SurgeWatch

STORM EVENT

4th April 1958

Worst flooding in living memory at Kirkcaldy, and impacts in many other east coast towns

Severity Ranking

		3			

Social	Loss of life	*
	Residential property	Properties flooded in Kirkcaldy and Edinburgh
	Evacuation & Rescue	Forty families were forced to evacuate
Economic	Cost	*
	Ports	*
	Transport	*
	Energy	Flood water damaged the power supply in some areas
	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 formed offshore of the US east coast on 27th March 1958 and moved west approaching the UK. On 4th April, the storm was over the French Atlantic coast with a pressure of approximately 1000 mbar. This results in strong easterly winds influencing the east coast of Scotland. We are unaware of any information regarding the sea level conditions during this event. Within the national tide gauge network, six tide gauges were operational at the time, but these were away from the region of influence. At all six sites the water level return periods were less than 1 year. The event occurred at peak spring tides. We are unaware of any sources describing the wave conditions during this event.
Pathway	We are unaware of any specific information regarding the flood pathways during this event.
Receptor & Consequence	This event saw the worst flooding in living memory at Kirkcaldy according to Hickey (1997) and the references therein, with widespread flooding along the Scottish east coast. In Kirkcaldy, residential properties were flooded to a depth 3 ft. [0.9 m] and forty families were forced to evacuate. Vehicles parked on the esplanade were submerged, and some were overturned by the waves. Power cables were damaged by the flood water which badly disrupted the electricity supply. "Serious" flooding was reported for several other east coast towns, including Edinburgh where residential properties were also flooded.

Table 1: High water levels (m CD) recorded at the UK National Tide Gauge sites that reached or exceeded a 1 in 5-year return level 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	04/04/58 17:00	<1	5.91	5.76	0.15
Aberdeen	04/04/58 13:00	<1	4.73	4.46	0.27
Immingham	05/04/58 19:00	<1	7.77	7.64	0.13
Harwich	05/04/58 00:00	<1	4.23	4.17	0.06
Sheerness	05/04/58 13:00	<1	6.1	5.93	0.17
Dover	04/04/58 23:00	<1	7.17	7.1	0.07

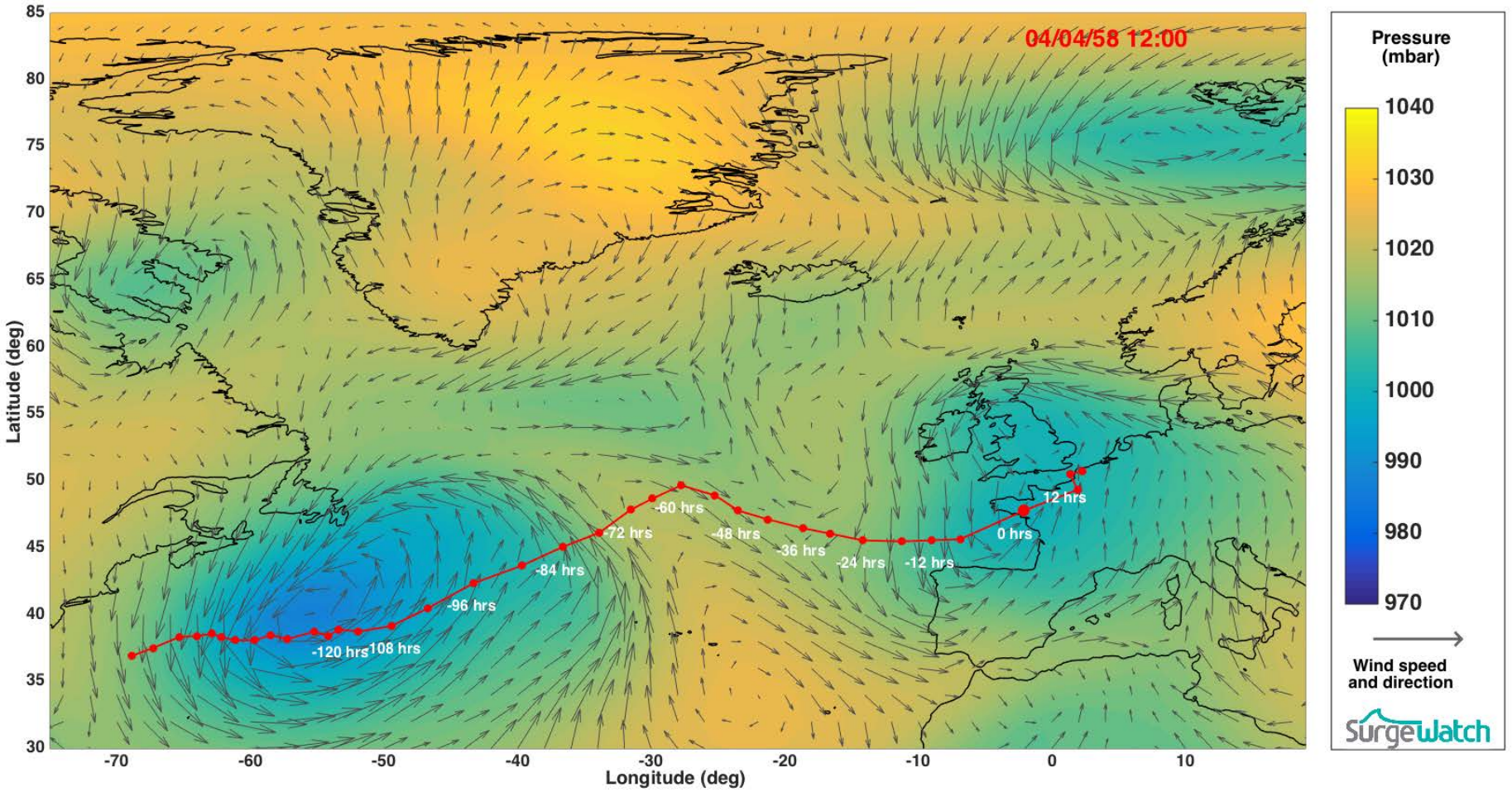

Figure 1: Meteorological conditions at time of maximum water level overlaid by the storm track

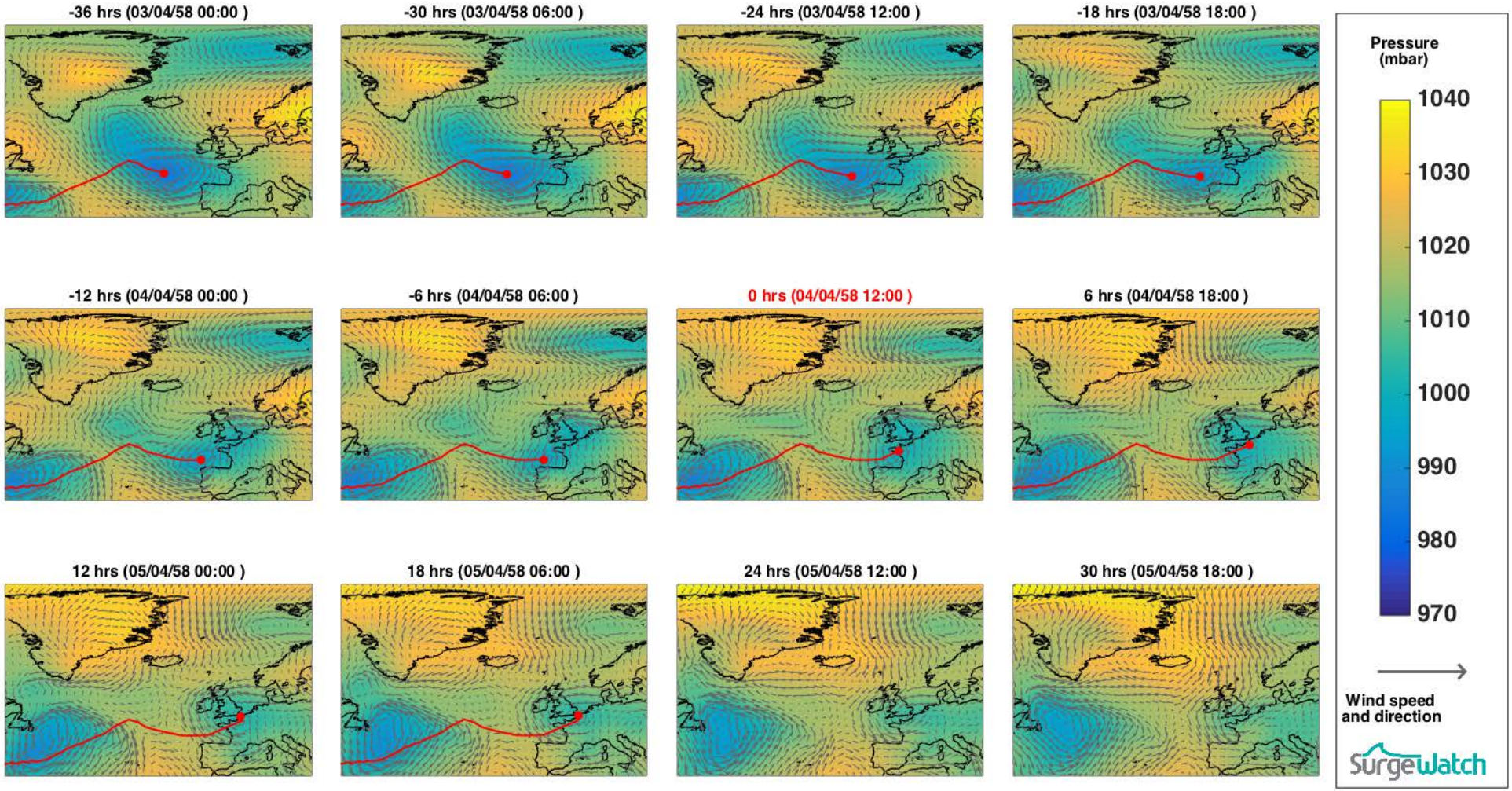

Figure 2: Meteorological conditions during event

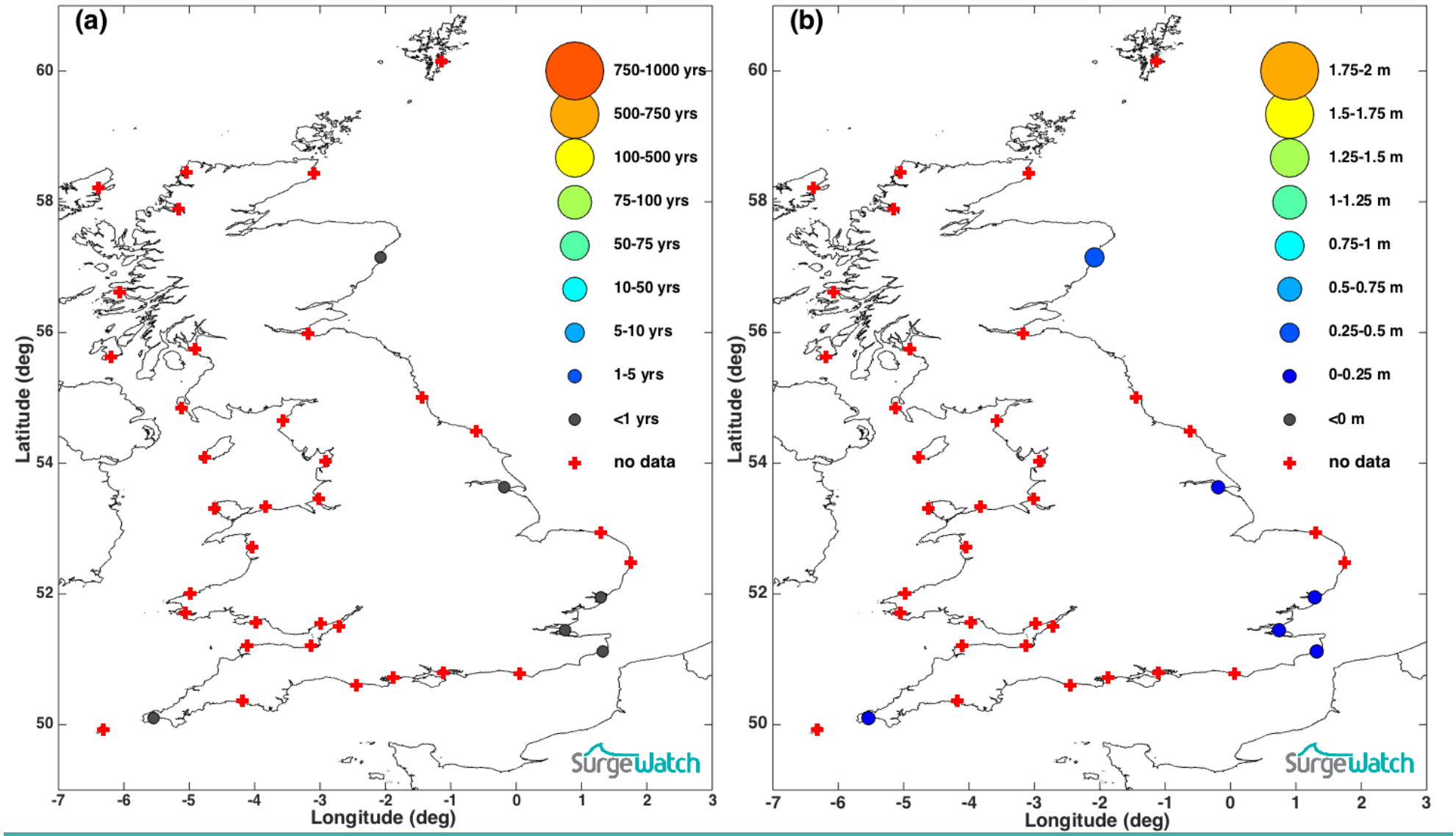

Figure 3: (a) Water level return period; (b) Skew surge levels

References

Hickey, K.R., 1997. *Documentary records of coastal storms in Scotland, 1500-1991 A.D.* Coventry University. Available at: https://curve.coventry.ac.uk/open/items/aa6dfd04-d53f-4741-1bb7-bdf99fb153be/1/.

Additional sources of information