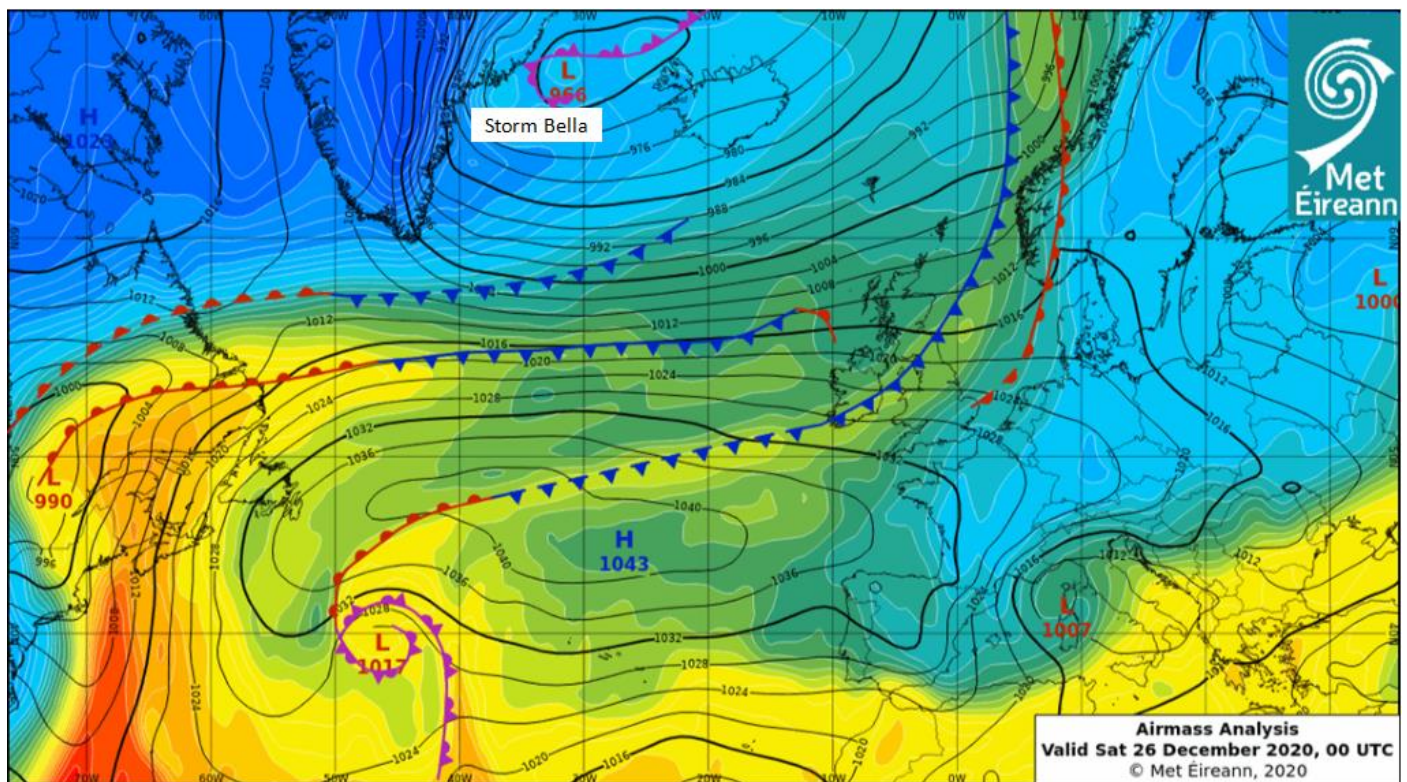


Storm Bella

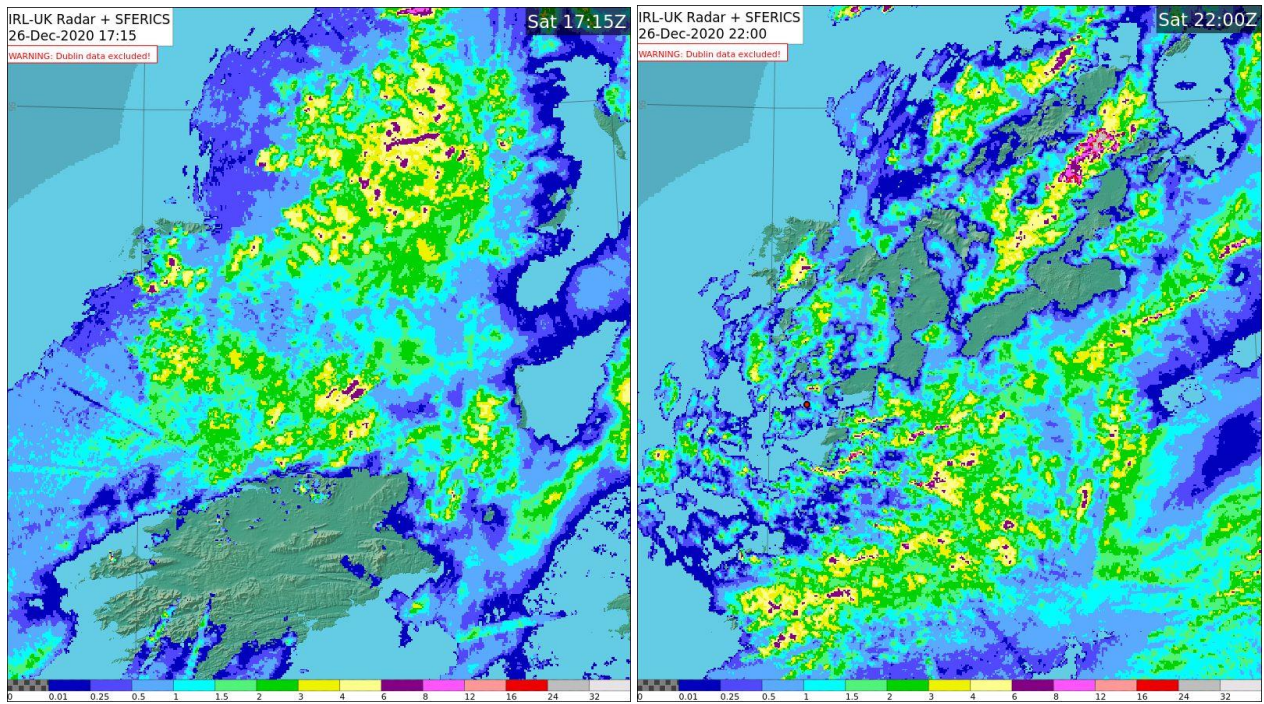
Saturday 26th December 2020

Second named storm of the season, named by the UK Met Office, on Thursday 24th December 2020

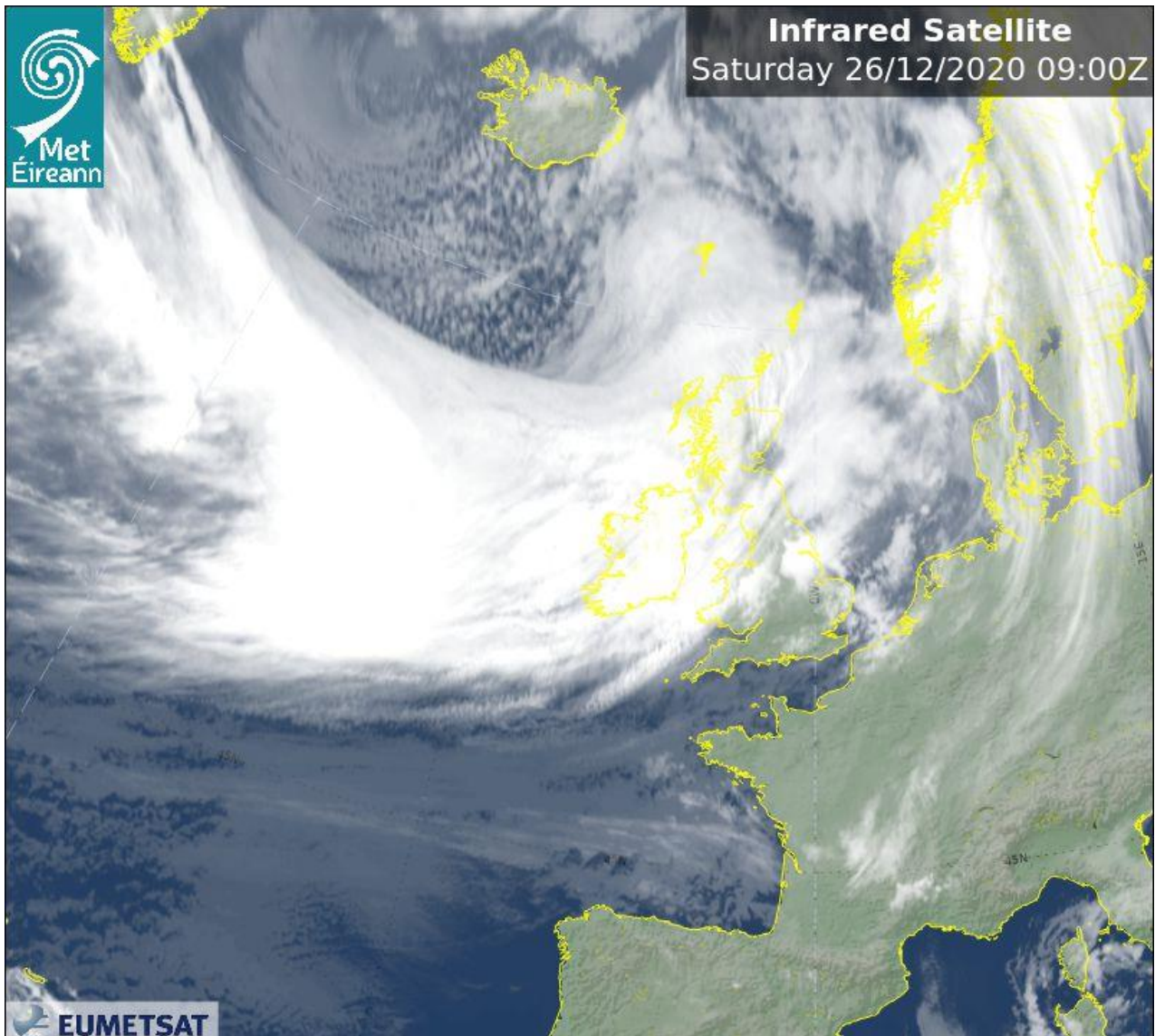
On Christmas Eve, Thursday 24 December 2021, a very cold air mass, which emerged from northwest Canada and Greenland, met a relatively warm air mass over the western North Atlantic. This resulted in a powering up of the polar front Jet Stream. A complex low-pressure system, named Storm Bella by the UK Met Office, tracked eastwards over Greenland on Christmas Eve and engaged the developmental zone of this powered up Jet Stream, which helped to deepen it to the north of Iceland on Christmas Day. The storm then tracked eastwards over parts of Iceland on St. Stephens's day and grew into a large storm system with a vast swathe of gales, westerly veering northerly, across the North Atlantic as it interacted with the Azores high to the south. Storm Bella then tracked south-eastwards towards Scotland whilst deepening a little more on St. Stephen's night, bringing a spell of wet and very windy weather over Ireland for St Stephen's afternoon/evening/night as an associated squally cold front tracked south-eastwards over the country.



Storm Bella then tracked southwards over the Irish Sea on Sunday 27th and began to fill. However, at the same time, the high-pressure system to the south moved to the west of Ireland over the Atlantic, which tightened the isobars over the western half of the country once again and brought northerly winds with wintry showers. This led to several stations along the western seaboard receiving their strongest winds from the system between the 27th and 29th, as the storm filled and moved southwards over the Irish Sea. The highest recorded sustained wind of 85km/h (46knots) was recorded at Mace Head, Co Galway on both the 26th and 28th, while the highest gust of 122 km/h (66knots) was recorded at Mace Head on the 26th.



Radar images of the active weather fronts crossing Ireland ahead of Storm Bella on the evening of Saturday 26th



EUMETSAT infrared satellite of Storm Bella south of Iceland on the morning of Saturday 26th December 2020

Main Meteorological Impacts

Station location	Date	Rainfall 24hr Totals	Sustained (10-min mean) wind speed	Gust (3-sec mean) wind speed	Wind Direction (of highest gust)	Time (UTC) (of highest gust)
Mace Head, Co Galway	Sat 26 Dec 2020	10.3 mm	85 km/h Strong Gale Force 9 (46 knots or 53 mph)	122 km/h (66 knots or 76 mph)	260° (W)	2123
Mace Head, Co Galway	Mon 28 Dec 2020	0.8 mm	85 km/h Strong Gale Force 9 (46 knots or 53 mph)	120 km/h (65 knots or 75 mph)	320° (NW)	0215
Sherkin Island, Co Cork	Sat 26 Dec 2020	12.6 mm	81 km/h Strong Gale Force 9 (44 knots or 51 mph)	106 km/h (57 knots or 66 mph)	270° (W)	2314
Malin Head, Co Donegal	Sat 26 Dec 2020	20.8 mm	78 km/h Strong Gale Force 9 (42 knots or 48 mph)	106 km/h (57 knots or 66 mph)	230° (SW)	1140
Sherkin Island, Co Cork	Sun 27 Dec 2020	5.7 mm	76 km/h Strong Gale Force 9 (41 knots or 47 mph)	107 km/h (58 knots or 67 mph)	260° (W)	0023
Malin Head, Co Donegal	Mon 28 Dec 2020	10.6 mm	76 km/h Strong Gale Force 9 (41 knots or 47 mph)	96 km/h (52 knots or 60 mph)	340° (NNW)	1753
Roches Point, Co Cork	Mon 28 Dec 2020	0.5 mm	74 km/h Gale Force 8 (40 knots or 46 mph)	109 km/h (59 knots or 68 mph)	320° (NW)	1104
Mace Head, Co Galway	Sun 27 Dec 2020	4.0 mm	72 km/h Gale Force 8 (39 knots or 45 mph)	96 km/h (52 knots or 60 mph)	290° (WNNW)	0535
Roches Point, Co Cork	Sat 26 Dec 2020	8.4 mm	72 km/h Gale Force 8 (39 knots or 45 mph)	98 km/h (53 knots or 61 mph)	250° (WSW)	2156
Shannon Airport, Co Clare	Sat 26 Dec 2020	20.2 mm	70 km/h Gale Force 8 (38 knots or 44 mph)	104 km/h (56 knots or 64 mph)	230° (SW)	1748
Malin Head, Co Donegal	Sun 27 Dec 2020	9.4 mm	69 km/h Gale Force 8 (37 knots or 43 mph)	93 km/h (50 knots or 58 mph)	340° (NNW)	2243
Valentia Observatory, Co Kerry	Sat 26 Dec 2020	11.3 mm	67 km/h Gale Force 8 (36 knots or 41 mph)	98 km/h (53 knots or 61 mph)	260° (W)	2307
Belmullet, Co Mayo	Sat 26 Dec 2020	16.8 mm	67 km/h Gale Force 8 (36 knots or 41 mph)	100 km/h (54 knots or 62 mph)	260° (W)	2009

Table 1. Wind station data for those reaching orange (> 65 km/h) sustained mean wind speeds

WEATHER WARNINGS ISSUED FOR STORM BELLA



Level: Yellow

Type: Wind

Message: On Saturday (St Stephen's Day), through the afternoon, evening and night, westerly winds associated with Storm Bella (named by UK Met Office) will reach mean speeds of 50 to 65km/h with gusts of 90 to 110km/h. Winds will be higher in exposed areas of the west and southwest, especially tonight.

With the combination of strong winds, high waves and forecasted storm surge, there is a risk of coastal flooding along the west coast.

Affected Regions: Carlow, Cavan, Clare, Cork, Donegal, Dublin, Galway, Kerry, Kildare, Kilkenny, Leitrim, Laois, Limerick, Longford, Louth, Mayo, Meath, Monaghan, Offaly, Roscommon, Sligo, Tipperary, Waterford, Westmeath, Wexford, and Wicklow

Issue Time: Saturday 26/12/2020 11:31

Expected Onset: Saturday 26/12/2020 12:00

Expires: Sunday 27/12/2020 03:00



Level: Yellow

Type: Rainfall

Message: On Saturday (St Stephen's Day), through the late afternoon, evening and night, heavy rain associated with Storm Bella (named by the UK Met Office) will move southwards over Ireland and may cause localised flooding in some areas.

Affected Regions: Carlow, Cavan, Clare, Cork, Donegal, Dublin, Galway, Kerry, Kildare, Kilkenny, Leitrim, Laois, Limerick, Longford, Louth, Mayo, Meath, Monaghan, Offaly, Roscommon, Sligo, Tipperary, Waterford, Westmeath, Wexford, and Wicklow

Issue Time: Friday 25/12/2020 15:55

Expected Onset: Saturday 26/12/2020 15:00

Expires: Sunday 27/12/2020 04:00