

## Ex-Hurricane Ophelia 16 October 2017

On 16 October 2017 ex-hurricane Ophelia brought very strong winds to western parts of the UK and Ireland. This date fell on the exact 30th anniversary of the Great Storm of 16 October 1987.

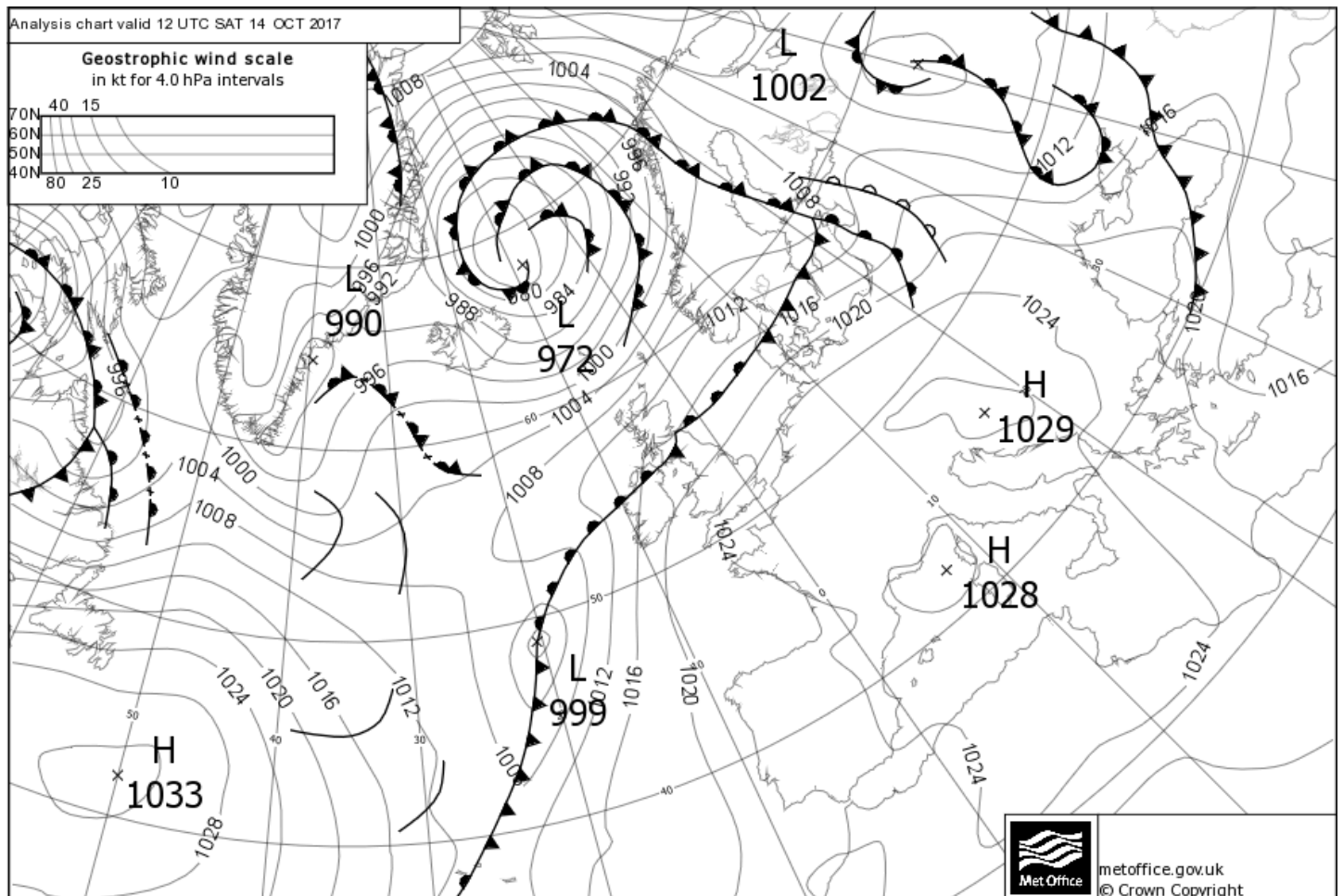
Ex-hurricane Ophelia (named by the US National Hurricane Center) was the [second storm](#) of the 2017-2018 winter season, following Storm Aileen on 12 to 13 September. The strongest winds were around Irish Sea coasts, particularly west Wales, with gusts of 60 to 70 Kt or higher in exposed coastal locations.

### Impacts

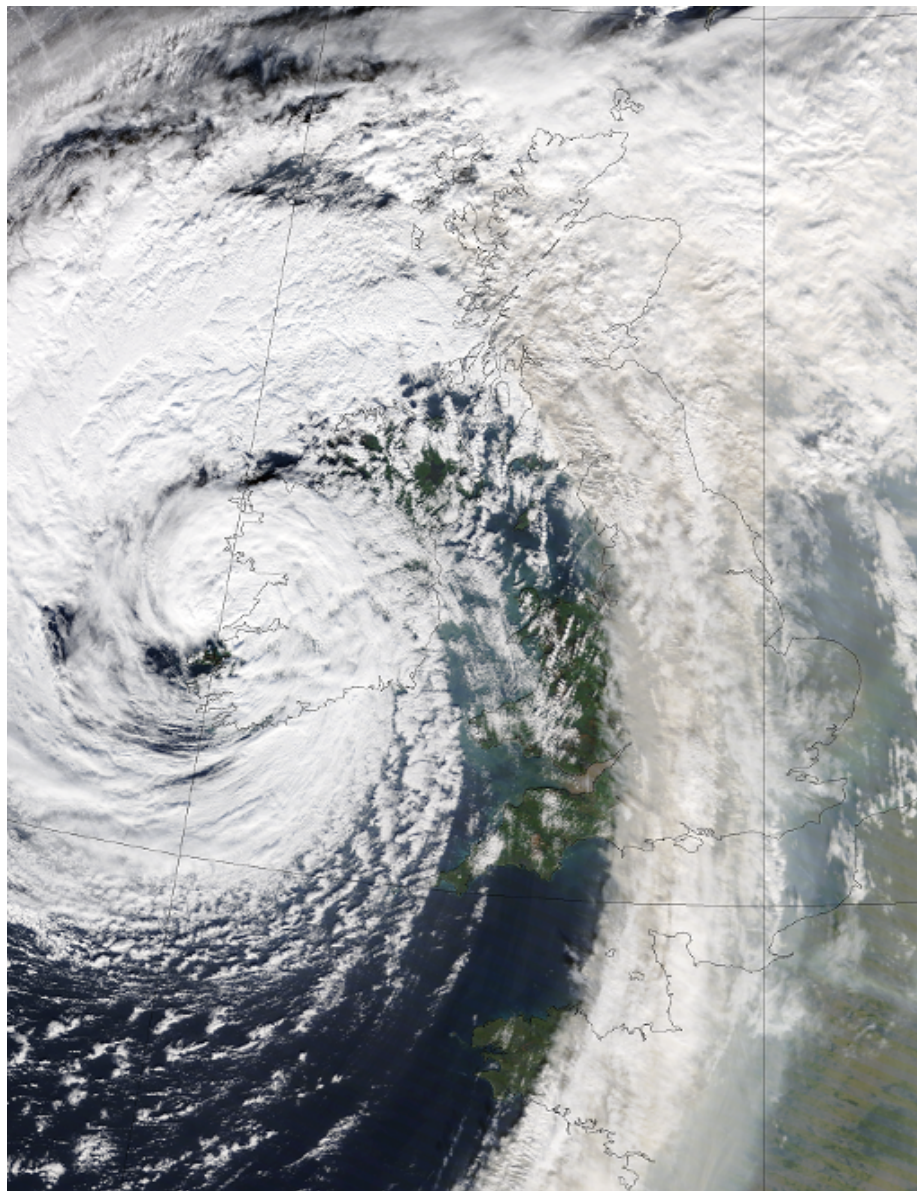
The most severe impacts were across the Republic of Ireland, where three people died from falling trees (still mostly in full leaf at this time of year). There was also significant disruption across western parts of the UK, with power cuts affecting thousands of homes and businesses in Wales and Northern Ireland, and damage reported to a stadium roof in Barrow, Cumbria. Flights from Manchester and Edinburgh to the Republic of Ireland and Northern Ireland were cancelled, and in Wales some roads and railway lines were closed. Ferry services between Wales and Ireland were also disrupted. Storm Ophelia brought heavy rain and very mild temperatures caused by a southerly airflow drawing air from the Iberian Peninsula.

### Weather data

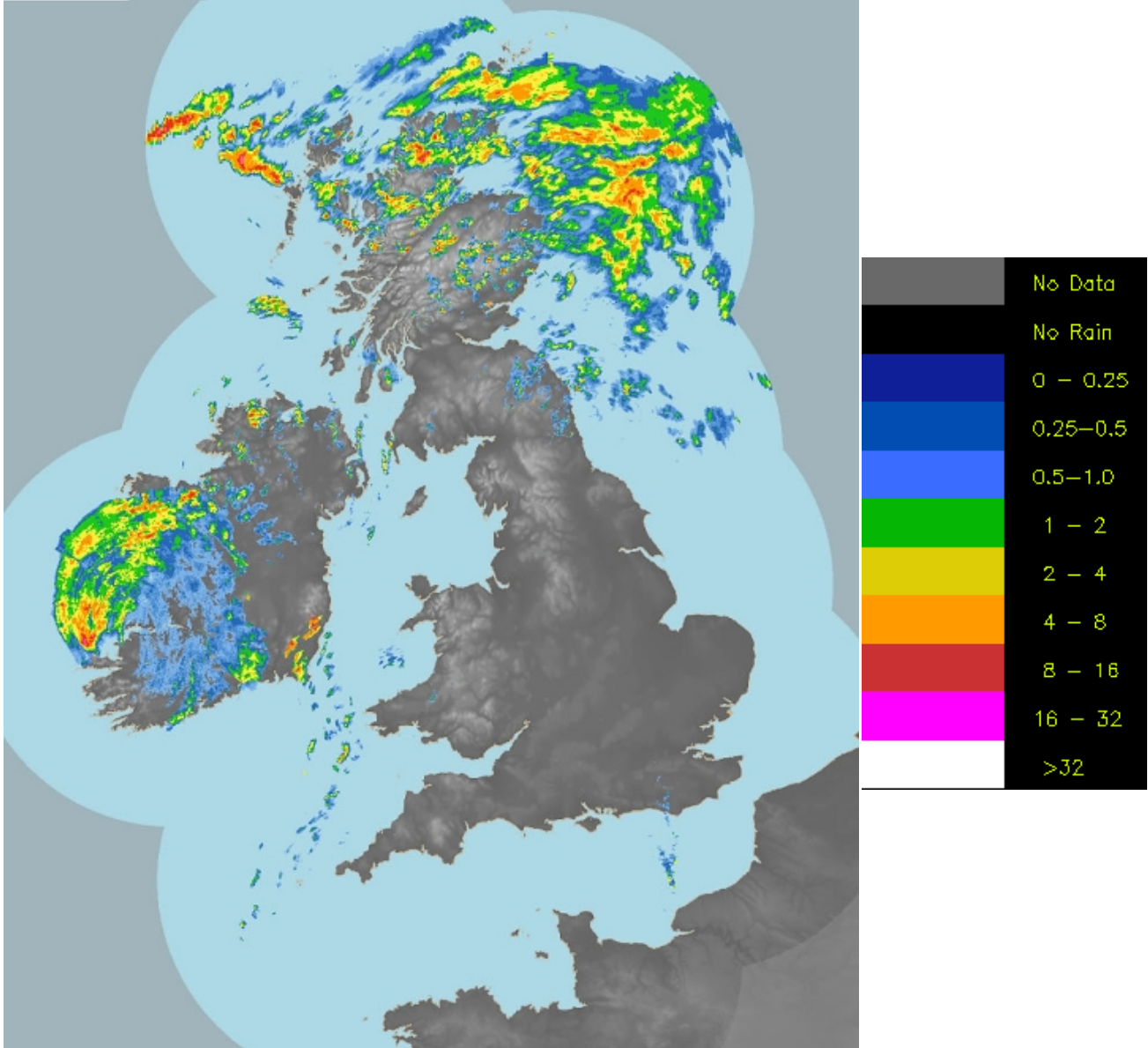
Ex-hurricane Ophelia moved on a northerly track to the west of Spain and then north along the west coast of Ireland, before sweeping north-eastwards across Scotland. The sequence of analysis charts from 12 UTC 15 to 12 UTC 17 October shows Ophelia approaching and tracking across Ireland and Scotland.



A visible satellite image of Ophelia at 1153 UTC 16 October 2017. Image copyright Met Office.



Rain-radar image of Ophelia at 1200 UTC 16 October 2017. The centre of the storm is over south-west Ireland, corresponding to the satellite image above.

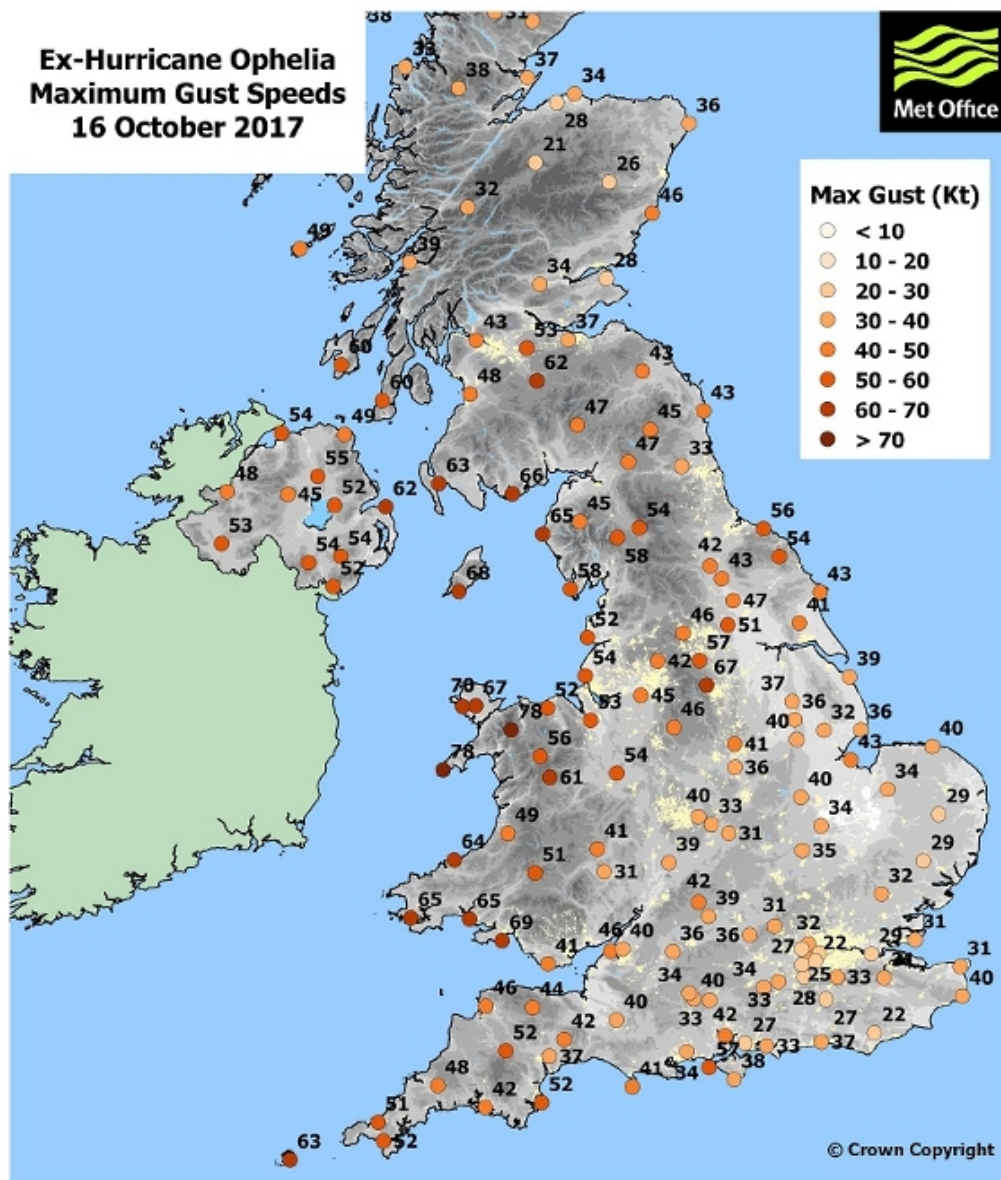




An image of the sun during the morning of 16 October 2017 from Met Office Headquarters in Exeter, likely to be caused by a combination of Saharan dust and smoke from Portuguese wild-fires drawn north by the warm southerly airflow; a phenomenon observed widely across southern England. Image courtesy Dan Harris, Met Office.



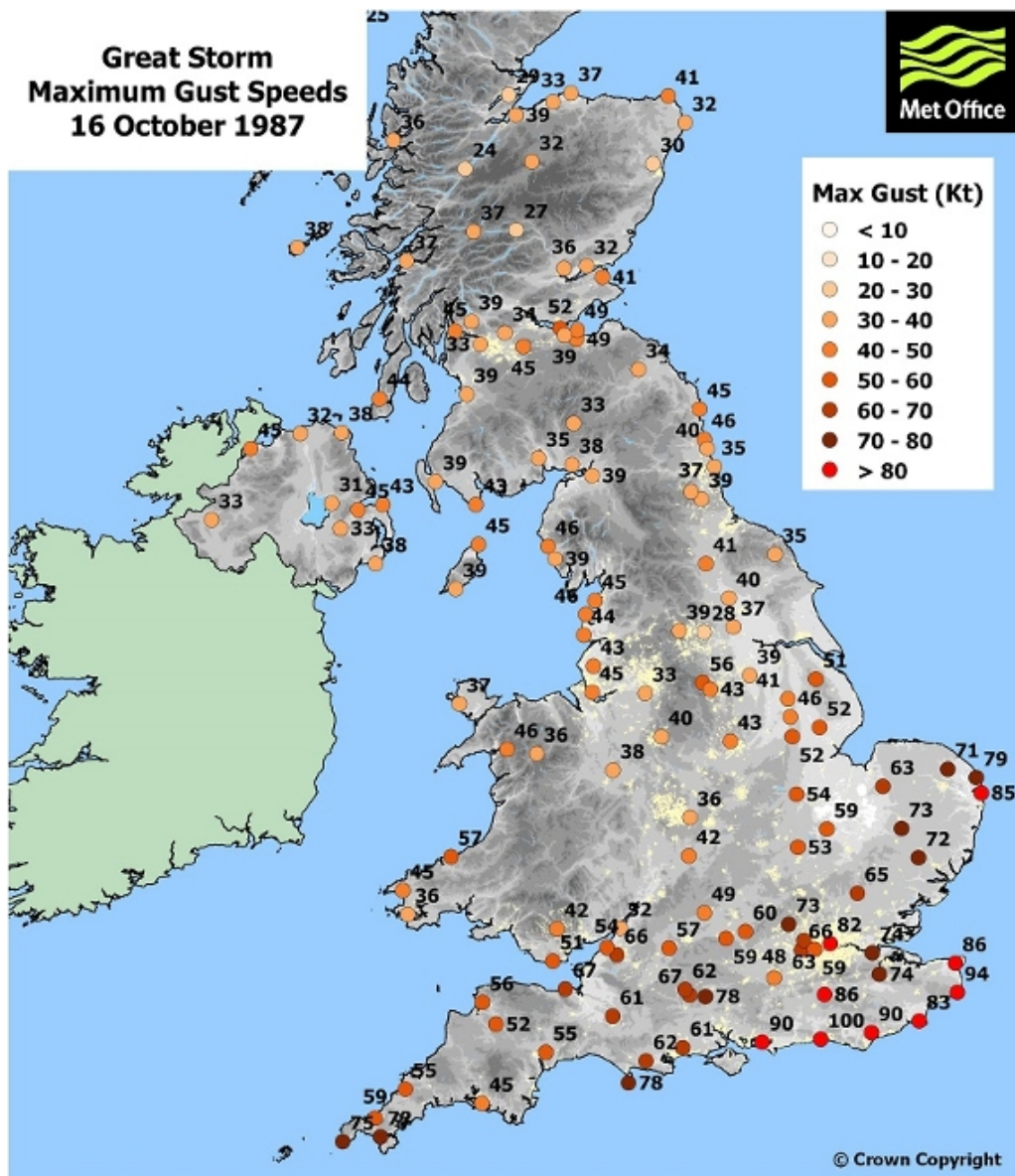
Highest max gust speeds (Kt) 16 October 2017 from Ophelia. The strongest winds of 60 to 70 Kt were around Irish Sea coasts, particularly west Wales. The highest recorded gusts were 78 Kt (90 mph) at Capel Curig and Aberdaron (both Gwynedd), 70 Kt (81 mph) at Valley (Anglesey) and 69 Kt (79 mph) at Mumbles Head (Swansea).



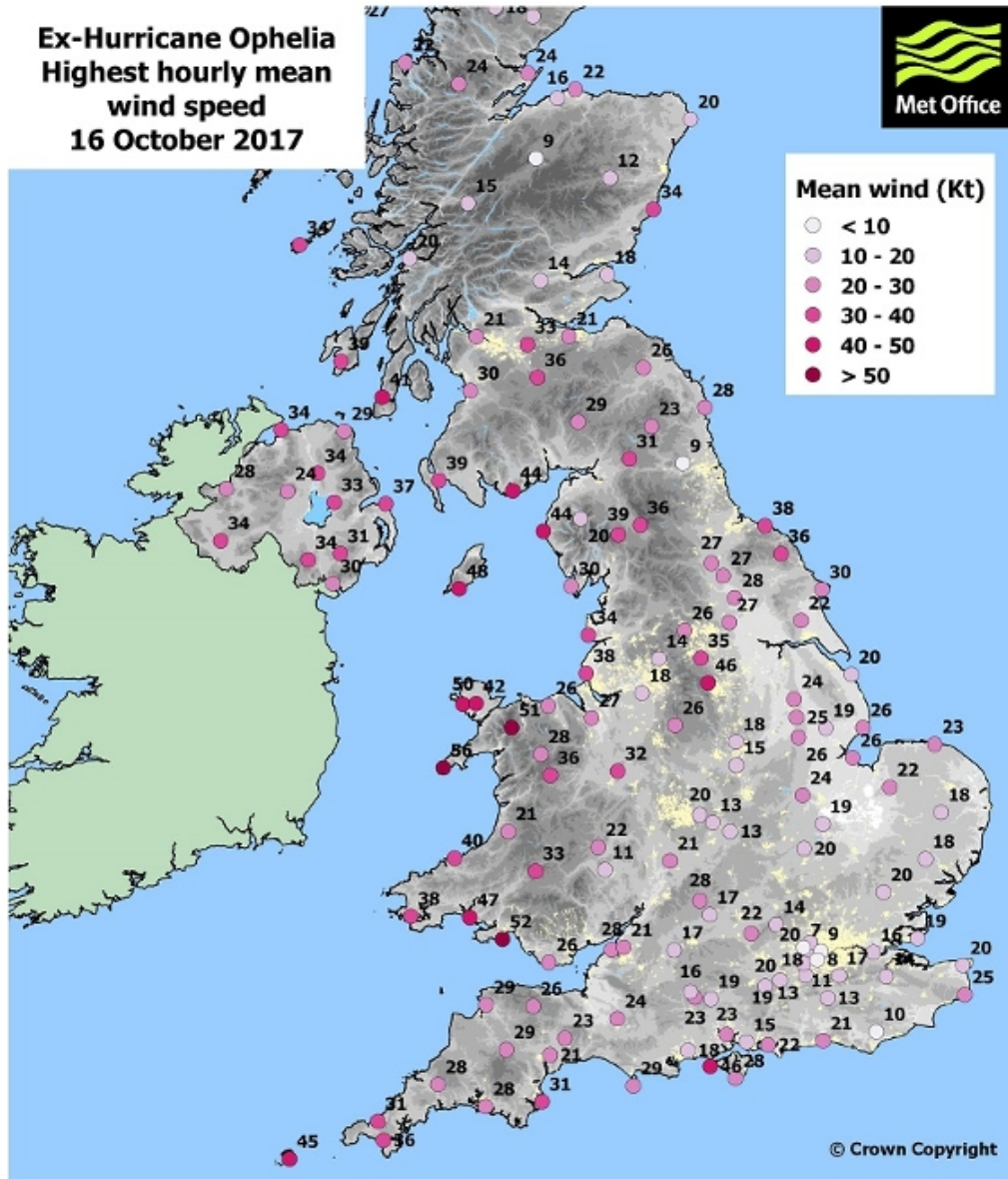
Ex-hurricane Ophelia occurred on the 30th anniversary of the [Great Storm of 16 October 1987](#). For comparison, maximum gust speeds in 1987 are shown below, exceeding 70 Kt widely across south-east England and 80 to 90 Kt or higher across the far south-east, with 100 Kt (115 mph) at Shorham (Sussex).

The October 1987 storm has been referred to as the worst storm to affect southern England since the Great Storm of 1703 (impacts from the latter were recorded in detail by Daniel Defoe, author of the novel Robinson Crusoe. He estimated at least 8000 deaths, and over 400 windmills overturned or burnt down when their wooden machinery overheated. The Eddystone rock lighthouse, off Plymouth, was swept away, taking its designer Henry Winstanley with it).

# Great Storm Maximum Gust Speeds 16 October 1987

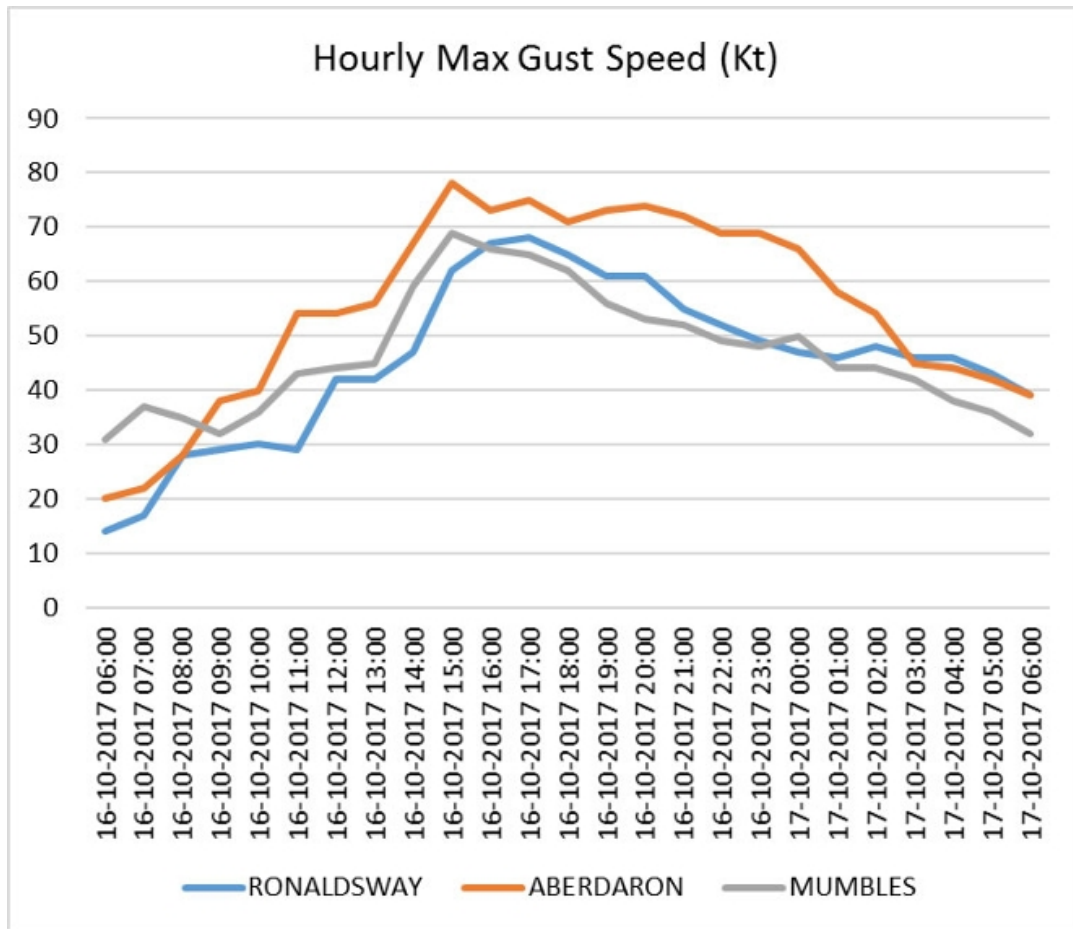


Highest hourly mean wind speeds (Kt) 16 October 2017 from Ophelia. The highest hourly mean wind speeds were 40 to 50 Kt, and again these occurred around Irish Sea coasts, particularly west Wales, with 56 Kt (64 mph) at Aberdaron.



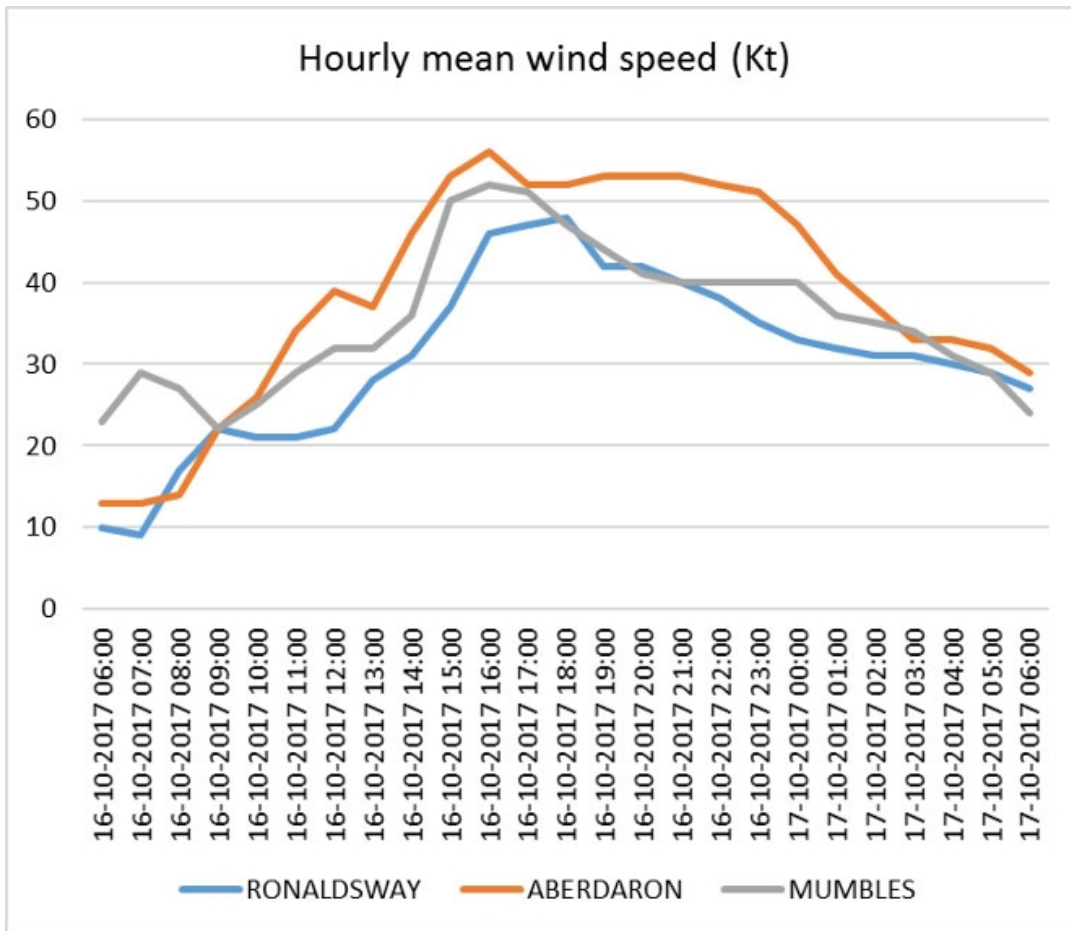


Time-series of hourly maximum gust speed (Kt) for Ronaldsway (Isle of Man), Aberdaron (Lley Peninsula, Gwynedd) and Mumbles Head (Swansea) from 06 UTC 16 to 06 UTC 17 October 2017. The highest gust speeds were recorded at between 15 and 17 UTC but remained at over 50 Kt for several hours; at Aberdaron the hourly maximum gust speed exceeded 50 Kt (58 mph) from 11 UTC on 16 to 02 UTC on 17 October, a period of 15 hours.



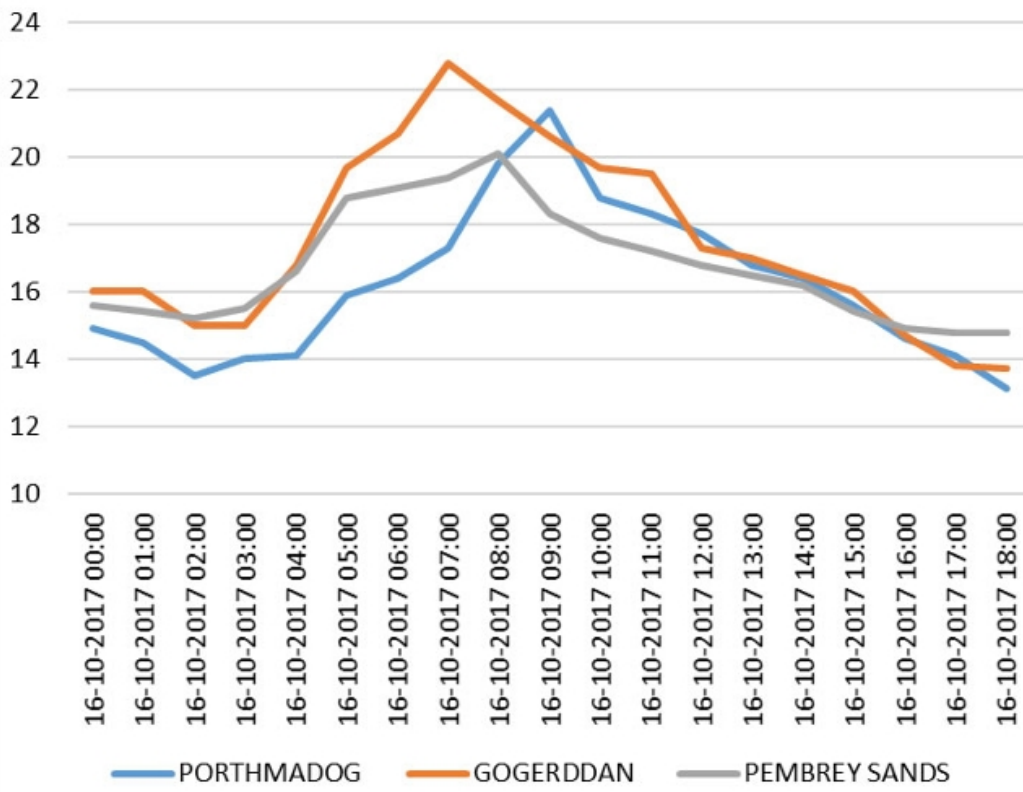
Time-series of hourly mean wind speed (Kt) for these same stations. The highest hourly mean wind speeds occurred slightly after the highest gust speeds and remained sustained at over 40 Kt (and for Aberdaron 50Kt) for several hours.





Hourly air temperature at Porthmadog (Gwynedd), Gogerddan (Ceredigion) and Pembrey Sands (Dyfed) from 00 UTC to 18 UTC 16 October 2017, showing the temperature peaking at around or over 20 °C at around 07 to 09 UTC. At Gogerddan, the air temperature was already 22.8 °C at 07 UTC on 16 October. The UK's highest daily maximum temperature on the 16th was 23.5 °C at Manston (Kent); notably mild for this time of year (although 22 °C was exceeded on Halloween 31 October in both 2014 and 2016).

### Hourly Air Temperature (°C)



## Previous ex-hurricanes

There have been a number of ex-hurricanes affecting the UK in recent years (this is not a definitive list).

Ex-hurricane **Bertha** [↗](#) on 10 to 11 August 2014 brought strong winds and heavy rain, resulting in some flooding in Moray (Scotland), with 56 Kt (64 mph) at Needles Old Battery (Isle of Wight).

Ex-hurricane **Nadine** on 24 to 26 September 2012 caused flooding in north-east England, some fallen trees in the Scottish Borders and a fatality from a fallen tree in London, with 61 Kt (70 mph) at Warcop Range (Cumbria).

Ex-hurricane **Katia** on 12 September 2011 resulted in widespread transport disruption and one fatality from a fallen tree in northern England, with 63 Kt (72 mph) at High Bradfield (South Yorkshire).

Ex-hurricane **Gordon** brought strong winds to southern and western parts of the UK on 21 September 2006 with 61 Kt (70 mph) at St Marys Airport (Isles of Scilly).

Ex-hurricane **Lili** brought strong winds to southern parts of the UK on 28 October 1996, with 76 Kt (87 mph) at Solent (Hampshire).

Ex-hurricane **Charley** on 25 to 26 August 1986 brought strong winds, widespread heavy rain and boats were driven onto rocks at Abersoch, west Wales. Bank Holiday Monday 25 August 1986 was exceptionally wet with over 50mm of rain falling widely across much of England and Wales. The highest gust was 62 Kt (71 mph) at Gwennap Head (Cornwall).

Examples of other severe storms to affect the UK at this time of year include the [St Judes' Day storm of 28 October 2013](#) [↗](#), the [storm of 27 October 2002](#) [↗](#), and the [storm of 30 October 2000](#) [↗](#) – the latter autumn also seeing significant flooding across England and Wales.

However, there are no compelling trends in maximum gust speeds to indicate increased storminess of the UK's weather, as recorded by the UK wind network in the last four decades. Further details are given in the [State of the UK Climate 2016 report](#) [↗](#).

Last updated: 19 January 2018