (43 knots or 49 mph)	Sun 10 Dec 2023 1637 UTC	200° (SSW)	15.1 mm Sun 10 Dec 2023
Newport (coastal) Co Mayo	39 km/h Fresh Breeze (21 knots or 24 mph)	Sun 10 Dec 2023 12 UTC	190° (S)	61 km/h (33 knots or 38 mph)	Sun 10 Dec 2023 1222 UTC	200° (SSW)	23.7 mm Sun 10 Dec 2023
Moore Park Co Cork	37 km/h Fresh Breeze (20 knots or 23 mph)	Sun 10 Dec 2023 17 UTC	250° (WSW)	59 km/h (32 knots or 37 mph)	Sun 10 Dec 2023 1714 UTC	240° (WSW)	6.5 mm Sun 10 Dec 2023
Finner (coastal) Co Donegal	35 km/h Fresh Breeze (19 knots or 22 mph)	Sun 10 Dec 2023 16 UTC	20° (NNE)	46 km/h (25 knots or 29 mph)	Sun 10 Dec 2023 1656 UTC	30° (NNE)	8.7 mm Sun 10 Dec 2023
Ballyhaise Co Cavan	26 km/h moderate breeze (14 knots or 16 mph)	Sun 10 Dec 2023 15 UTC	140° (SE)	43 km/h (23 knots or 26 mph)	Sun 10 Dec 2023 1600 UTC	130° (SE)	14.0 mm Sun 10 Dec 2023

Impacts

- **Power Outages:** ESB Power Check showed outages in Co Cork, Co Galway, Co Kerry and Co Leitrim on the morning of Monday ([ESB PowerCheck, 2023](#)).
- **Tornado:** Reports of a tornado in Co Leitrim which caused damage to property and cars in the area on Sunday ([RTE News, 2023](#)).
- **Travel:** Downed trees and debris on the roads resulted in road closures in Co Leitrim ([RTE News, 2023](#)).

Definitions

- Sustained (or mean) wind speeds are an average of 10-minute wind speeds.
- Gust wind speeds are an average of 3-second wind speeds.
- Unless otherwise stated daily means midnight to midnight UTC.
- Long-Term Averages (LTA) and 'normal' refer to the observations being averaged over the period 1991-2020.
- Beaufort Scale available at www.met.ie/forecasts/marine-inland-lakes/beaufort-scale
- Marine area buoy maps and definitions available at www.met.ie/forecasts/marine-inland-lakes/sea-area-forecast-terminology

** Malin Head, Co Donegal's wind speeds are observed (using an anemometer) at a non-standard height of 23 m while all others are at 10 m. This will cause Malin Head's wind speeds to be higher in a strong air flow.*

*** Mace Head, Co Galway's anemometer is situated above exposed rock at the coast line.*

This report is based on the observations from Met Éireann's weather and climate stations and data available up to the publication date. For more information, please contact Met Éireann's Climate Services Division: enquiries@met.ie or <https://www.met.ie/about-us/contact-us>.