SurgeWatch

STORM EVENT

26th November 1954

A lengthy period of heavy rainfall interspersed with widespread coastal flooding along the south coast

Severity Ranking

			4		

Social	Loss of life	*
	Residential property	150 properties were flooded in Cornwall, and many more in other south coast locations
	Evacuation & rescue	*
Economic	Cost	*
	Ports	*
	Transport	The railway station at Dawlish was damaged, which disrupted services. The coastal road from Newhaven to Seaford was closed for 10 days.
	Energy	*
	Public services	The council depot In Perranporth was under 1.8 m of water
	Water & wastewater	*
	Livestock	*
	Agricultural land	*
Environmental	Coastal erosion	*
	Natural environment	*
	Cultural heritage	*
	Coastal defences	Breaches at Chesil Beach and Seaford

**No known sources of information available*

Source	The storm began forming along the eastern North American seaboard during 24th December, and intensified whilst moving northeast towards the British Isles. Whilst centred over Ireland, the storm reached a central air pressure of approximately 960 mbar on 26th December, and the sharp pressure gradient generated strong south-westerly winds over the English Channel. According to a contemporary source, gusts of 52 knots [27 m/s] were recorded at an unspecified location (NMHMA, 1954). Whilst weakening as it moved northwest, the storm was followed by another low-pressure cell in its wake on 27th December. We are unaware of any information regarding the sea level conditions during this event. Within the national tide gauge network, only the Newlyn and Harwich tide gauges were operational at the time. At both sites the water level return period was less than 1 year. The event occurred at peak spring tides. We are unaware of any sources of information describing the wave conditions during this event.
Pathway	Chesil Beach was reportedly breached in 30 places, and the sea wall at Seaford suffered a breach of about 50 yards [46 m] wide.
Receptor & Consequence	This event occurred during a period of considerable rainfall from 21st-30th November, which brought about extensive flooding across the country (Met Office, 1954; NMHMA, 1954). Widespread coastal flooding occurred at many locations during 26th November along the south coast, including: Lostwithiel, Gunnilsake, Truro, Mevagissey, Perranporth, Portland, Worthing, Teignmouth, Newhaven, Seaford (Zong & Tooley, 2003; Cornwall Council, 2011). About 150 properties were flooded in Cornwall, mostly in Lostwithiel, and approximately 40 ft. [12 m] waves sent water rushing down chimneys in Mevagissey (Cornwall Council, 2011). In Perranporth, the council depot was said to have been under 1.8 m of water. Elsewhere, houses in Lymington were flooded up to 1.2 m, with deep flooding reported from Southampton to Lymington (Ruocco *et al.,* 2011). Properties were apparently flooded in many popular coastal resorts, and thousands of pounds' worth of damages resulted as beach huts were "splintered to matchwood" in the Isle of Wight (*Maryborough Chronicle*, 1954). The Newhaven to Seaford coastal road was closed for 10 days following wave damages (*The Times*, 1954). At Seaford, the sea wall suffered a breach about 50 yards wide, and the road behind was eroded to about halfway. Unsurprisingly, defences were left badly damaged, with Chesil beach breached in about 30 places (West, 2014), and part of the railway platform at Dawlish was lifted from its foundations which limited services to one operational line (*The Times*, 1954). Also, 50 main roads were reportedly under water (NMHMA, 1954).

Table 1: High water levels (m CD) recorded at the UK National Tide Gauge sites that were available during the event.

Tide gauge Site	Date and time (GMT)	Return period (years)	Water level (m CD)	Astronomical tide (m CD)	Skew surge (m)
Newlyn	26/11/54 17:00	<1	5.86	5.05	0.8
Harwich	26/11/54 12:00	<1	4.02	3.66	0.35

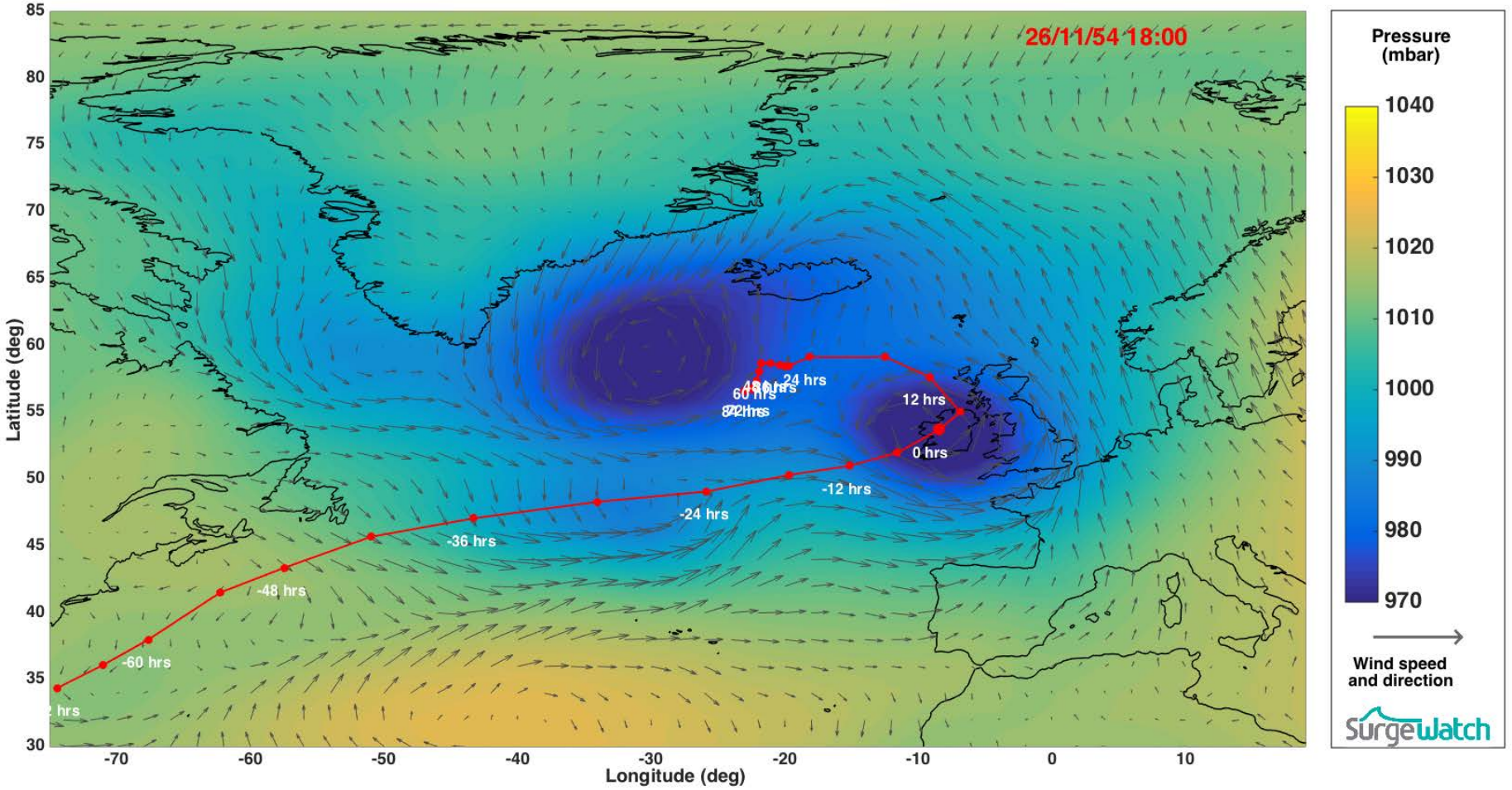

Figure 1: Meteorological conditions at time of maximum water level overlaid by the storm track

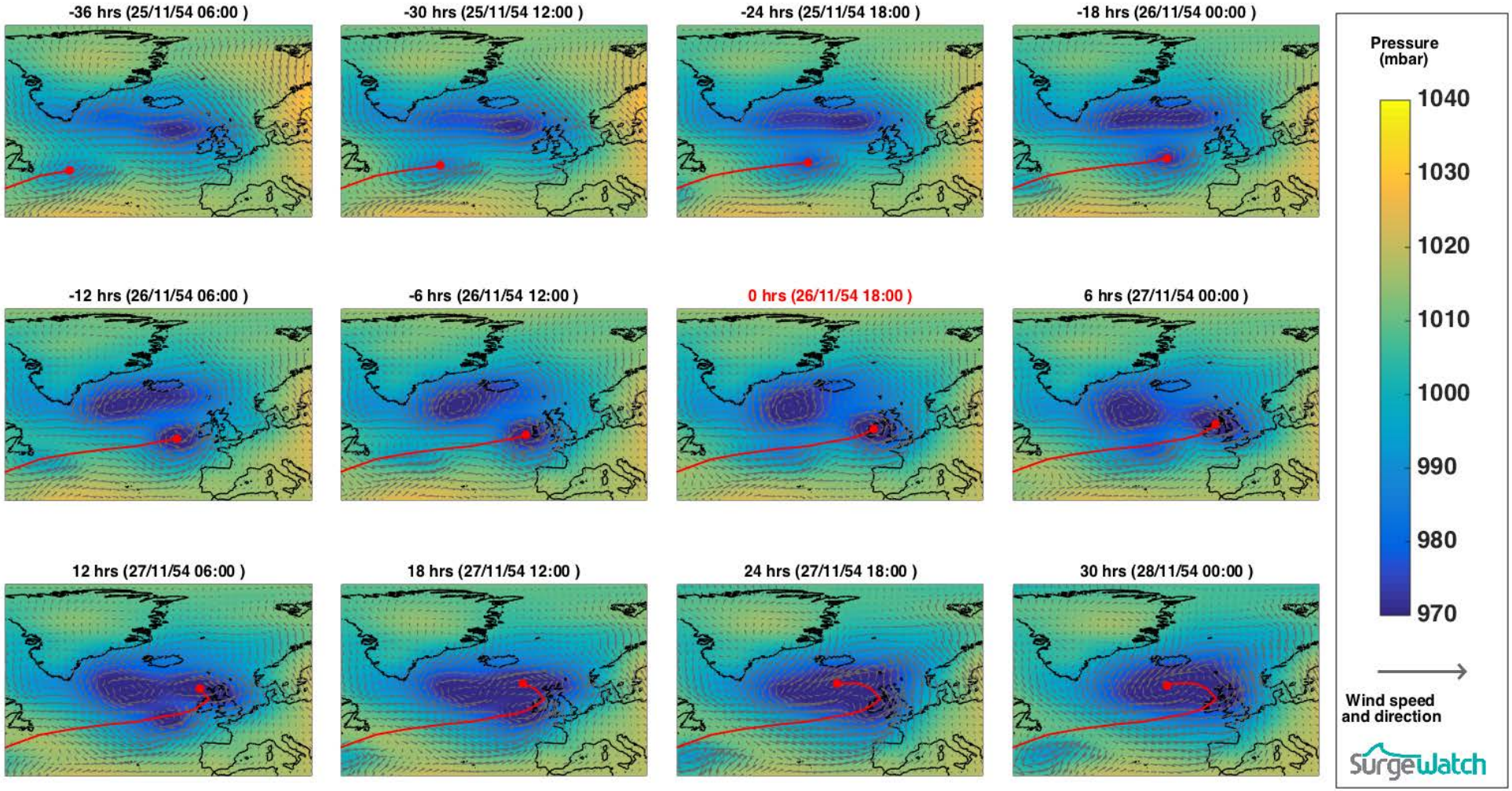

Figure 2: Meteorological conditions during event

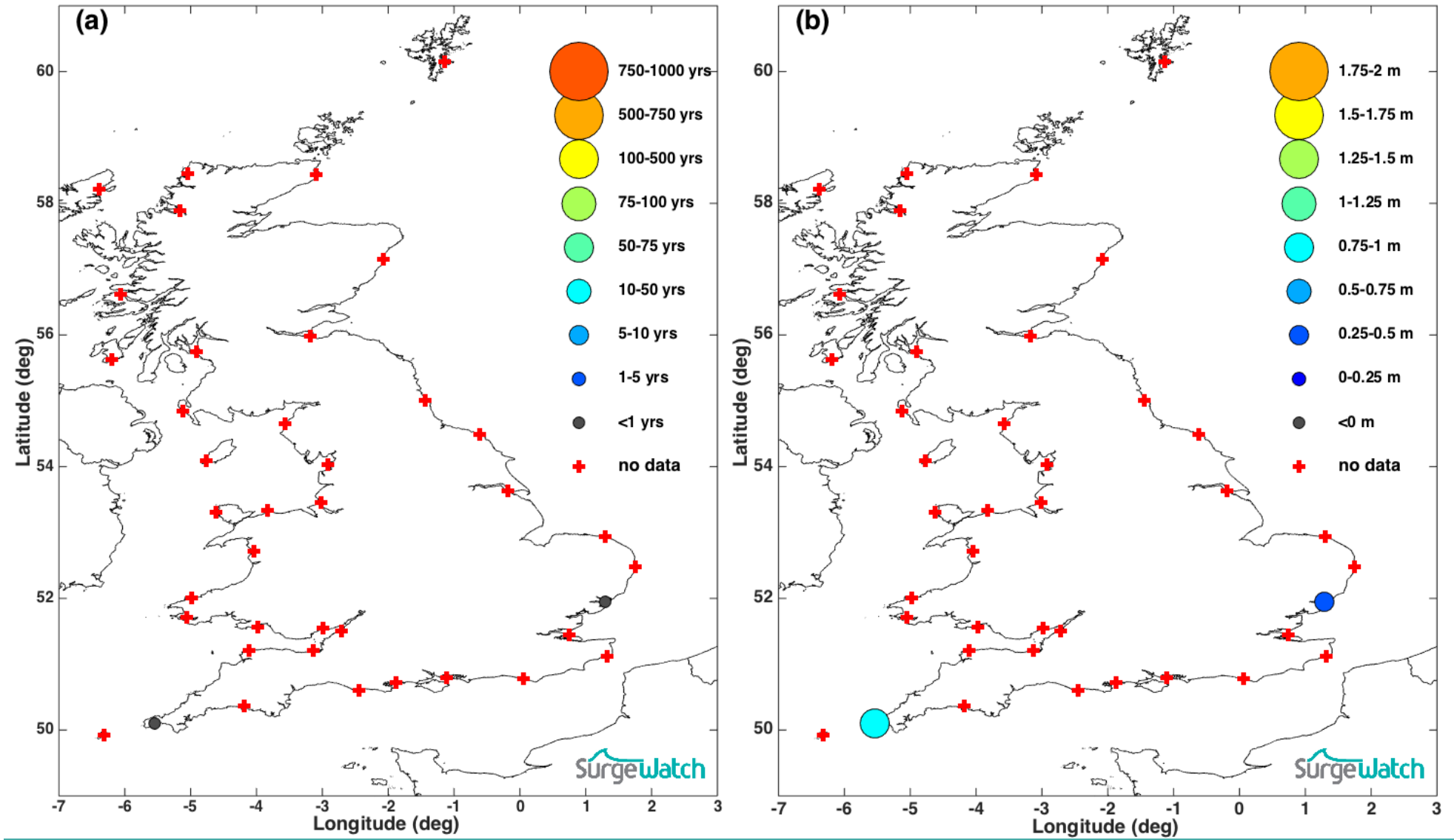

Figure 3: (a) Water level return period; (b) Skew surge levels

References

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The Times, 1954. Serious Floods in the West. *Times Newspapers Limited* [London, England. The Times Digital Archive.

Additional sources of information