SurgeWatch

STORM EVENT

10th – 11th November 1931

Event on the south coast as areas of the Isle of Wight are isolated by floodwaters

Severity Ranking

		3			

Social	Loss of life	•
	Residential property	Properties were flooded in Shoreham
	Evacuation & rescue	*
Economic	Cost	*
	Ports	*
	Transport	Roads flooded on the Isle of Wight
	Energy	*
	Public services	*
	Water & wastewater	*
	Livestock	*
	Agricultural land	*
Environmental	Coastal erosion	*
	Natural environment	*
	Cultural heritage	*
	Coastal defences	*

**No known sources of information available*

Source	The storm began to form early on 7th November 1931 east of Newfoundland before moving north-eastwards towards the UK. Upon nearing western Ireland, the storm intensified, reaching a central air pressure of approximately 960 mbar on 10th November. There were strong southerly and south-westerly gales over much of the British Isles, most prominent in the English Channel (Met Office, 1931). The storm remained situated around the British Isles before moving north and dissipating over the Norwegian Sea on the 13th November. We are unaware of any information regarding the sea level conditions during this event. Within the national tide gauge network, only the Newlyn tide gauge was operational at the time, but this was away from the region of influence. At Newlyn 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	The general information provided below indicates that waves and tide combined to overwhelm defences in various south coast locations, including propagating the Western Yar (river) on the Isle of Wight. We are unaware of any further specific information regarding the flood pathways for this event.
Receptor & Consequence	This event was associated with widespread flooding and damages along the south coast caused by a “major” storm surge in the English Channel, with affected areas including Sussex, Hampshire and the Isle of Wight, (Eden, 2008; West, 2014). Waves reported as “battering” residential properties in some areas, and at Shoreham, Sussex bungalows were left considerably damaged (Lamb, 1991). Part of the Isle of Wight west of the River Yar and Freshwater Bay was cut-off from the remainder of the island during high tide; whilst in East Sussex “a great lagoon” of water appeared over the low-lying ground between Winchelsea beach and Rye harbour. A road here was inundated to a depth of 4 ft. (Lamb, 1991). In Littlehampton, some streets were flooded to several feet deep (West, 2014). There was “considerable” damage to bungalows at Shoreham-by-Sea (Met Office, 1931).

T**able 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	10/11/31 17:00	4	6.11	5.71	0.4

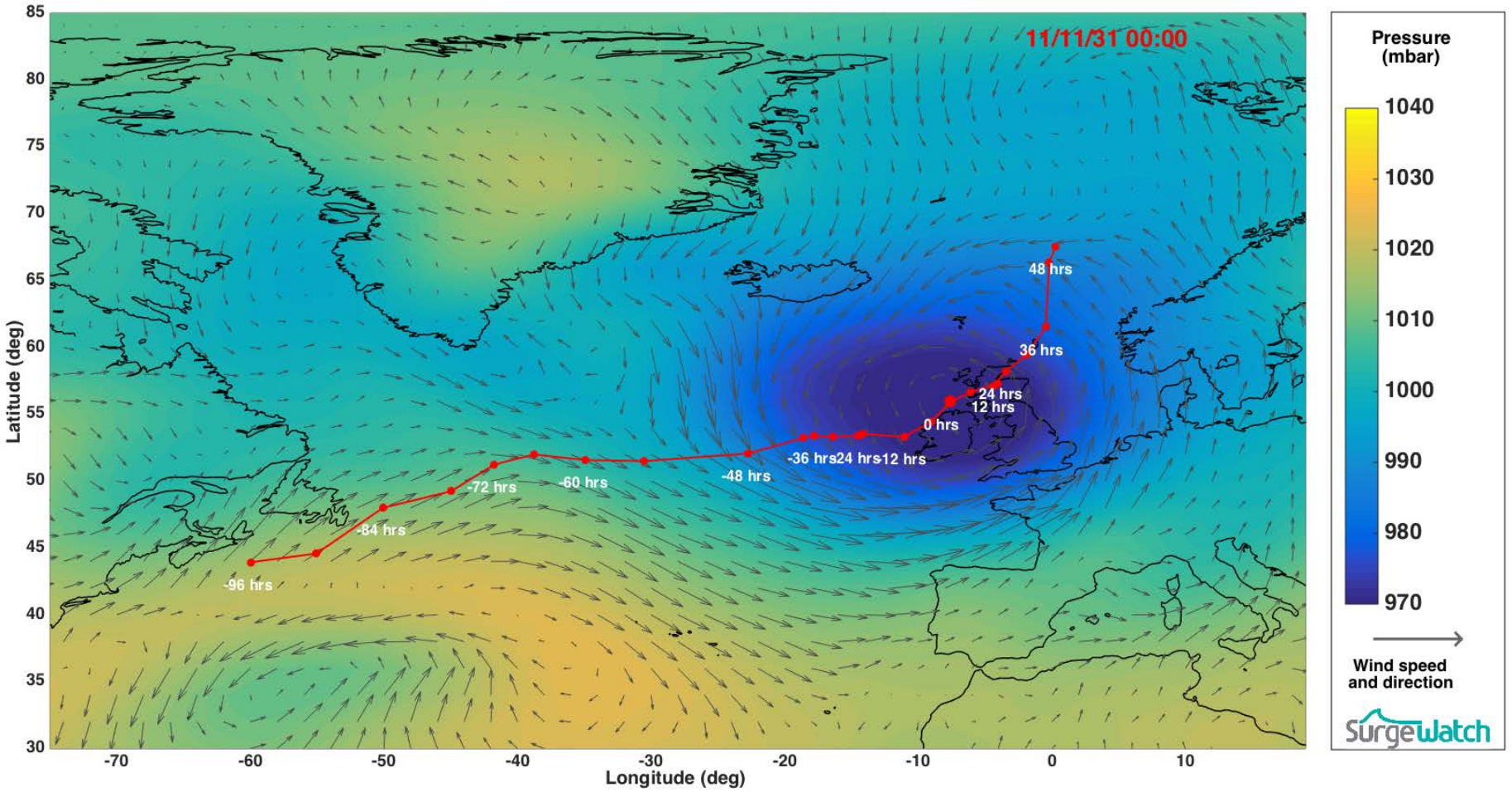

Figure 1: Meteorological conditions at time of maximum water level overlaid by the storm track

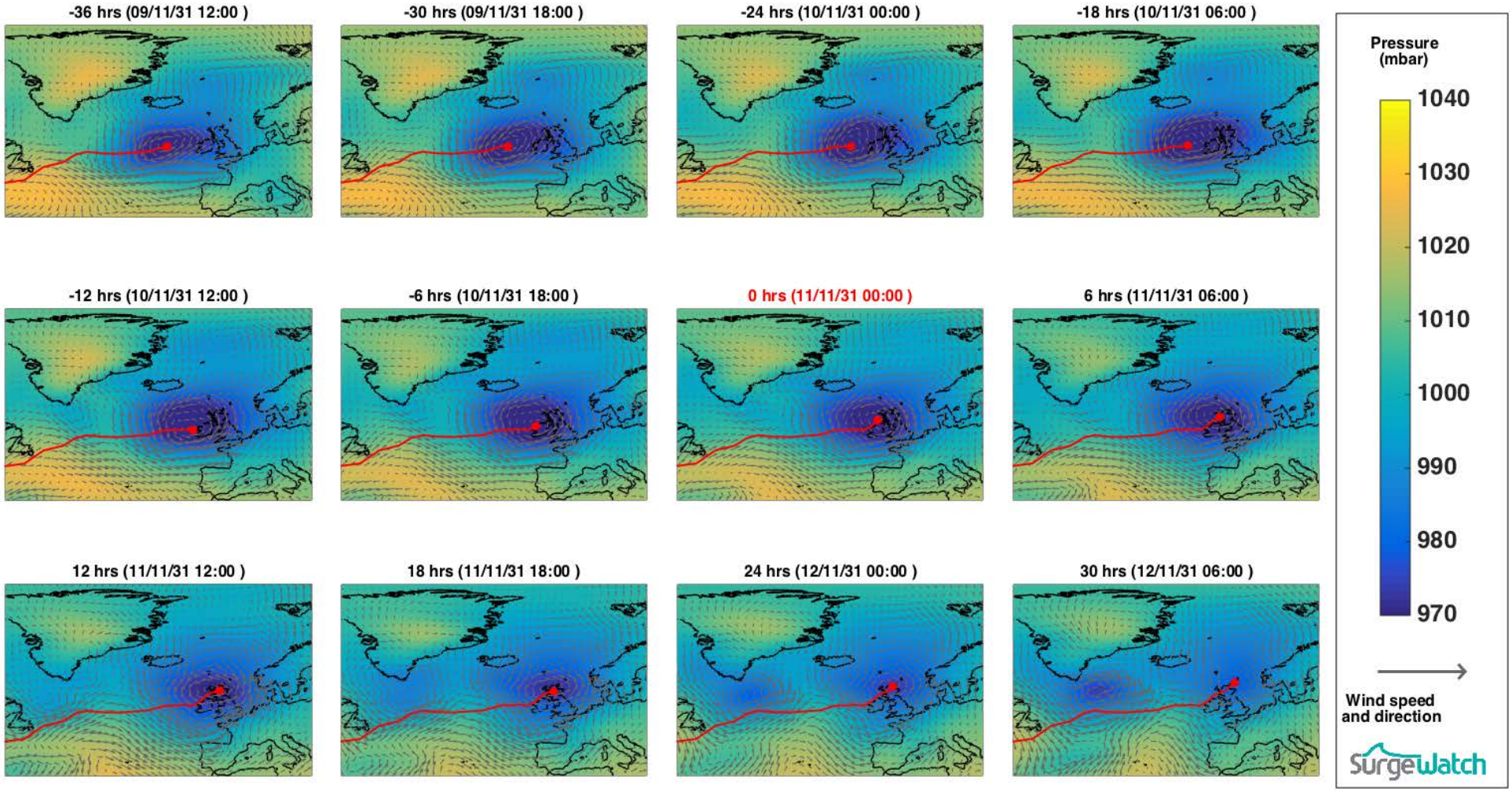

Figure 2: Meteorological conditions during event

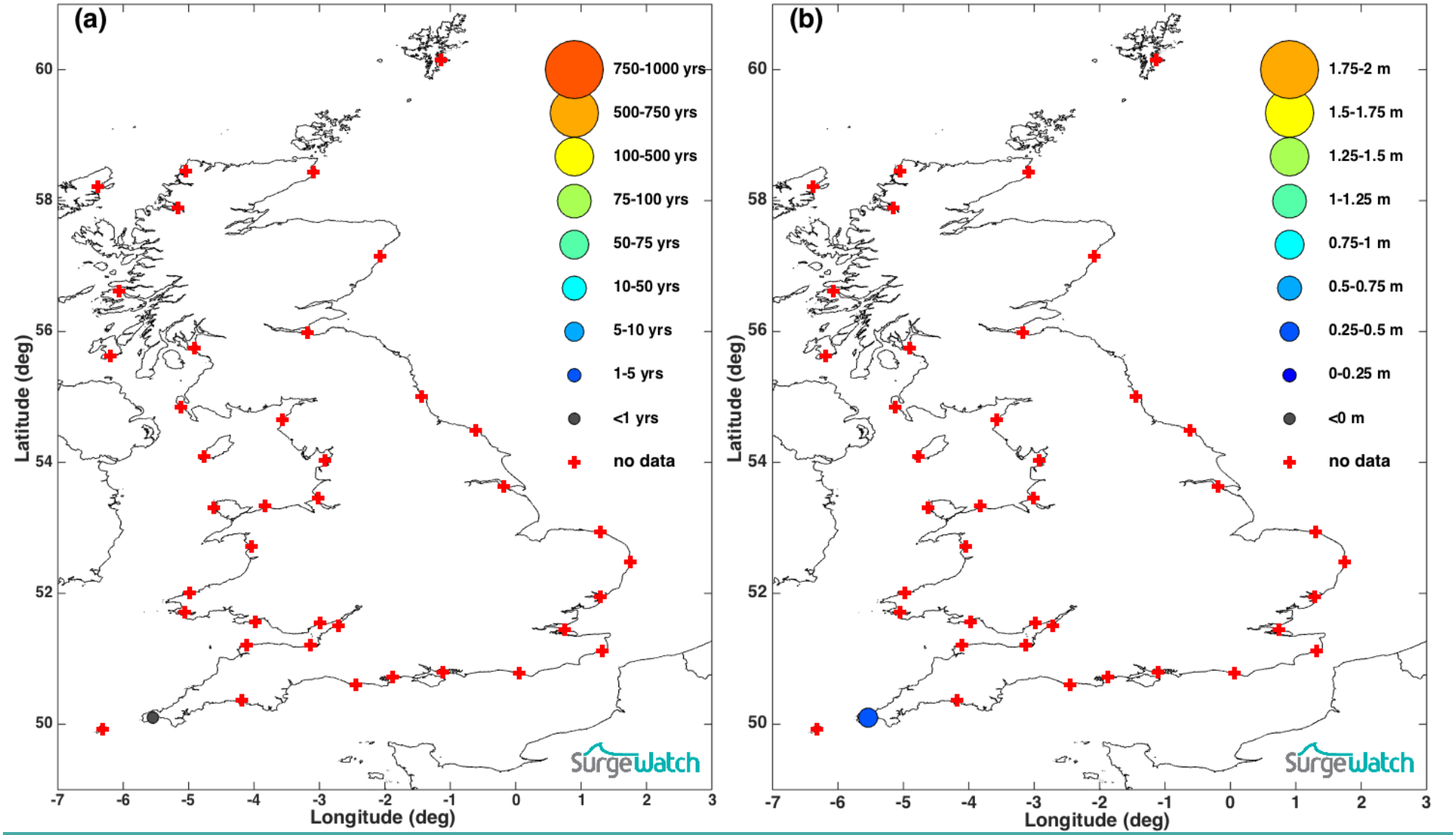

Figure 3: (a) Water level return period; (b) Skew surge levels

References

Eden, P., 2008. *Great British Weather Disasters*, London: Continuum UK.

Lamb, H.H., 1991. *Historic Storms of the North Sea, British Isles and Northwest Europe* 1st ed., Cambridge University Press. Available at: http://assets.cambridge.org/97805216/19318/excerpt/9780521619318_excerpt.pdf [Accessed March 13, 2015].

Met Office, 1931. Monthly Weather Report of the Meteorological Office. *Monthly Weather Report*, 48(11).

West, I.W., 2014. Chesil Beach - Hurricanes, Storms, and Storm Surges. *Geology of the Wessex Coast of Southern England*. Available at: http://www.southampton.ac.uk/~imw/chestorm.htm [Accessed March 8, 2015].

Additional sources of information

Phenomena.org, 2016. LANDMARKS OF WORLD HISTORY. A Chronology of Remarkable Natural Phenomena. 20th Century 1931-1940. *The Gallery of Natural Phenomena; the earth, the sea, the sky – and beyond.* Available at: http://www.phenomena.org.uk/page29/page86/page86.html [Accessed: 01/09/2015]