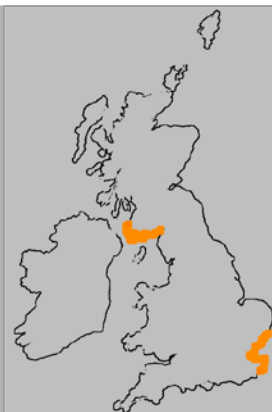


STORM EVENT

— 6th – 7th January 1928 —

Worst flooding in central London during the 20th century, 14 people drowned, and thousands made homeless



Severity Ranking



Social	<u>Loss of life</u>	14 persons were drowned in London
	<u>Residential property</u>	Nearly 1,000 properties were inundated in one London district alone, and the total number is likely to be much higher
	<u>Evacuation & rescue</u>	*
Economic	<u>Cost</u>	Total damages in Bermondsey alone were estimated at £100,000 in 1928 prices (equivalent to about £5.5m in 2014 prices)
	<u>Ports</u>	*
	<u>Transport</u>	Key transport routes were disrupted including the Blackwall Tunnel, together with interruptions to tramcar and tube services
	<u>Energy</u>	In London, Lots Road Power Station and Wandsworth gasworks were flooded
	<u>Public services</u>	*
	<u>Water & wastewater</u>	*
	<u>Livestock</u>	*
	<u>Agricultural land</u>	*
Environmental	<u>Coastal erosion</u>	*
	<u>Natural environment</u>	*
	<u>Cultural heritage</u>	Artwork stored in the basement of the Tate Gallery, London were damage (18 items damaged beyond repair, 226 oil paintings badly damaged and a further 67 slightly damaged).
	<u>Coastal defences</u>	*

**No known sources of information available*

Source

The storm showed early signs of formation northwest of Newfoundland on 5th January 1928, and subsequently moved east towards the British Isles. On 6th January, the storm intensified whilst situated over Scotland with a central air pressure of approximately 980 mbar. There were northwesterly to northerly winds over the North Sea until 7th, after which the storm weakened over the Baltic Sea. According to a contemporary weather report, measured gusts at Tiree (west coast of Scotland) reached 70 knots [36 m/s], and the average wind speed rose to around 52 knots [27 m/s] (*The Times*, 1928). Gusts of 68 knots [35 m/s], 74 knots [38 m/s], and 66 knots [34 knots] were recorded at Liverpool, Spurn Head (Yorkshire), and Cranwell (Lincolnshire), respectively. There were also northwesterly and northerly winds over the North Sea exceeding 52 knots [27 m/s] (Dines, 1929).

During the first week of January 1928, rainfall generally averaged around twice the expected level which, in combination with thawing snow from the upper reaches of the Thames, meant that the river was already in a swollen condition prior to the storm. Despite this the extreme water levels within the Thames are believed to have been largely a result of a North Sea storm surge about the time of high tide (Mirrlees, 1928; Doodson, 1929; Dines, 1929). Water levels were reportedly at their highest in since 1881 (Dines, 1929). According to Holford (1976), at Southend the surge measured about 1.5m, and 1.8m in central London – 0.3 m higher than any previous record. Within the national tide gauge network, only the Newlyn and Dover tide gauges were operational at the time. At Dover the water level return period was less than 1 year and the skew surge was 0.85 m. The event occurred 2 days before peak spring tides.

We are unaware of any sources of information describing the wave conditions during this event.

Pathway

There were breached defences in several places during this event, most notably the embankments in London.

Receptor & Consequence

Shortly after midnight on 6th January 1928, central London experienced the worst flooding to have occurred during the 20th century (Dines, 1929; Eden, 2008). Properties were destroyed and the lower storeys of buildings close to the riverside were flooded, when the sudden inrush of water overwhelmed those caught out in basement accommodation and 14 people drowned as a result (*The Times*, 1928; Tate Gallery, 2003). Flooding extended across several London boroughs including Southwark, Greenwich, Westminster, Hammersmith, Lambeth, as well as the City. Traffic in many places was forced to stop, tramcar services were interrupted, and tube was also reported to have been affected (*The Capricornian*, 1928; Tate Gallery, 2003). Key public buildings such as the House of Commons were also not exempt, and some paintwork in the basement of the Tate Gallery were damaged (*The Times*, 1928; Tate Archive, 2003). According to the Museum of London (n.d.), some 4,000 people were made homeless, and flooding had also affected Lots Road Power Station, Wandsworth gasworks, and the Blackwall Tunnel. At the time, the Mayor of Bermondsey announced that nearly 1000 homes were made uninhabitable in the south London district, owing to water carrying in creosote and tar from the riverside mills, with the “greater portion of the bedding ruined” (*The Capricornian*, 1928), and the total number is likely to have been much higher. Total damages in Bermondsey alone were estimated at £100,000 in 1928 prices (equivalent to about £5.5m in 2014 prices) (*The Examiner*, 1928). Elsewhere, a breach of the seawall and consequent severe flooding was reported at Maldon, Essex (*The Examiner*, 1928), and “mountainous seas” again with severe flooding were reported at Stranraer, Scotland (Hickey, 1997 and references therein).

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	08/01/28 05:00	<1	5.28	5.31	-0.03
Dover	06/01/28 23:00	<1	7.17	6.32	0.85

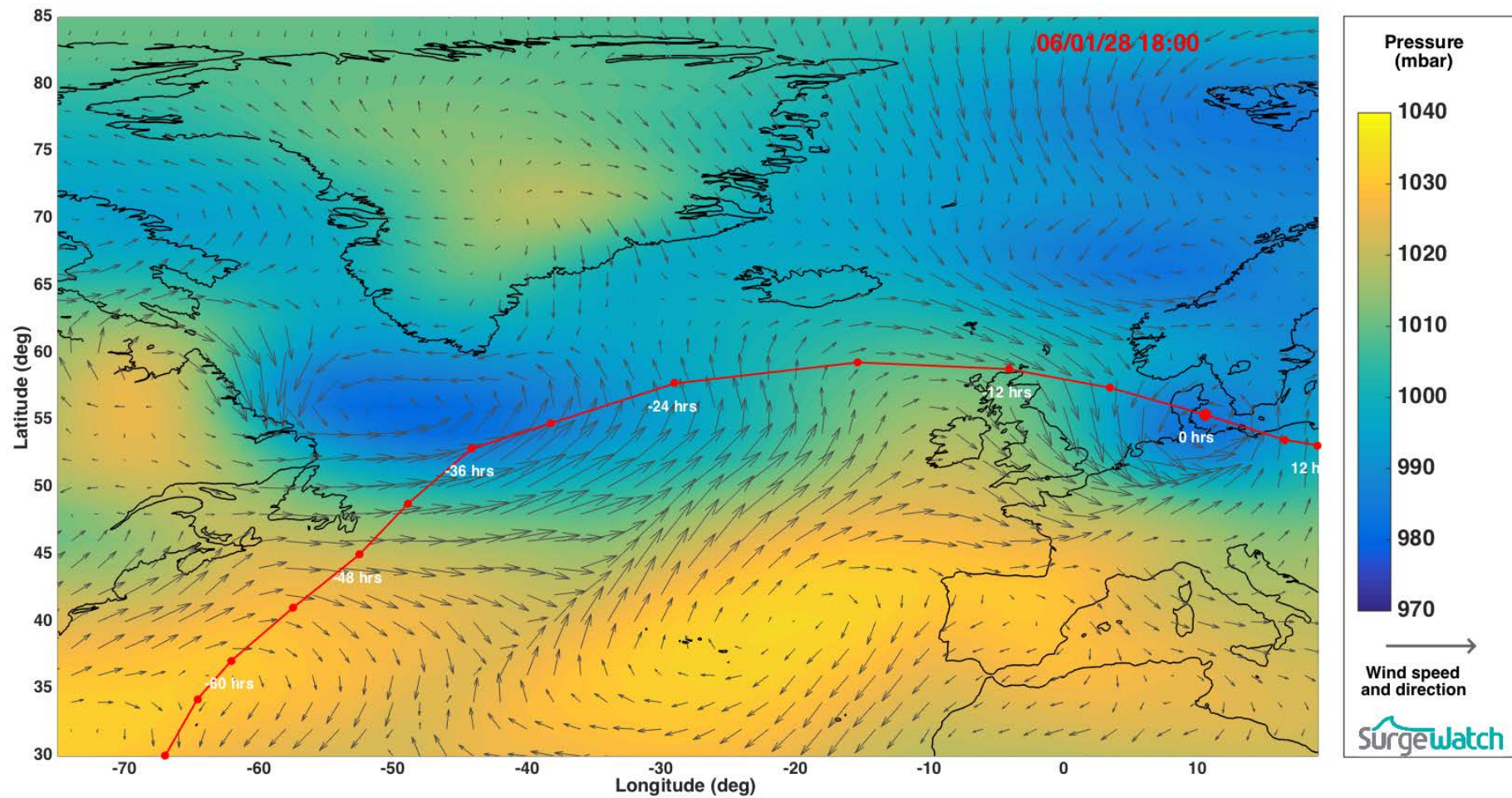


Figure 1: Meteorological conditions at time of maximum water level overlaid by the storm track

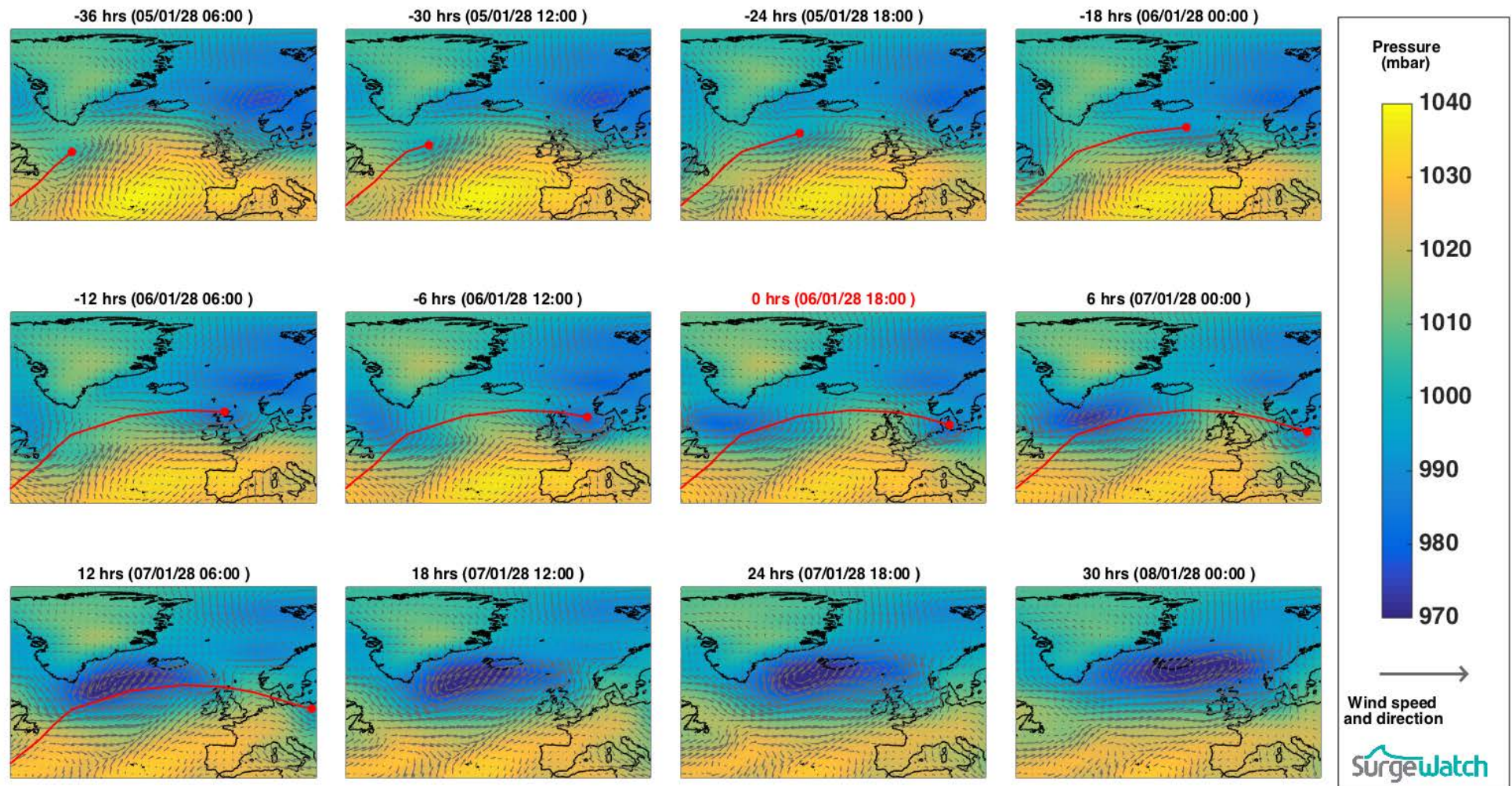


Figure 2: Meteorological conditions during event

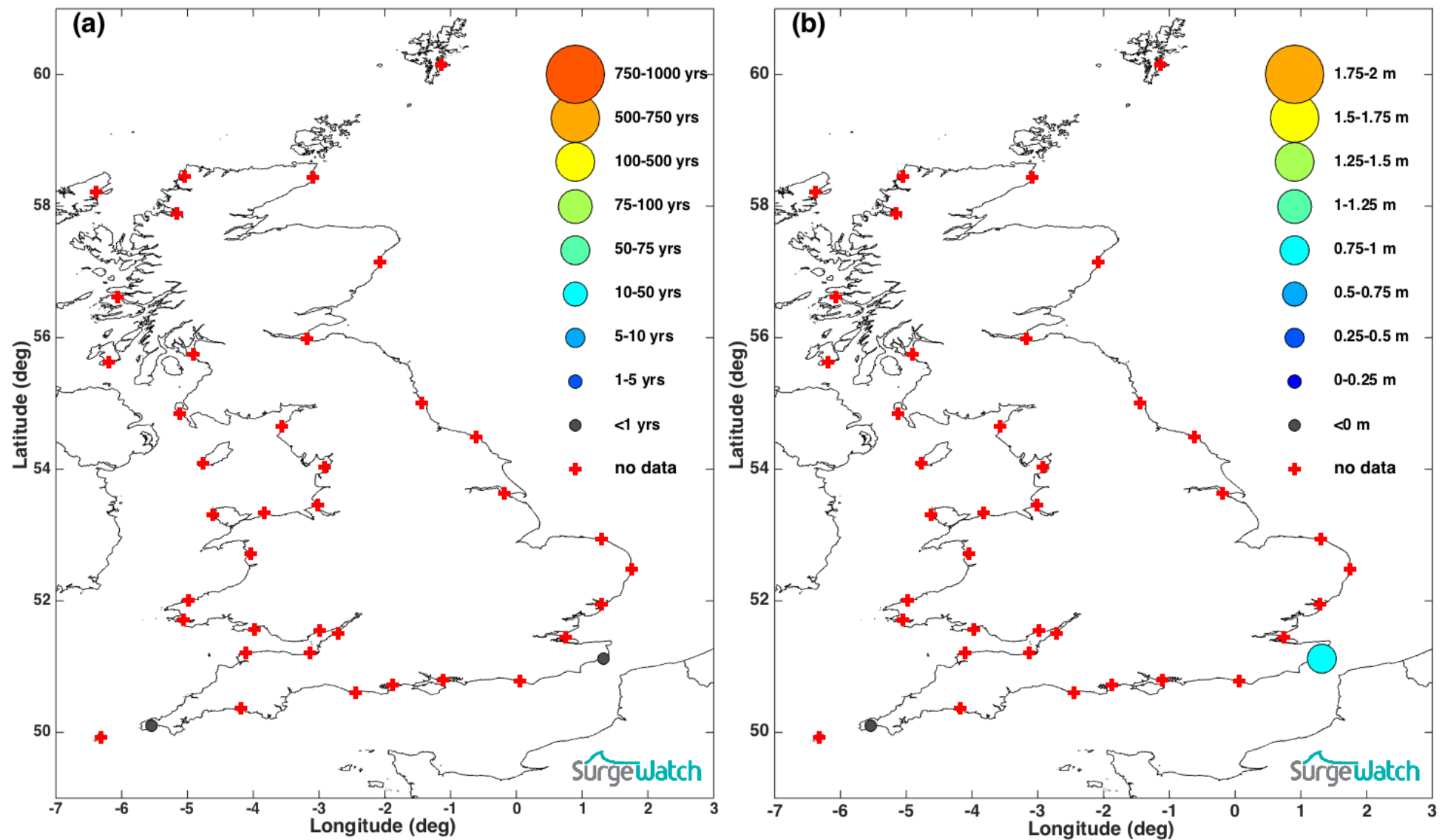


Figure 3: (a) Water level return period; (b) Skew surge levels

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Additional sources of information

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