

The following is a short analysis of the low impact named storm Malik. The impact date for Ireland was Saturday 29 January 2022, this date is based upon the date of the storm's highest sustained (10-minute mean) wind speed of 78 km/h observed at 07 UTC at Malin Head, Co Donegal.

- The third storm of the year was named Malik, after the Greenlandic boy name Malik, by the Danish Meteorological Institute (DMI) as part of the Northern storm naming group of Denmark, Sweden and Norway.
- The storm's highest sustained (10-minute mean) wind speed of 78 km/h was reported at 07 UTC at Malin Head, Co Donegal from a west-southwest direction.
- The highest daily gust (3-second) wind speeds of 107 km/h (58 kt) was also reported at Malin Head, Co Donegal near 07 UTC on Saturday 29 January 2022.
- The previous highest sustained (10-minute mean) wind speeds to occur on any 29th January was 100 km/h storm force 10 (54 knots | 62 mph) from the north and which occurred at Malin Head, Co Donegal on Sunday 29 January 1978.
- The previous highest gust (3-second mean) wind speeds to occur on any 29th January was 131 km/h (71 knots | 82 mph) from the south-southeast and which occurred at Valentia Observatory, Co Kerry, Malin Head, Co Donegal, Belmullet and Co Mayo on Thu 29 January 1976, Sun 29 January 1978 and Tue 29 January 2002.
- The highest rainfall hourly amounts were recorded at Finner, Co. Donegal with a value 1 mm recorded and the highest daily rainfall totals were recorded at Castleisland, County Kerry with a value 6.4 mm recorded.
- The highest individual wave was recorded at M4 Buoy with 12.8 m recorded.

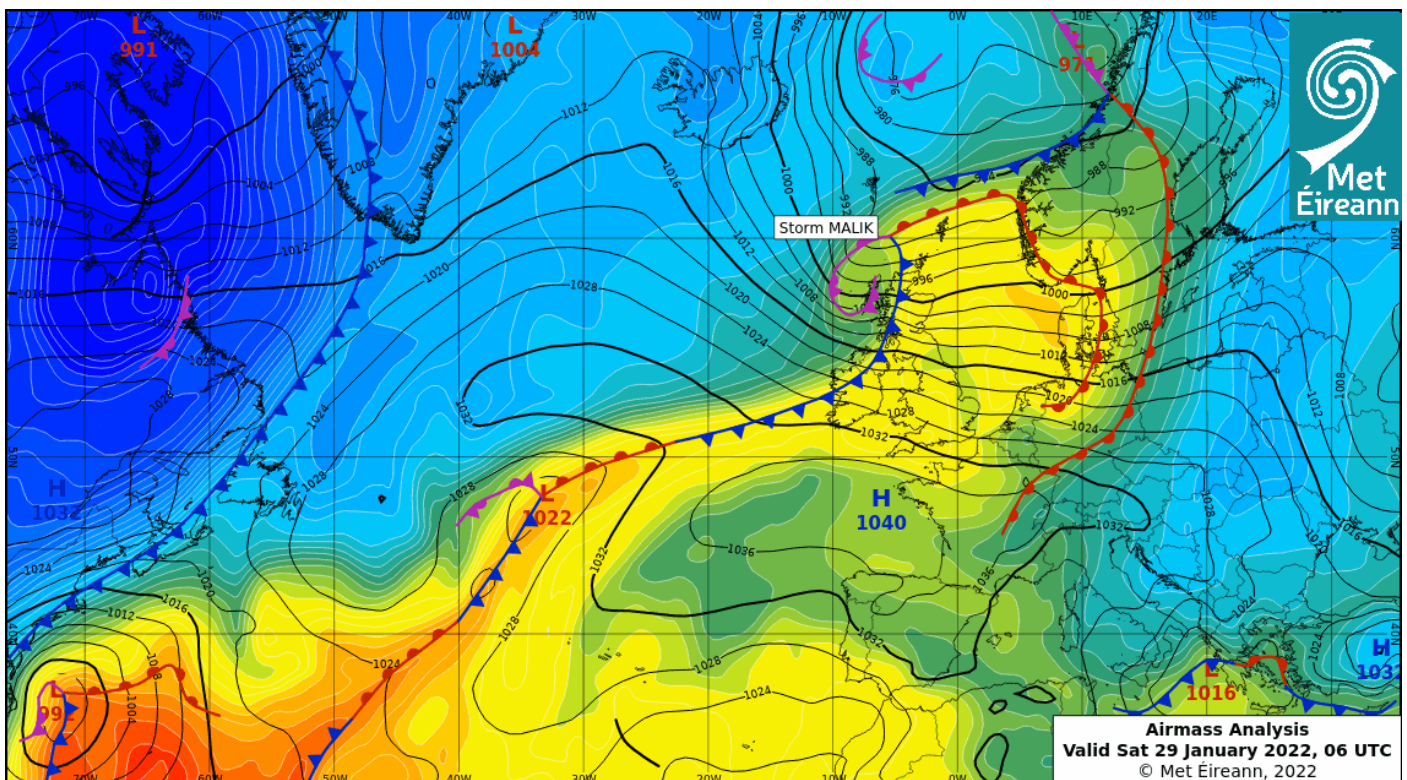


Figure 1. This chart was chosen using the highest gust wind speed 107 km/h at Malin Head, Co Donegal at 07:59 UTC on Saturday 29 January 2022

## Saturday 29th January 2022

On the 29th Ireland lay in a fresh to strong westerly airflow between a high of 1039 hPa near the Bay of Biscay and a depression of 980 hPa near Iceland. A Yellow wind warning for the North ended early morning. Strong and gusty westerly winds, strongest in the North-west during the night and early morning. Slight air frost in the Midlands. Sunny spells best in the Midwest, Southwest and South. Slight grass frost widespread. Dry during the day sunny spells moved in from the north to all areas through the late morning and afternoon as winds turn north-westerly and eased. Cloudier conditions moved in overnight with some patchy drizzle.

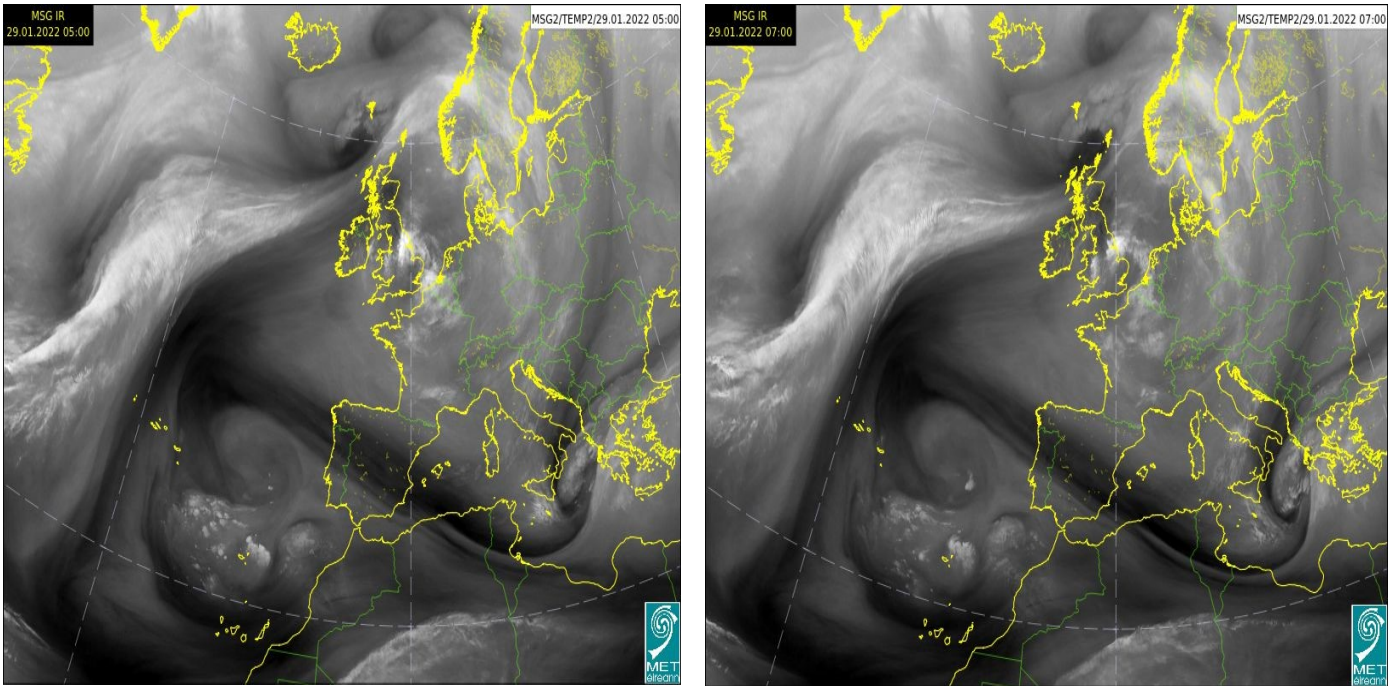


Figure 2 & 3: Infra-Red Satellite images closest to hour 06 UTC of the lowest mean sea level pressure 1014.3 hPa at Malin Head, Co Donegal on Sat 29 Jan 2022.

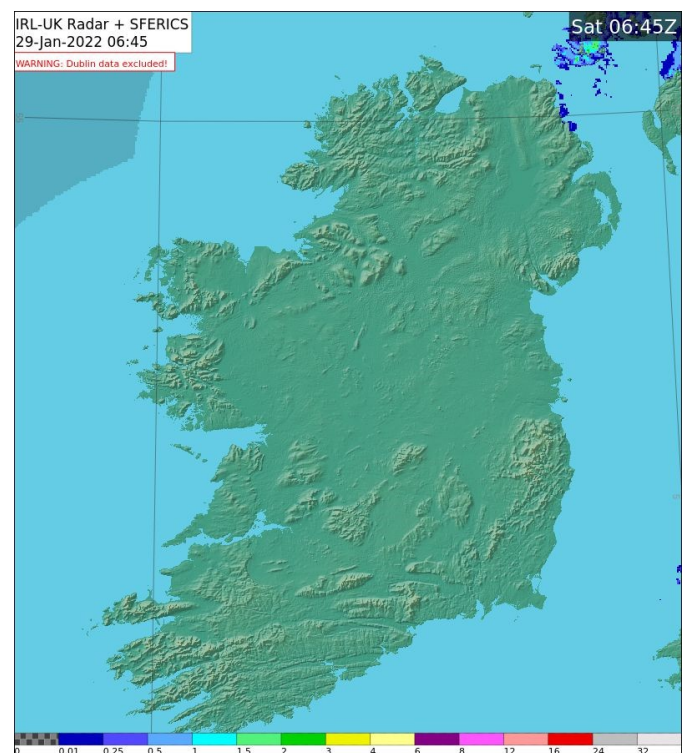
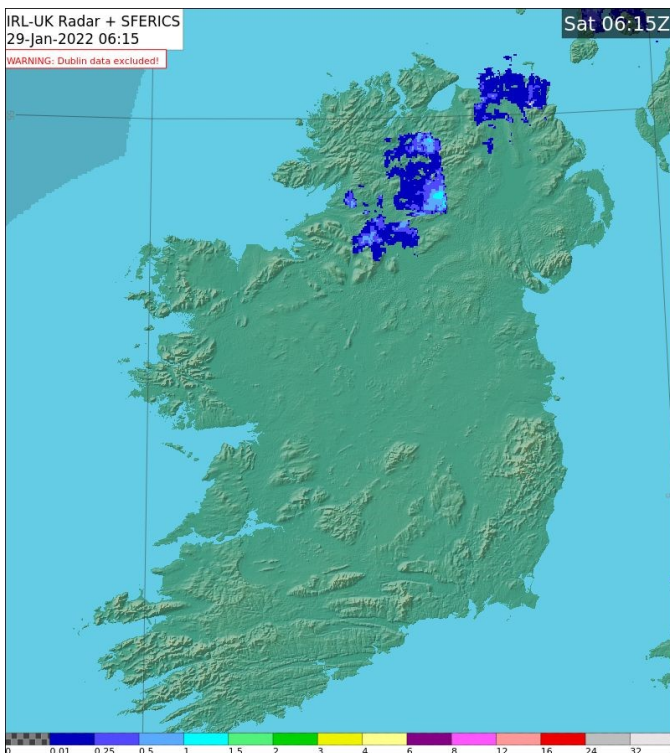
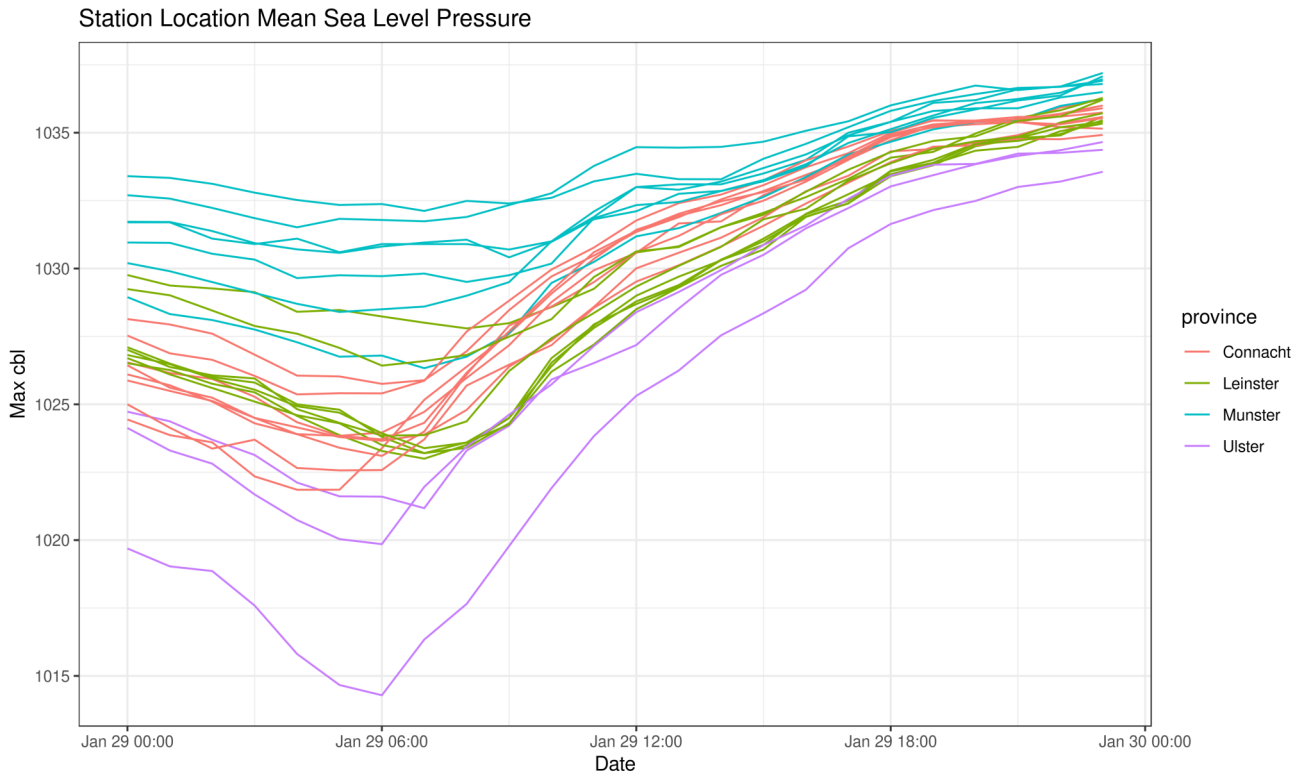


Figure 4 & 5: On Sun 29 Jan 2022 in the hour ending 07 UTC 1.0 mm of rain fell at Finner, Co Donegal . On Sun 29 Jan 2022 in the hour ending 07 UTC 0.8 mm of rain fell at Knock Airport, Co Mayo

## ATMOSPHERIC PRESSURE

The minimum mean sea level pressure (MSLP) observed in Ireland during Storm Malik was reported at Knock Airport, Co Mayo with 1024 hPa recorded at 06:00 (UTC). In the south Sherkin Island Cork 1032 hPa was reported at 06:00 (UTC) while Phoenix Park, Co Dublin 1024 hPa was reported at 06:00 (UTC).



## Impacts

**Power Outages:** Thousands without electricity across the UK. However, the storm has calmed down as it passed over the north west of Ireland and no major power outages reported.

**Flooding:** According to AA/Roadwatch, flooding on the Enniscrone/ Tullylin Rd (R298), N18 Limerick/ Galway Rd at Labane, Tubbercurry/ Boyle Rd (R294), Tusk/ Ballintober Rd (R367), Longford/ Ardagh Rd (R393)

**Travel:** Some travel delays reported heading to Scotland and much of Northern Europe

**Irish rail:** The Western Corridor line remains flooded between Ennis and Limerick. Bus transfers are in operation with a restricted service into and out of Six-mile-bridge

**Table 1. Buoy Observations - 29th January 2022**

buoy	Max Mean Winds	Max Gust	Max Sig. Wave	Max Individual Wave
M3	43.5 km/h (23.5 knots or 27.0 mph)	54.0 km/h 29.2 knots   33.6 mph	3.9 m	7.5 m
M4	62.7 km/h (33.9 knots or 39.0 mph)	92.4 km/h 49.9 knots   57.4 mph	7.7 m	14.4 m
M5	42.2 km/h (22.8 knots or 26.2 mph)	63.7 km/h 34.4 knots   39.5 mph	3.0 m	5.6m

**Table 2. Observations at SYNOPTIC STATIONS**

The following table contains wind speeds and rainfall observations for the SYNOPTIC stations for 3 days, Some of the observations have weather warning thresholds and these are highlighted. See the weather warnings page on [www.met.ie](http://www.met.ie).

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)
Malin Head* Co Donegal	<b>78 km/h</b> Strong Gale Force (42 knots or 48 mph)	Sat 29 Jan 2022 07UTC	260° (W)	<b>107 km/h</b> (58 knots or 67 mph)	Sat 29 Jan 2022 0759 UTC	260° (W)	<b>0.5</b> Sat 29 Jan 2022
Finner Co Donegal	<b>63 km/h</b> Gale Force 8 (34 knots or 39 mph)	Sat 29 Jan 2022 06UTC	260° (W)	<b>81 km/h</b> (44 knots or 51 mph)	Sat 29 Jan 2022 0627 UTC	260° (W)	<b>1.2</b> Sat 29 Jan 2022
Newport Co Mayo	<b>57 km/h</b> Near Gale (31 knots or 36 mph)	Sat 29 Jan 2022 06UTC	280° (W)	<b>94 km/h</b> (51 knots or 59 mph)	Sat 29 Jan 2022 0657 UTC	290° (WNW)	<b>0.9</b> Sat 29 Jan 2022
Knock Air- port Co Mayo	<b>57 km/h</b> Near Gale (31 knots or 36 mph)	Sat 29 Jan 2022 07UTC	260° (W)	<b>83 km/h</b> (45 knots or 52 mph)	Sat 29 Jan 2022 0614 UTC	260° (W)	<b>1.5</b> Sat 29 Jan 2022
Mace Head** Co Galway	<b>57 km/h</b> Near Gale (31 knots or 36 mph)	Sat 29 Jan 2022 07UTC	260° (W)	<b>78 km/h</b> (42 knots or 48 mph)	Sat 29 Jan 2022 0720 UTC	270° (W)	<b>0.0</b> Sat 29 Jan 2022
Dublin Air- port Co Dublin	<b>57 km/h</b> Near Gale (31 knots or 36 mph)	Sat 29 Jan 2022 10UTC	290° (WNW)	<b>74 km/h</b> (40 knots or 46 mph)	Sat 29 Jan 2022 0942 UTC	290° (WNW)	<b>0.4</b> Sat 29 Jan 2022
Casement Aerodrome Co Dublin	<b>56 km/h</b> Near Gale (30 knots or 35 mph)	Sat 29 Jan 2022 07UTC	250° (WSW)	<b>81 km/h</b> (44 knots or 51 mph)	Sat 29 Jan 2022 0715 UTC	250° (WSW)	<b>0.6</b> Sat 29 Jan 2022
Belmullet Co Mayo	<b>54 km/h</b> Near Gale (29 knots or 33 mph)	Sat 29 Jan 2022 05UTC	250° (WSW)	<b>76 km/h</b> (41 knots or 47 mph)	Sat 29 Jan 2022 0412 UTC	240° (WSW)	<b>0.2</b> Sat 29 Jan 2022
Roches Point Co Cork	<b>50 km/h</b> Strong Breeze (27 knots or 31 mph)	Sat 29 Jan 2022 04UTC	240° (WSW)	<b>61 km/h</b> (33 knots or 38 mph)	Sat 29 Jan 2022 0429 UTC	240° (WSW)	<b>0.1</b> Sat 29 Jan 2022
Shannon Airport Co Clare	<b>46 km/h</b> Strong Breeze (25 knots or 29 mph)	Sat 29 Jan 2022 03UTC	240° (WSW)	<b>70 km/h</b> (38 knots or 44 mph)	Sat 29 Jan 2022 0535 UTC	250° (WSW)	<b>1.1</b> Sat 29 Jan 2022
Dunsany Co Meath	<b>44 km/h</b> Strong Breeze (24 knots or 28 mph)	Sat 29 Jan 2022 06UTC	260° (W)	<b>69 km/h</b> (37 knots or 43 mph)	Sat 29 Jan 2022 0918 UTC	300° (WNW)	<b>0.5</b> Sat 29 Jan 2022
Claremorris Co Mayo	<b>44 km/h</b> Strong Breeze (24 knots or 28 mph)	Sat 29 Jan 2022 07UTC	280° (W)	<b>65 km/h</b> (35 knots or 40 mph)	Sat 29 Jan 2022 0700 UTC	270° (W)	<b>0.4</b> Sat 29 Jan 2022

\*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.

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)
Sherkin Island Co Cork	<b>43 km/h</b> Strong Breeze (23 knots or 26 mph)	Sat 29 Jan 2022 00UTC	240° (WSW)	<b>52 km/h</b> (28 knots or 32 mph)	Sat 29 Jan 2022 0008 UTC	240° (WSW)	<b>1.0</b> Sat 29 Jan 2022
Oak Park Co Carlow	<b>39 km/h</b> Fresh Breeze (21 knots or 24 mph)	Sat 29 Jan 2022 05UTC	250° (WSW)	<b>56 km/h</b> (30 knots or 35 mph)	Sat 29 Jan 2022 0446 UTC	250° (WSW)	<b>0.6</b> Sat 29 Jan 2022
Gurteen Co Tipperary	<b>37 km/h</b> Fresh Breeze (20 knots or 23 mph)	Sat 29 Jan 2022 08UTC	250° (WSW)	<b>56 km/h</b> (30 knots or 35 mph)	Sat 29 Jan 2022 0609 UTC	240° (WSW)	<b>0.7</b> Sat 29 Jan 2022
Mount Dillon Co Roscommon	<b>35 km/h</b> Fresh Breeze (19 knots or 22 mph)	Sat 29 Jan 2022 03UTC	240° (WSW)	<b>57 km/h</b> (31 knots or 36 mph)	Sat 29 Jan 2022 0321 UTC	240° (WSW)	<b>0.3</b> Sat 29 Jan 2022
Johnstown Castle Co Wexford	<b>35 km/h</b> Fresh Breeze (19 knots or 22 mph)	Sat 29 Jan 2022 12UTC	300° (WNW)	<b>52 km/h</b> (28 knots or 32 mph)	Sat 29 Jan 2022 1146 UTC	290° (WNW)	<b>0.2</b> Sat 29 Jan 2022
Athenry Co Galway	<b>33 km/h</b> Fresh Breeze (18 knots or 21 mph)	Sat 29 Jan 2022 04UTC	240° (WSW)	<b>59 km/h</b> (32 knots or 37 mph)	Sat 29 Jan 2022 0458 UTC	240° (WSW)	<b>1.0</b> Sat 29 Jan 2022
Ballyhaise Co Cavan	<b>33 km/h</b> Fresh Breeze (18 knots or 21 mph)	Sat 29 Jan 2022 04UTC	220° (SW)	<b>57 km/h</b> (31 knots or 36 mph)	Sat 29 Jan 2022 0512 UTC	230° (SW)	<b>1.2</b> Sat 29 Jan 2022
Cork Airport Co Cork	<b>33 km/h</b> Fresh Breeze (18 knots or 21 mph)	Sat 29 Jan 2022 01UTC	240° (WSW)	<b>54 km/h</b> (29 knots or 33 mph)	Sat 29 Jan 2022 0255 UTC	250° (WSW)	<b>0.0</b> Sat 29 Jan 2022
Valentia Observatory Co Kerry	<b>33 km/h</b> Fresh Breeze (18 knots or 21 mph)	Sat 29 Jan 2022 08UTC	250° (WSW)	<b>48 km/h</b> (26 knots or 30 mph)	Sat 29 Jan 2022 0729 UTC	240° (WSW)	<b>0.6</b> Sat 29 Jan 2022
Mullingar Co Westmeath	<b>30 km/h</b> moderate breeze (16 knots or 18 mph)	Sat 29 Jan 2022 03UTC	230° (SW)	<b>57 km/h</b> (31 knots or 36 mph)	Sat 29 Jan 2022 0455 UTC	240° (WSW)	<b>0.6</b> Sat 29 Jan 2022
Moore Park Co Cork	<b>30 km/h</b> moderate breeze (16 knots or 18 mph)	Sat 29 Jan 2022 07UTC	250° (WSW)	<b>48 km/h</b> (26 knots or 30 mph)	Sat 29 Jan 2022 0724 UTC	260° (W)	<b>0.1</b> Sat 29 Jan 2022

*\*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.*

## Wind warnings issued for Storm Malik on 29 Jan 2022

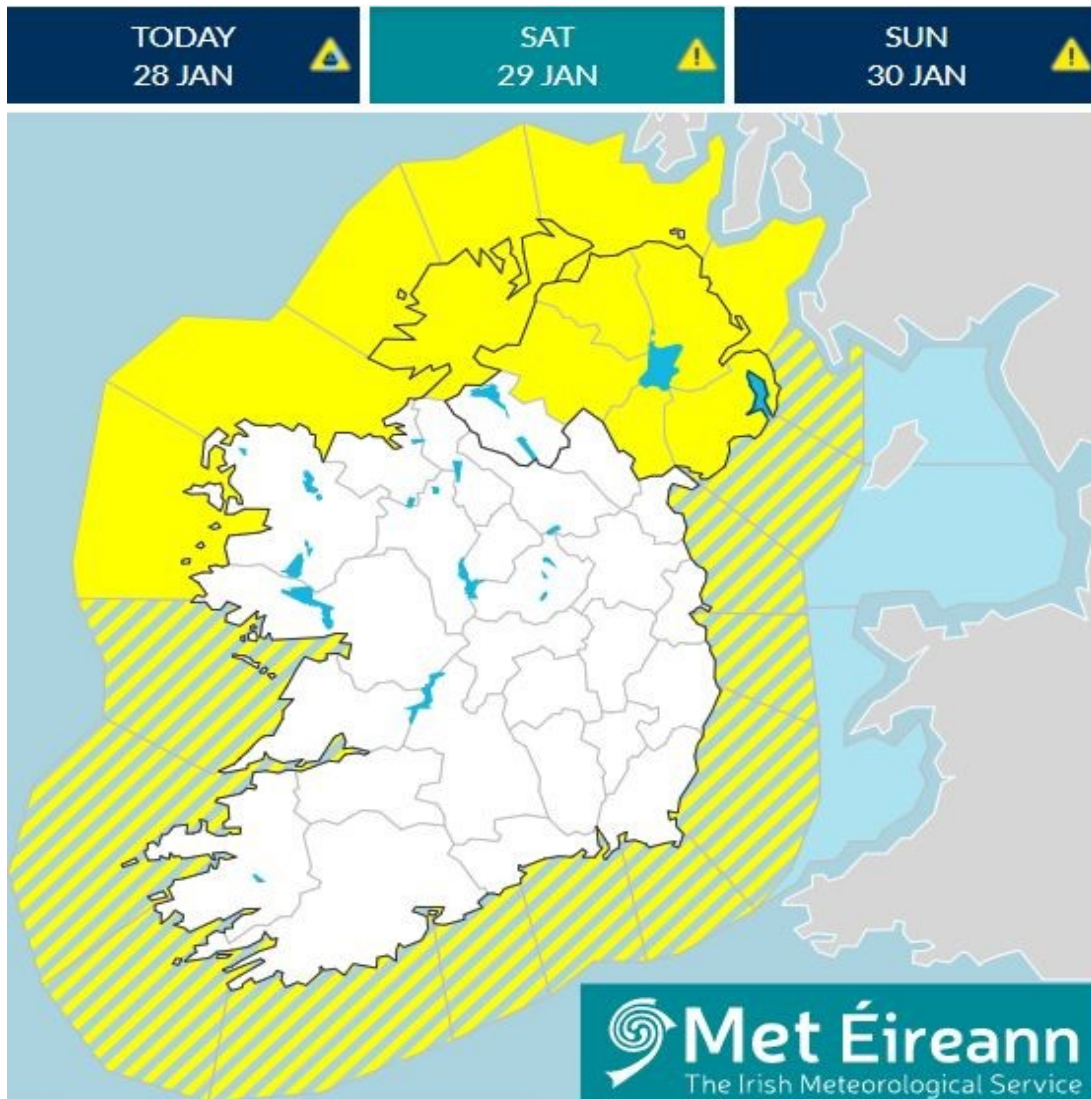


Figure 7: Wind warnings issued by Met Éireann for Storm Malik

## Definitions

*Gust* wind speeds are an average of 3-second wind speeds.

*Sustained* wind speeds are an average of 10-minute wind speeds. For observations of sustained wind speeds: -

- Storm Force 10  $\geq$  89 km/h (48 knots)
- Violent Storm Force 11  $\geq$  103 km/h (56 knots)
- Hurricane Force 12  $\geq$  117 km/h (64 knots)

This report is based on the data observed at Met Éireann's weather stations and available on this date.

All times are UTC unless stated they are local Irish time.

Synoptic station data is midnight to midnight UTC.

For more information, contact Met Éireann at e-mail: [enquiries@met.ie](mailto:enquiries@met.ie)

