

# STORM EVENT

7<sup>th</sup> March 1962

*The worst storm in living memory to hit Penzance and Newlyn*



## Severity Ranking



Social	<u>Loss of life</u>	*
	<u>Residential property</u>	Residential properties were flooded in Tolcarne, Newquay
	<u>Evacuation &amp; rescue</u>	Sea front houses in Tolcarne were evacuated; 50 families evacuated from their homes in Penzance and Newlyn. 300 people were left homeless.
Economic	<u>Cost</u>	The estimated cost of damage was £100,000, equivalent to more than £1 million in 2012
	<u>Ports</u>	*
	<u>Transport</u>	Railway tracks were washed away at Penzance, Cornwall. Roads were closed.
	<u>Energy</u>	*
	<u>Public services</u>	*
	<u>Water &amp; 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>	Overtopping reported at the sea wall in Tolcarne Beach, Newquay

*\*No known sources of information available*

**Source**

The storm developed east of the Atlantic Canadian coast on the 24<sup>th</sup> February 1962. It initially remained for some time in the mid-Atlantic, but intensified on 6<sup>th</sup> March 1962, and then moved northeastwards towards the UK. On the 7<sup>th</sup> March 1962 the centre of the storm had a pressure of 975 mbar and was about 1,600 km west of Europe, from where it moved north-northeastwards towards the UK. Southeasterly gales to severe gales were recorded along the south and south west coasts of the UK, with gusts up to 81 knots (150 km hr<sup>-1</sup>) at Scilly (Met Office 1962).

Within the national tide gauge network, four tide gauges were operational at the time. At Milford Haven the maximum water level had a 21-year return period. A skew surge of 0.23 m was recorded at this site. The event occurred at peak spring tides. 'High seas' were reported by the Met Office (1962).

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

The date of the storm and flood that affected South West England is somewhat ambiguous – with different sources suggesting the 7<sup>th</sup>, 9<sup>th</sup> and 12<sup>th</sup> March 1962 being the dates of flooding. The Met Office (1962) report suggests the night of 7<sup>th</sup> March was when the severest gales occurred. Interestingly, the Newlyn tide gauge data is flagged by the BODC as 'improbable values' between 10:00 5<sup>th</sup> March to 13:00 9<sup>th</sup> March 1962. We could speculate that the serious flooding that impacted Newlyn had implications for the tide gauge equipment or attendant at that time, but the flagged data looks plausible (i.e. no 'spikes'). The tide levels were extreme over 2 days – at 07:00 7<sup>th</sup> March 6.22 m(CD), at 18:00 6.26 m(CD), and on 8<sup>th</sup> reaching 6.30 m(CD) at 06:00. The surge peaked at 0.8 m during the morning of 7<sup>th</sup> March, prior to reducing by almost 0.5 m before increasing again that evening (to over 0.7 m).

**Pathway**

There was a breach in the sea wall at Tolcarne. We are unaware of any further information regarding the flood pathways for this event.

**Receptor & Consequence**

The strong winds coupled with high seas caused serious damage to sea defences and 'disastrous' flooding in the south west of the UK (Met Office 1962). Railway tracks at Penzance (Cornwall) train station were washed away and Penzance Harbour was severely damaged (Clemo, 2012). Significant flood damage also occurred in Newlyn, Cornwall. The area between Jubilee Pool in Penzance and the Tolcarne Inn in Newlyn was inundated with floodwater (Exeter Express and Echo 2012). According to Exeter Express and Echo (2012), the sea wall at Tolcarne Beach was already being overtopped several hours before high water, and then the area behind the sea wall was flooded an hour before high water. Most sea front houses in the area were evacuated before the sea wall was breached, after which homes were flooded and windows smashed. Large parts of the western end of the promenade were damaged, and cottages were swept away. Also, several boats were torn off their moorings (with one sunk). Fortunately, no one died during the storm (Exeter Express and Echo 2012). The estimated cost of damage was £100,000, equivalent to more than £1 million in 2012 (Exeter Express and Echo 2012).

**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)
Avonmouth	07/03/62 08:00	<1	14.48	14.48	0.01
Milford Haven	07/03/62 07:00	21	8.06	7.83	0.23
Lerwick	08/03/62 12:00	<1	2.41	2.44	-0.03
North Shields	07/03/62 16:00	<1	5.37	5.45	-0.08

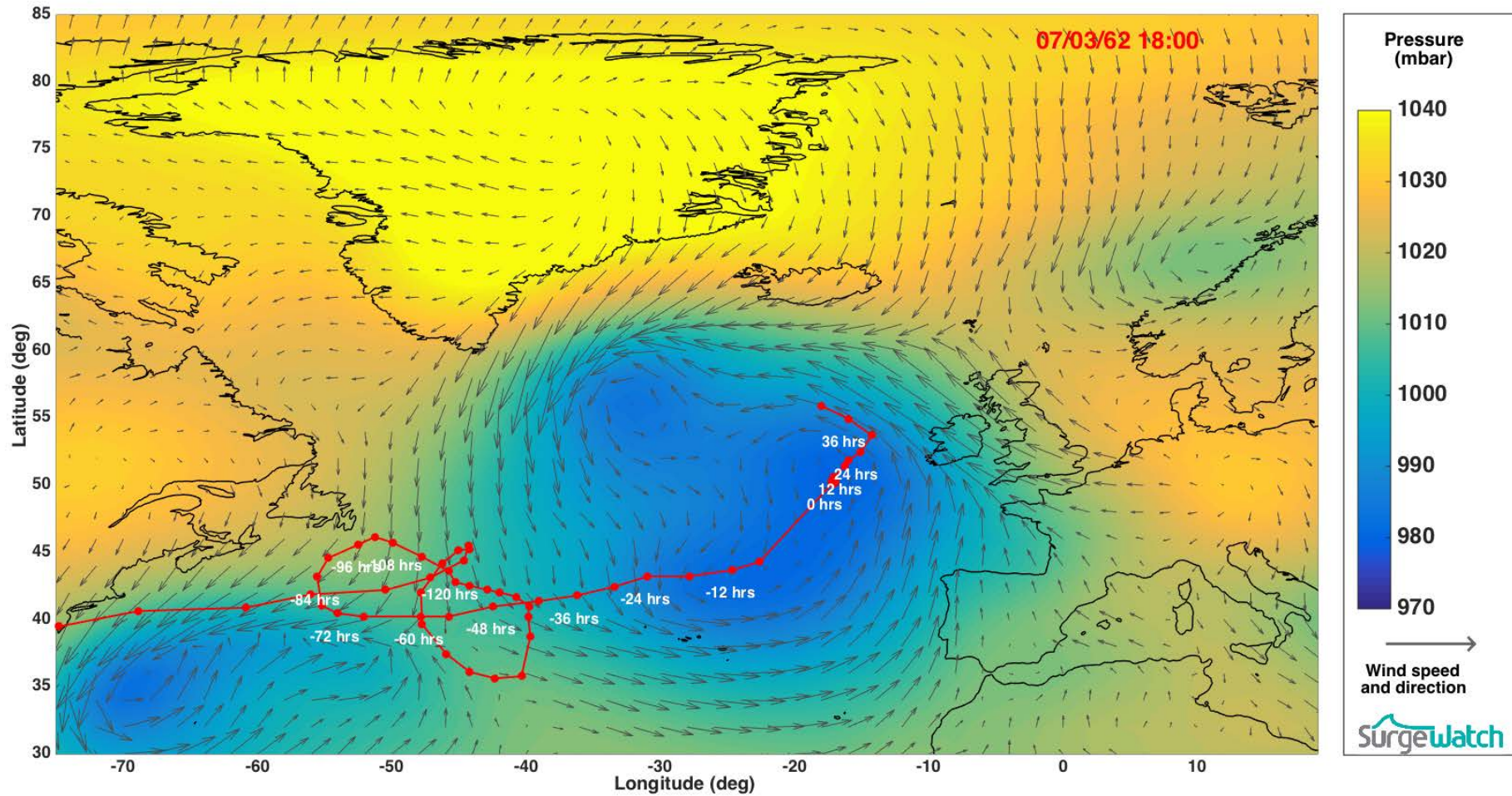


Figure 1: Meteorological conditions at time of maximum water level overlaid by the storm track



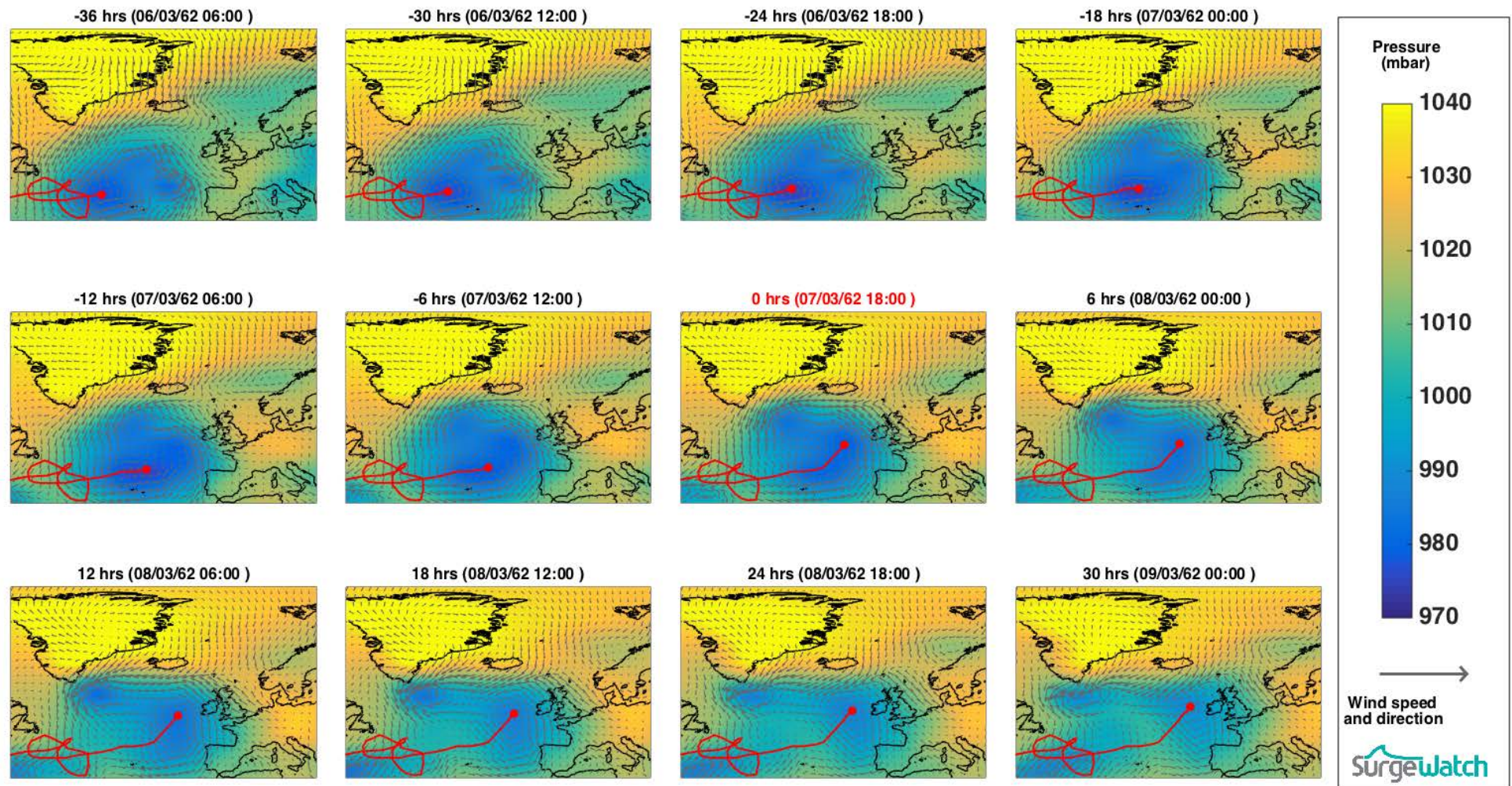


Figure 2: Meteorological conditions during event

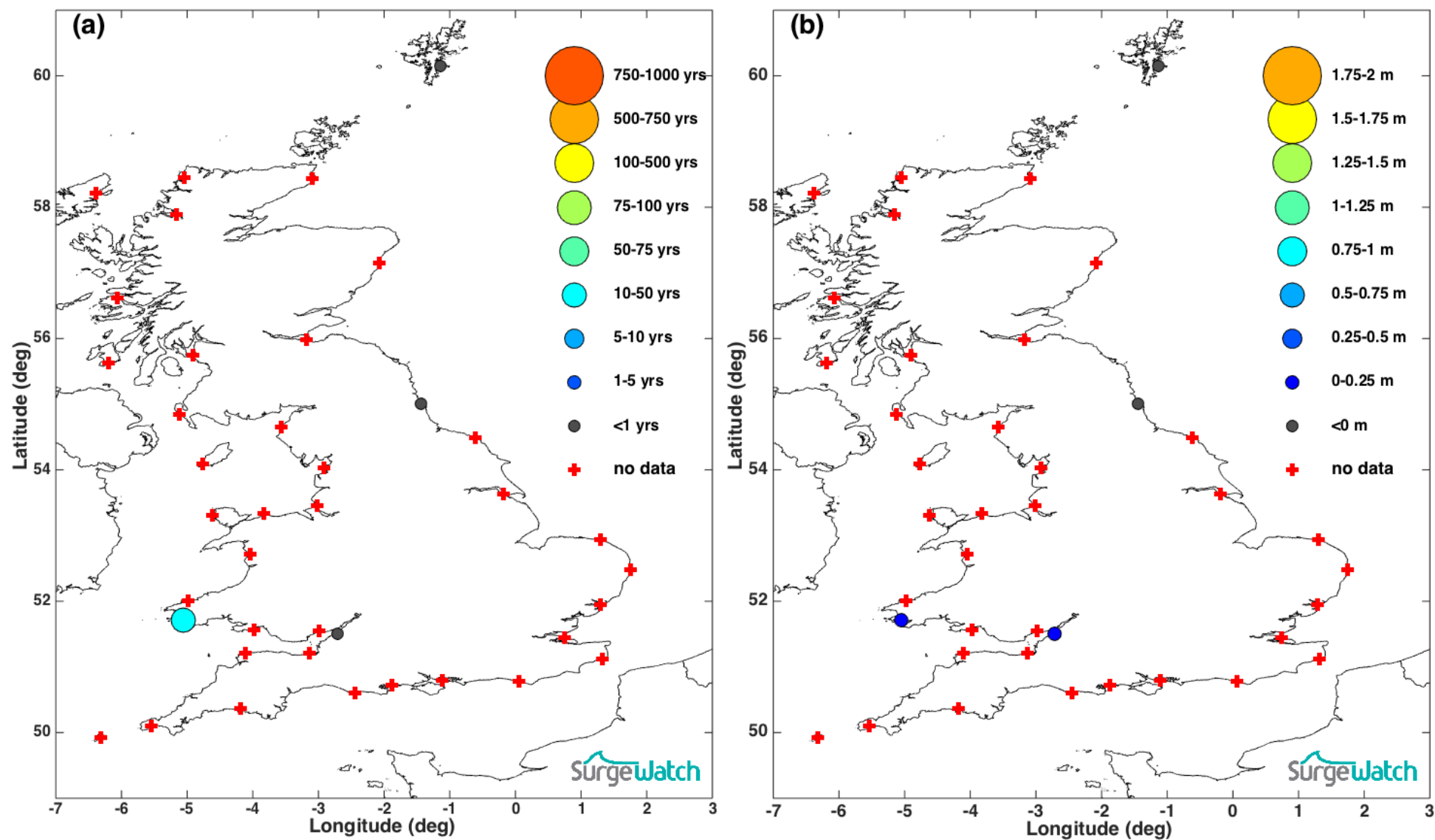


Figure 3: (a) Water level return period; (b) Skew surge levels

## References

Met Office, 1962. Monthly Weather Report of the Meteorological Office. *Monthly Weather Report*, 79(3). Available at: <http://www.metoffice.gov.uk/learning/library/archive-hidden-treasures/monthly-weather-report-1960s>.

Exeter Express and Echo, 1962. The worst storm in living memory. Available at: <http://www.exeterexpressandecho.co.uk/worst-storm-living-memory/story-15521222-detail/story.html>.

Clemo, D., 2012. The Great Ash Wednesday Storm of 1962. *Dave Clemo's Blog*. Available at: <http://davecleo.blogspot.co.uk/2012/03/great-ash-wednesday-storm-of-1962.html> [Accessed April 29, 2015].

## Additional sources of information

BFI Player, 2014. The Penzance Storm Aftermath. Available at: <http://player.bfi.org.uk/film/watch-penzance-storm-aftermath-1962/> [Accessed April 28, 2015].

Forward, R., The Ash Wednesday Storm 1962. *Ancestry.com*. Available at: <http://freepages.family.rootsweb.ancestry.com/~treevecwll/pzseaashwed.htm>.

Lennon, K., 2014. A Stormy History. *The Morrab Library; The Official Website for Penzance's independant library, Est. 1818*. Available at: <http://morrablibrary.org.uk/morrab-library/a-stormy-history/> [Accessed April 23, 2015].

PAimages, Weather - Flooding - Newlyn - Cornwall - 1962. Available at: <https://www.paimages.co.uk/image-details/2.6620001> [Accessed April 15, 2015].

UK Parliament, 1962. West Cornwall (Storm Damage). Available at: <http://hansard.millbanksystems.com/commons/1962/mar/08/west-cornwall-storm-damage>.

Van Der Kiste, J., 2013. *The Little Book of Cornwall*, The History Press. Available at: <https://books.google.co.uk/books?id=d7E7AwAAQBAJ&pg=PT97&lpg=PT97&dq=7+march+1962+flooding+newlyn+cornwall&source=bl&ots=8pbYCnaTdM&sig=YvShOLKeKzI3MTxQheEasCDbFpU&hl=en&sa=X&ved=0ahUKEwj9x5ehtKXOAhWIWRQKHbLaD04Q6AEINDAD#v=onepage&q=7 march 1962 flooding newlyn cornwall&f=false>.