

STORM EVENT

11th November 1954

High tides and heavy rain cause worst local flooding in memory at Hull



Severity Ranking



Social	<u>Loss of life</u>	*
	<u>Residential property</u>	Approximately 1,000 properties in Hull were inundated
	<u>Evacuation & rescue</u>	*
Economic	<u>Cost</u>	*
	<u>Ports</u>	*
	<u>Transport</u>	In Hull, all transport was disorganised
	<u>Energy</u>	A gas plant was put out of action at an unspecified location in Scotland, with all power and lights cut off
	<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>	*
	<u>Coastal defences</u>	*

**No known sources of information available*

Source	<p>The storm formed in the central North Atlantic region during 10th November and moved north-east over the north of Scotland (Met Office, 1938). The storm intensified and reached a central air pressure of approximately 965 mbar while centred over the North Sea late on 11th November, producing westerly to north-westerly winds. At Stornoway, Scotland gusts reached 88 knots [45 m/s] (Met Office, 1938), whilst gales of 87 knots [44 m/s] were recorded in Clyde, west Scotland according to <i>The Sydney Morning Herald</i> (1954).</p> <p>The sea level was reportedly 32 ft. 5 in. [9.8 m] – about 3 ft. 4 in. [1 m] higher than officials had expected (<i>The Times</i>, 1954a). Within the national tide gauge network, only the Harwich tide gauge was operational at the time. At Harwich the water level return period was less than 1 year and the skew surge was 0.49 m. The event occurred at peak spring tides.</p> <p>We are unaware of any sources describing the wave conditions during this event.</p>
Pathway	<p>We are unaware of information regarding the flood pathways for this event.</p>
Receptor & Consequence	<p>The combination of high sea levels and rain-swollen rivers led to serious flooding in Hull, where thousands were reportedly trapped in their homes and needed to be “ferried” to work by lorry (Queensland Times, 1954; Met Office, 1954; Zong and Tooley, 2003). Around 1,000 properties were flooded according to <i>The Times</i> (1954b). The city centre including the market place and main shopping centre were “deep” under water, while all transport become disorganised (Queensland Times, 1954). Some Scottish towns were “swamped” by floodwater. There was plenty of damage and subsequent disruption to infrastructure, and a shipyard and gas plant were put out of action, with all power and lights cut off (<i>The Sydney Morning Herald</i>, 1954).</p> <p>The treacherous conditions caused many problems for seafarers, including the British freighter <i>La Cordillera</i> which snapped her lines while being moored and thrown against a floating grain elevator (<i>The Sydney Morning Herald</i>, 1954).</p>

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)
Harwich	12/11/54 12:00	<1	4.54	4.05	0.49

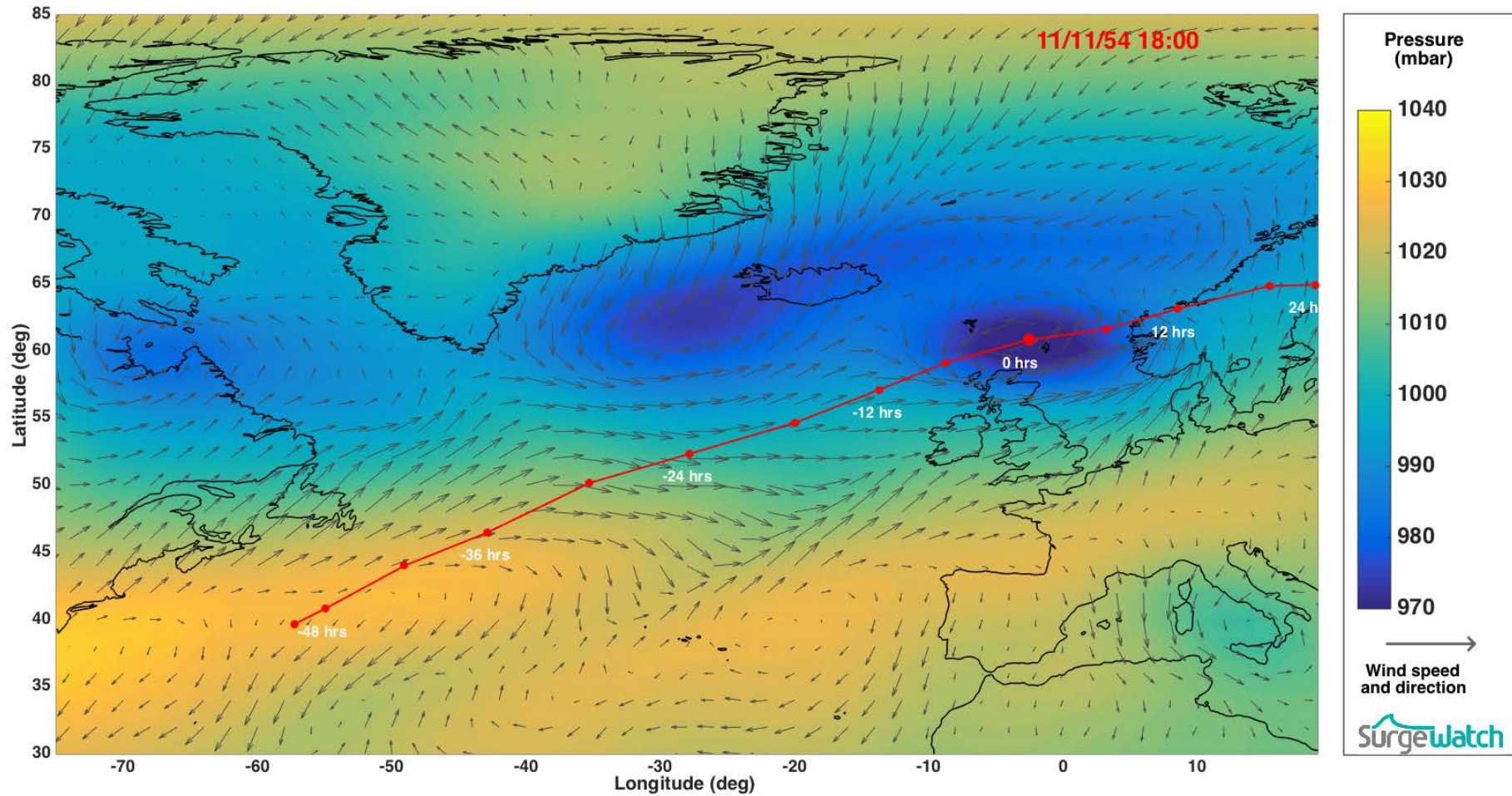


Figure 1: Meteorological conditions at time of maximum water level overlaid by the storm track

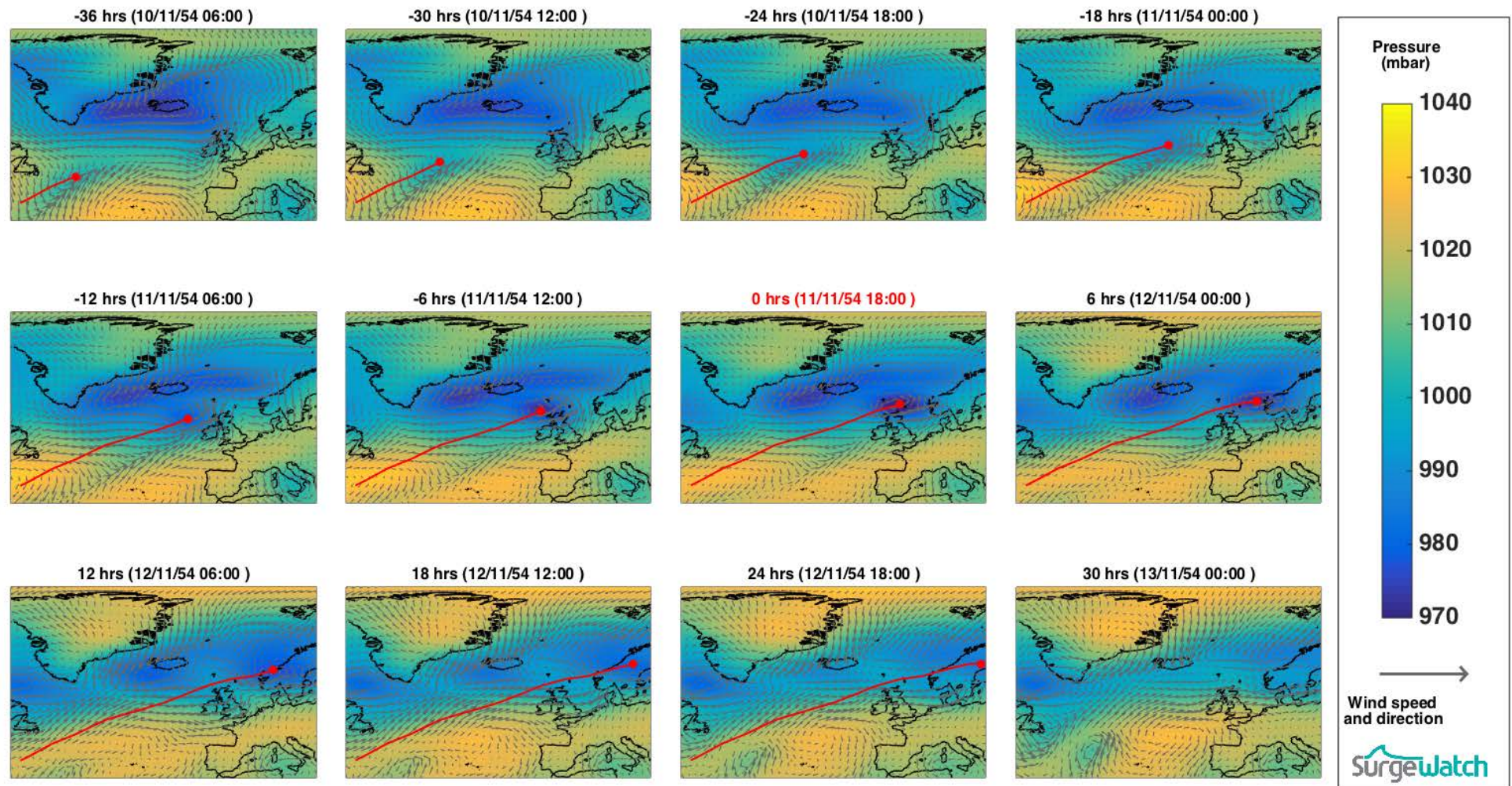


Figure 2: Meteorological conditions during event

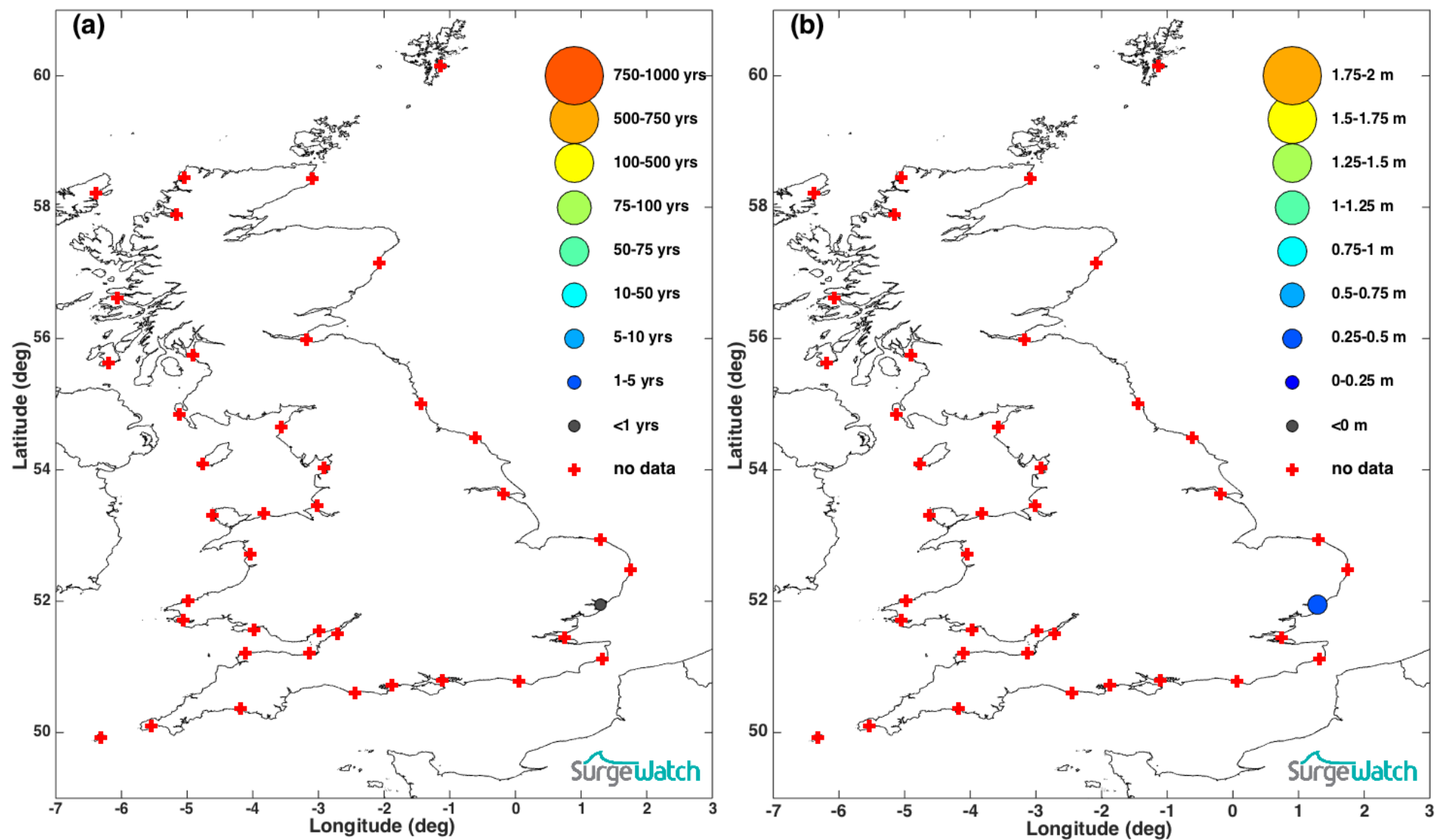


Figure 3: (a) Water level return period; (b) Skew surge levels

References

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- Queensland Times, 1954. Waves invade homes in Hull's big flood. *Queensland Times*. Available at: <http://trove.nla.gov.au/ndp/del/article/118433320>.
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- The Times, 1954b. Hull and High Water; Minister told of Safety 'Snags'. *Times Newspapers Limited* [London, England]. The Times Digital Archive.
- Zong, Y. & Tooley, M.J., 2003. A Historical Record of Coastal Floods in Britain: Frequencies and Associated Storm Tracks. *Natural Hazards*, 29(1), pp.13–36. Available at: <http://link.springer.com/article/10.1023/A%3A1022942801531> [Accessed March 5, 2015].

Additional sources of information