

Storm Brendan

Monday 13 January 2020

Fourth named storm of the season, named by Met Éireann on Saturday 11 January 2020.

Storm Brendan moved off the east coast of Canada on the 12th January and engaged with a very strong jet stream as it crossed the Atlantic towards Ireland and underwent rapid cyclogenesis (dropping by 40hPa in 18 hours). The strongest winds of the event came ahead of an occluded frontal system associated with the storm, which brought a squall line across Ireland from west to East, starting in the morning of the 13th and clearing the country in the afternoon of the 13th. This brought some coastal flooding to the East of the country as the strongest winds, which were southerly with a slight easterly component, coincided with a high spring tide in the early afternoon.

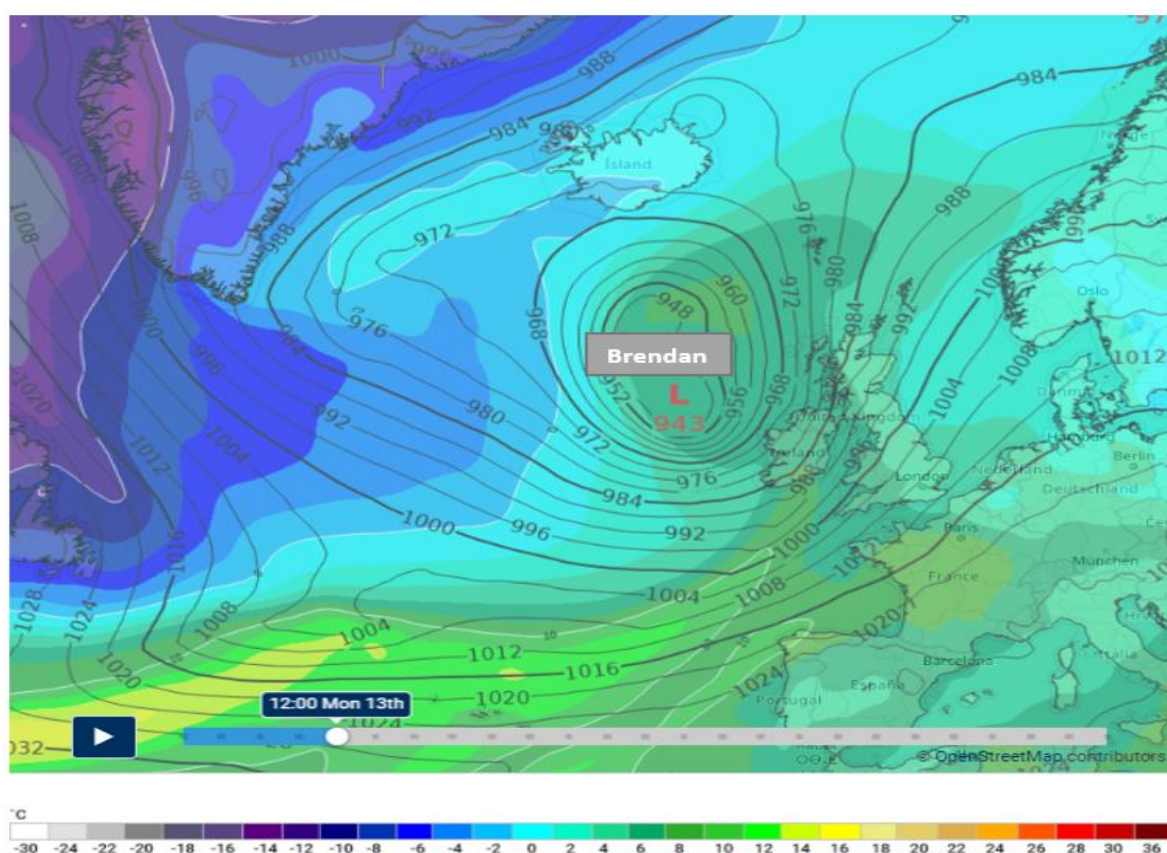


Figure 1. Atlantic Synoptic Chart for 13 January 2020 at 1200 utc.

A second core of very strong winds associated with the low pressure centre itself mostly stayed out to sea as the low moved northwest off the west coast of Ireland in the afternoon and evening of the 13th. The low was still intensifying at this stage and had winds of over 200km/h to the south if the low centre out in the Atlantic Ocean. This core of strong winds, now south-westerly or westerly, sideswiped the west and northwest coasts of Ireland in the late afternoon and evening, which brought some coastal flooding to the west and northwest during the high spring tide in the evening. The highest winds for Mace head and Malin Head were during this second swath of strong winds in the late afternoon and evening, while most other places received their highest winds for the event during the first swath of strong winds in the morning and early afternoon

Peak sustained wind speed was 96 km/h at Roches Point around 11 am (11 UTC) on Monday 13 January 2020. Three, out of 25, wind stations observed storm force 10 winds.

Peak gust wind speed was 135 km/h at Roches Point at 10:55 am (10:55 UTC).

Nineteen stations (76% of total) observed gusts \geq 48 knots Munster (6 stations), Connacht (5 stations), Leinster (5 stations) and Ulster (3 stations). Main impact date was Monday, however it remained gusty for a short time into Tuesday.

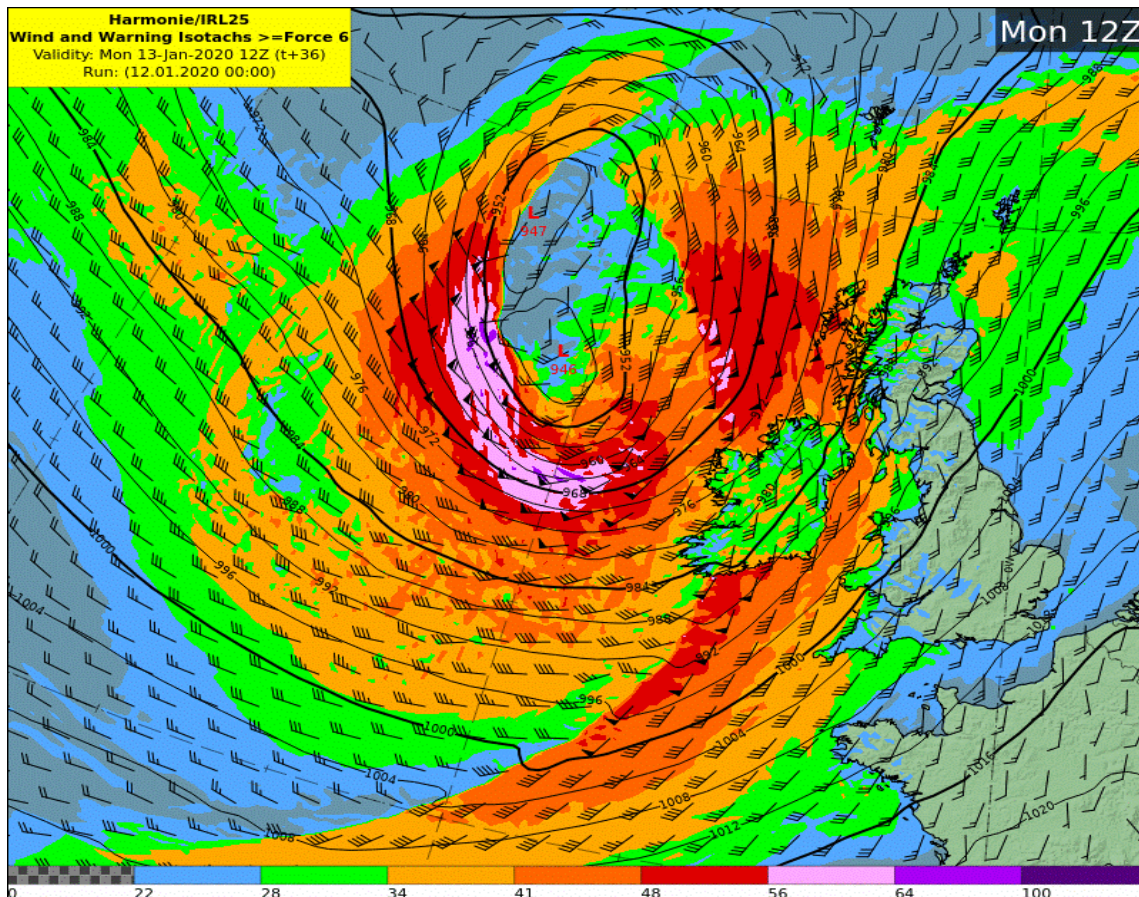


Figure 2. Harmonie Wind Forecast Chart for 13 January 2020 at 1200 utc.

Impacts:

- Up to 100,000 homes and businesses without power
- Roads closed with reports of fallen trees and other debris
- Some flights cancelled at Shannon Airport, and some ferries cancelled or postponed.
- Coastal flooding in parts of the East and West coasts.

Station Name	Rainfall (mm)	Highest 10-minute mean wind speed (km/h).	Highest Gust (km/h)	Wind Direction (degree)	Hour of occurrence (utc)
ROCHES POINT	8.8	96 (52 kt)	135 (73 kt)	170	1100
MACE HEAD	10.2	94 (51 kt)	122 (66 kt)	230	1500
BELMULLET	11.5	93 (50 kt)	124 (67 kt)	200	1300
SHERKIN ISLAND	14.4	85 (46 kt)	119 (64 kt)	180	1000
MALIN HEAD	7.3	78 (42 kt)	115 (62 kt)	160	1300
SHANNON AIRPORT	11.1	78 (42 kt)	102 (55 kt)	240	2000
CASEMENT	7.3	78 (42 kt)	111 (60 kt)	180	1300
NEWPORT	15.6	76 (41 kt)	113 (61 kt)	150	1000
FINNER	12.2	70 (38 kt)	98 (53 kt)	210	1600
CORK AIRPORT	14.4	67 (36 kt)	104 (56 kt)	190	1200
GURTEEN	6.8	65 (35 kt)	91 (49 kt)	160	1000
KNOCK AIRPORT	12.1	65 (35 kt)	102 (55 kt)	160	1200
VALENTIA	18.2	63 (34 kt)	106 (57 kt)	180	1000
OAK PARK	12.4	61 (33 kt)	98 (53 kt)	160	1200
JOHNSTOWN CASTLE	7.2	61 (33 kt)	93 (50 kt)	170	1200
CLAREMORRIS	10.5	61 (33 kt)	98 (53 kt)	220	1600
MULLINGAR	6.7	54 (29 kt)	89 (48 kt)	160	1100
DUBLIN AIRPORT	3.6	52 (28 kt)	89 (48 kt)	180	1300
MOORE PARK	16.0	52 (28 kt)	85 (46 kt)	160	1100
DUNSANY	5.4	50 (27 kt)	87 (47 kt)	180	1300
ATHENRY	11.1	50 (27 kt)	87 (47 kt)	210	1400
BALLYHAISE	7.8	50 (27 kt)	93 (50 kt)	170	1200
MT DILLON	11.9	44 (24 kt)	81 (44 kt)	150	1100

Figure 3. Station data for 13 January 2020

DEFINITIONS

Sustained wind speeds are an average of 10-minute wind speeds.

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

For observations of sustained (10-min mean) wind speeds:

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