

## CASE STUDY: Brisbane Floods, February 1893

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On 1 February 1893 a severe tropical cyclone crossed the Central Queensland coast north of Yeppoon. Buildings were damaged and many trees were uprooted. The barometer dropped to 968 hPa on the Steamer *Buninyong* when the cyclone passed near it in the vicinity of the Northumberland Islands Group. As the cyclone moved south record rainfall was recorded in parts of Southeast Queensland.

Events leading up to the floods were as follows:

### 2 February 1893

Major flooding occurred at Gympie, Maryborough, and Bundaberg. Large portions of Gympie and Maryborough were submerged. The Mary River was reported as being 80 feet above normal at Gympie. During the afternoon on the 2<sup>nd</sup> the wharves at Bundaberg were reported as being under 8 feet of water.

Very large seas were reported off Cape Moreton with vessels having departed the Port of Brisbane forced to return back to Moreton Bay. There were very high tides at Sandgate on Moreton Bay near Brisbane with seawater flooding overland and large damaging waves on the beaches.

H P Somerset of Caboonbah (NE of Esk) sent the following telegram to Brisbane at 4.50pm 2 February 1893: 'Prepare for flood – River here now within 10feet of 1990 flood level and rising fast. Still raining 77 points since 9am. Heard river rising rapidly'.

The following telegram was received from Cressbrook (on the Upper Brisbane River at 5.30pm 2 February 1893:

'River within 2.5feet of highest known level'

Then another telegram from Cressbrook at 8.10pm 2<sup>nd</sup> "Within one foot of highest known flood and still rising'.

### 3 February 1893

During 3 February 1893 the lower part of Brisbane was submerged, and water was still on the rise. The *Elamang* and the gunboat *Paluma* were carried by the flood into the Botanical Gardens. The *Natone* drifted onto the Eagle Farm flats. Storm surge conditions were again reported from Sandgate with large waves.

**Crohamburst (on the Stanley River) recorded 907 mm of rain in the 24 hrs to 9am 3 February 1893. This remains an Australian record for 24 hour rainfall, although there have been some unofficial higher registrations. Early on 3 February a 15.2 metre high wall of water was observed to roar down a Brisbane River gorge. The water tumbled down the Stanley River to its junction with the Brisbane River. Nearby by was Caboonbah, the residence of grazier Mr. H.P. Somerset. Caboonbah**

**(see Figure 1) is on high ground, with a view of the Brisbane River below its junction with the Stanley.**

Mr. Somerset described the flood as follows: "It was raining, though not heavily, so I went early as usual to meet all hands, and suggested flooring the lofts as a job under cover, to which the men readily agreed, while the boys were set to cleaning and oiling harness. I then went up to my breakfast, after which, as I was cutting a cake of tobacco at the copying press table on the south verandah, I heard a roaring sound, and looking west towards Mount Beppo (from which the sound seemed to come) I heard a louder noise quite different, so looking eastward I saw a wall of water fully fifty feet high coming around the bend. Astonished, I watched it pass the gum tree, and saw it submerge (i.e. exceed) the 1890 flood mark knob, and, while observing the tree, I felt the verandah floor lifting me, as the wall of water struck the cliff nearly two hundred yards away; the doors and windows rattled, the house shook as by an earthquake, and thinking my wife would be alarmed, I ran through a room, across the hall, and, on opening the door of her bedroom, she said 'What has happened, I felt the bed shake under me'. I drew back the curtains and opened the window on the east verandah, so, from her bed, she saw the river nearing the top of the far bank, which the 1890 flood did not, and I, jumping through the window, on looking north, saw the flood not only covering the flat (nearly a mile wide) on the far side of the Upper Brisbane River (whose channel it had overflowed) but also what looked like big logs racing along upstream in the distance away back from the river, so, getting my glasses, I saw clearly that they were saw-mill logs (as we found subsequently, when we saw them left high and dry near a drafting camp on a ridge in the top paddock) as being seven cedar logs bearing Mr. F. Bowman's brand, which he got from a scrub near the head of Reedy Creek, which runs into the Stanley water on its far or eastern side, clearly showing that it was the Stanley water that had carried them to where it had left them."

Somerset sent a horseman to Esk with a telegram addressed to the Postmaster-General in Brisbane: "Please warn inhabitants of Brisbane, Goodna, Ipswich, Lowood, other centres, of tremendous flood, 1890 level already exceeded several feet. Stanley River only, Brisbane to follow."

#### **4 February 1893**

Disastrous flooding occurred in the Brisbane River. Eight feet of water flooded Edward Street Brisbane at the Courier building. Numbers of houses at Ipswich, Brisbane, Gympie and Maryborough washed down the rivers. More than 150 houses were subsequently washed down the Brisbane River. Seven men drowned through the flooding of the Eclipse Colliery at North Ipswich. A man drowned after rescuing his father at South Brisbane.

#### **5 February 1893**

The Indooroopilly railway bridge (Figure 2) was washed away by the flood. These were the heaviest floods known in Brisbane and suburbs. The Brisbane City flood peak was 8.35 metres at 7pm 5 February 1893. At Maryborough two men were drowned and a family missing believed drowned while trying to cross the river. Unprecedented flooding at Maryborough with the Mary River Bridge washed away. The river peaked there at 4pm on the 5th with more than 130 families homeless after more than 130 homes were swept away. At Gympie numerous houses were washed away with a large number of homeless. There were other deaths in outlying areas. Four children drowned on the 5<sup>th</sup> and a policeman drowned in a rescue attempt.

The **225 ton steamer *Dickey*** was wrecked on a beach near Caloundra at 10am 5 February 1893. The beach now bears its name.

~~At 12.15pm 6 February 1893~~ **6 February 1893** one third of Victoria Bridge (Figure 3) broke away and other spans of the bridge quickly followed. A man was found drowned at O'Connell Terrace, a boy drowned at Petrie Terrace, a man was drowned at Rosalie and two men were drowned when a punt capsized at West End.

**7 February 1893**

Two men were found drowned at Fortitude Valley and Bowen Bridge and three men were lost when a boat capsized in the Brisbane River.

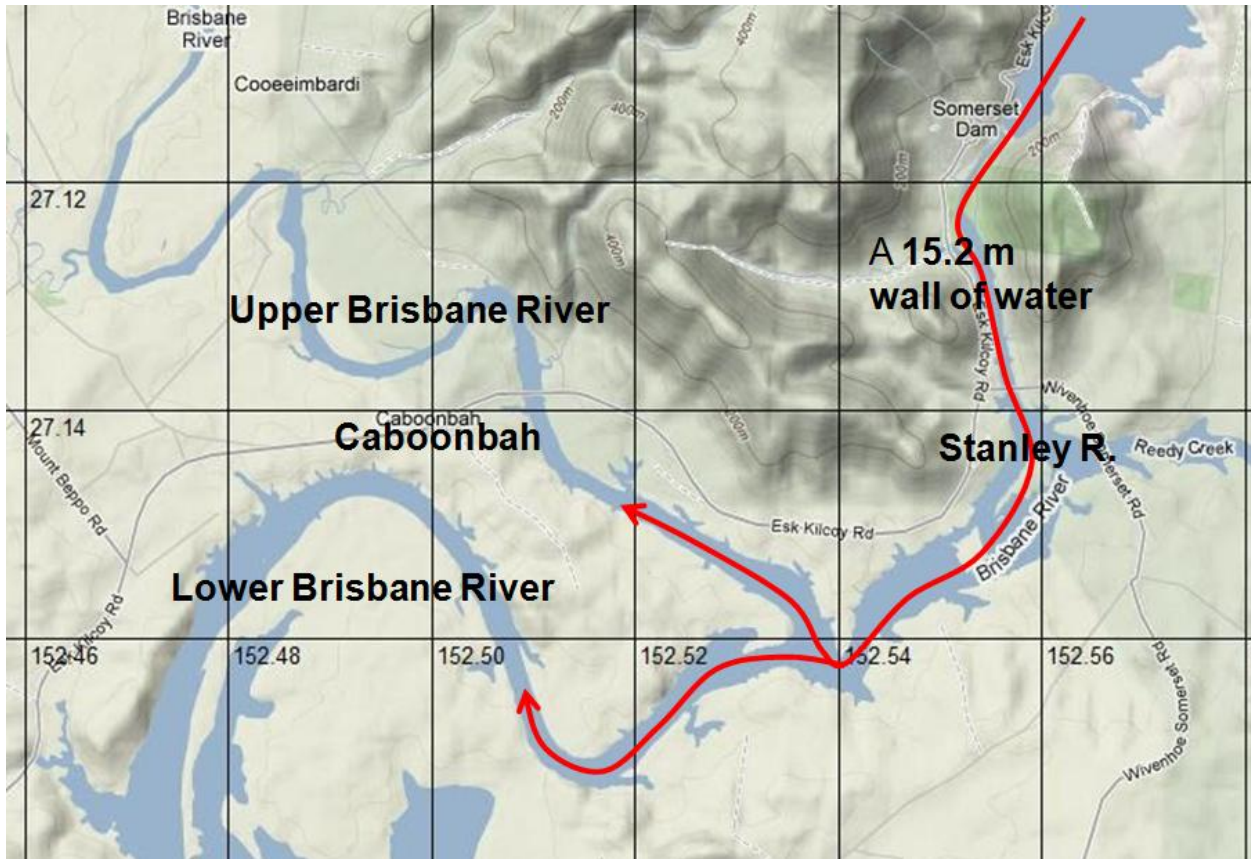


Figure 1. Location of Caboonbah with upper Brisbane River to its north and lower Brisbane River to its south. The path of the wall of water which came down the Stanley River is shown.



**Figure 2.** Indooroopilly Bridge February 1893 (Public Domain).

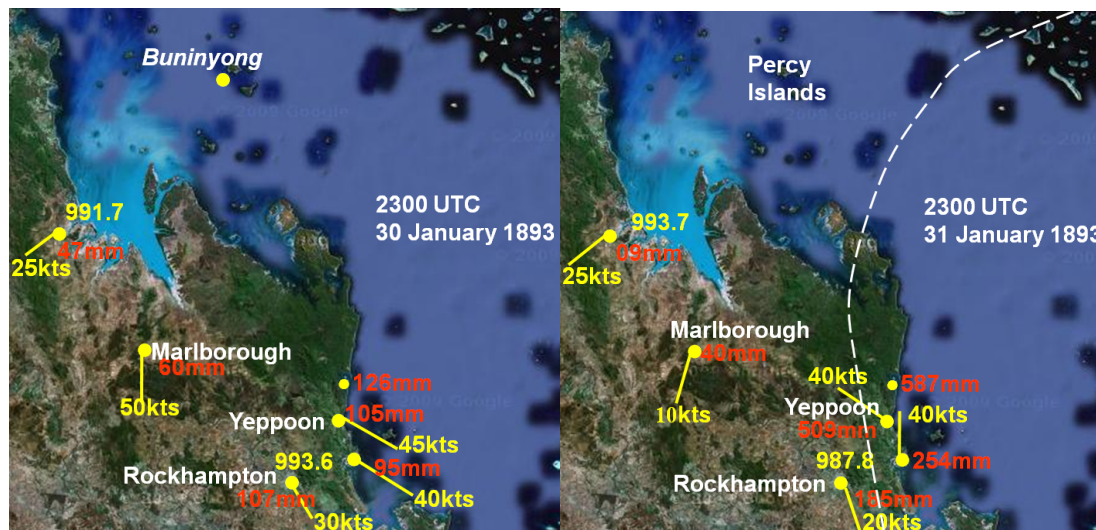


**Figure 3.** Victoria Bridge February 1893 (Public Domain copyright expired)

## Meteorology of the 1893 Floods

In Figure 4 weather observations are shown south of where the steamer *Buninyong* was fighting atrocious weather in the vicinity of the Percy Islands in the Northumberland Group. Aboard the *Buninyong* was the chief weather man of Queensland Mr. Clement Wragge. The *Buninyong* after leaving Mackay was at 1600UTC 30 January anchoring in the lee of the Percy Group. After the anchors began to drag it put out to sea again and at 02Z 31<sup>st</sup> it recorded a barometer reading of 968hPa and sustained winds of 85 knots. The vessel then must have been close to the track of the cyclone estimated in the right panel of Figure 4.

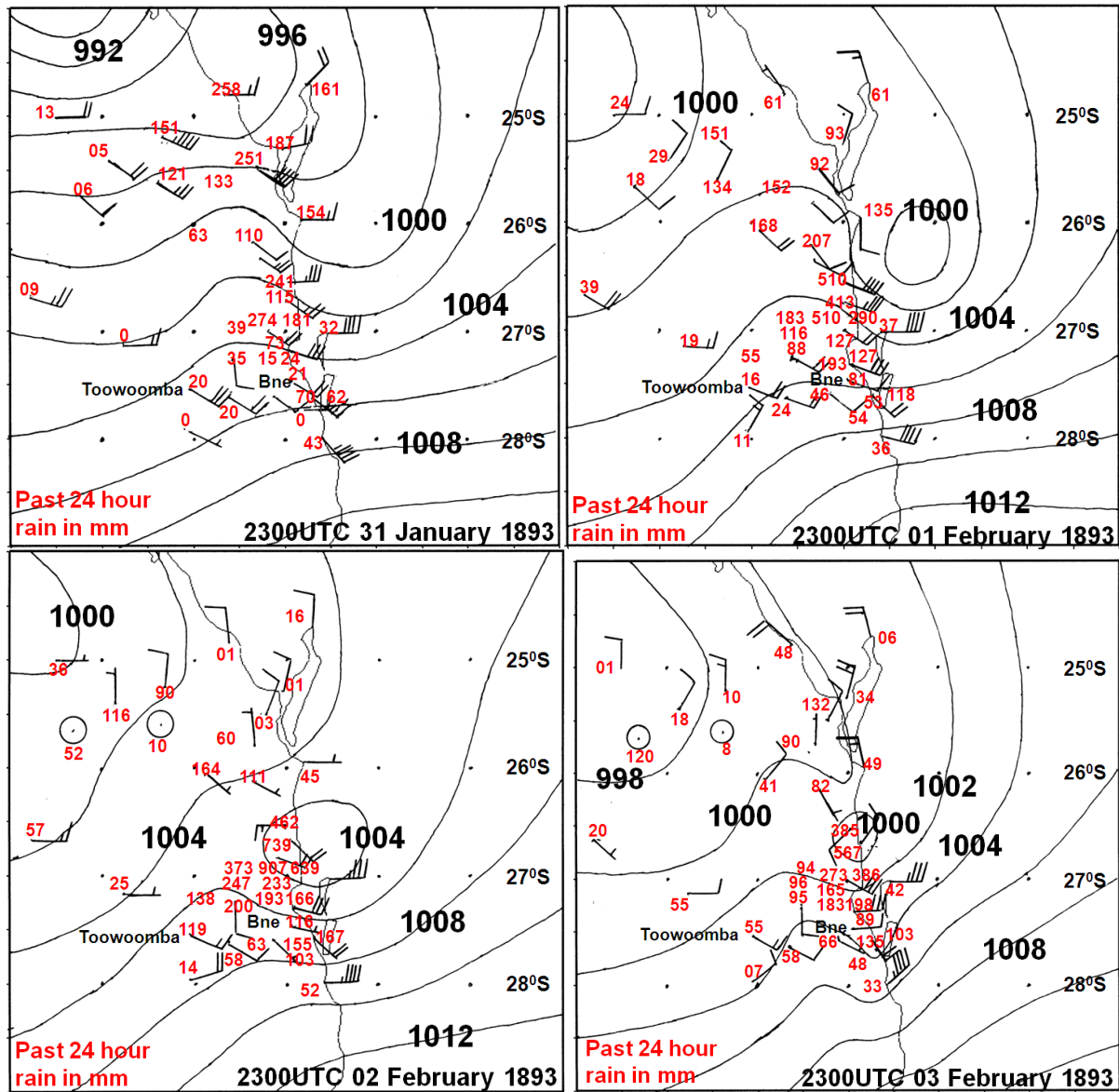
During the 31 January as the cyclone approached land Marlborough reported a southerly gale and a 'tremendous quantity of trees down everywhere'. Yeppoon reported flooded trees uprooted, roofs off and great damage all over district.



**Figure 4.** Observations of winds (the yellow lines indicating the direction from which the wind is blowing in knots), mean sea level pressure (hPa) and past 24hour rainfall (mm) at Marlborough, Saint Lawrence (NNW of Marlborough), Yeppoon, Rockhampton and Emu Park (S of Yeppoon). Past 24hour rainfall figures are also shown for Woodlands (N of Yeppoon). The left hand panel is for 9am 31 January 1893 (2300UTC 30<sup>th</sup>) and also shows the position of the steamer *Buninyong* 7 hours earlier. The right hand panel is for 9am 1 February 1893 and the dashed white line indicates the estimated track of the cyclone.

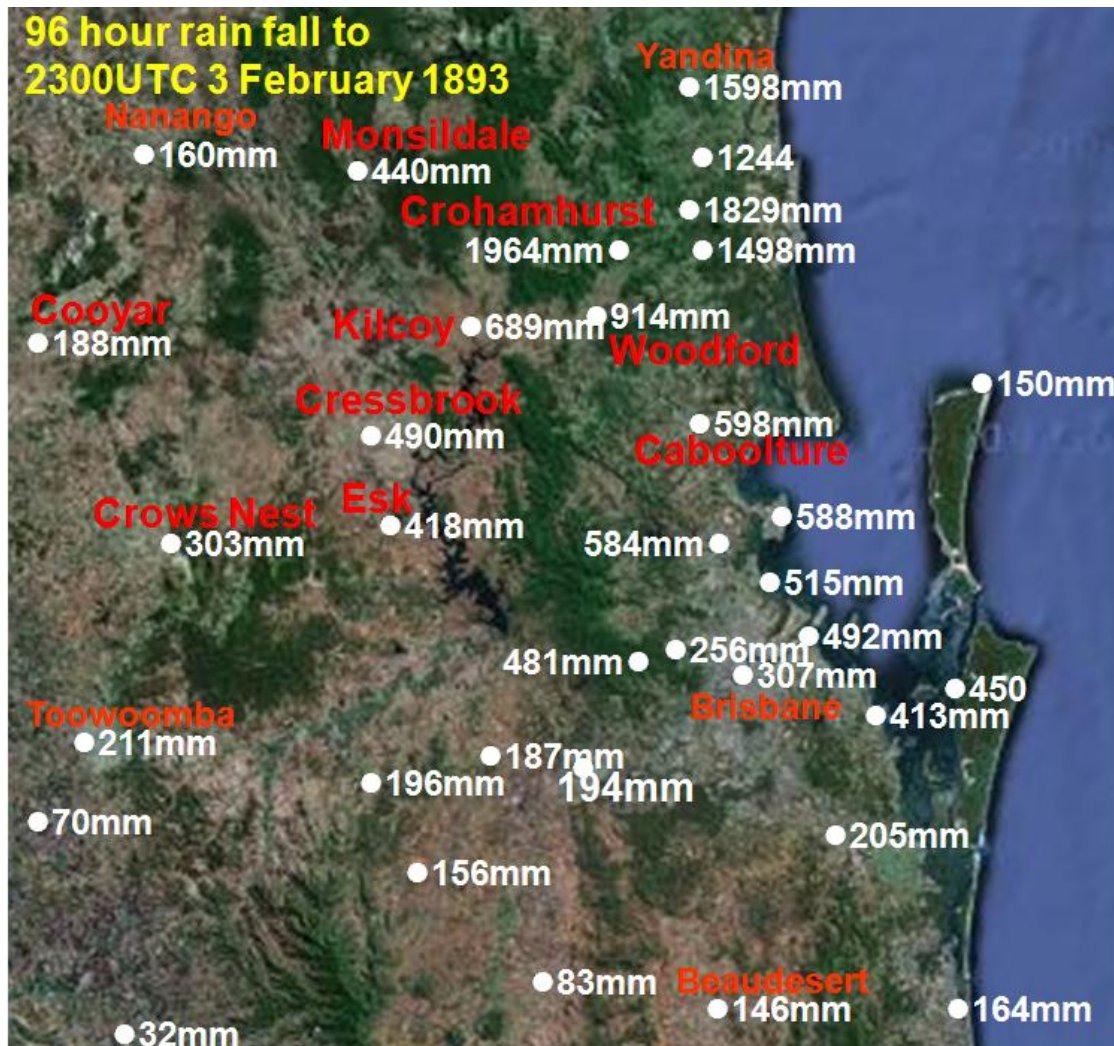
Torrential rain was recorded in the Yeppoon area with up to 587mm in 24hours. The cyclone was obviously steering southwards under the influence of a middle to upper level trough. This deep layered trough influenced the developed of an east coast low (ECL) southeast of the cyclone. The development and landfall of this ECL is shown in Figure 5 and was associated with the extreme rainfall in southeast Queensland. The heaviest rainfall occurred as this ECL made landfall near the Sunshine Coast with 24-hour totals to 907mm.

Confirmation of the wild coastal weather produced by this ECL were the very large seas reported off Cape Moreton with vessels having departed the Port of Brisbane forced to return back to Moreton Bay. There were very high tides at Sandgate on Moreton Bay near Brisbane with seawater flooding overland and large damaging waves on the beaches. This ECL on 5 February (not shown) began to merge with the remnant circulation of the cyclone and was also responsible for the large seas and winds, which drove the vessel *Dickey* ashore on the Sunshine Coast on 5 February.



**Figure 5.** Mean Sea Level Pressure distribution and wind observations (one wind barb represents 10 knots while the half barb denotes 5knots.) The rainfall over the previous 24 hours is shown in red.

The four day rainfall distribution (Figure 6) illustrates the exceptionally heavy rainfall north of Brisbane. Note the report of 1964 mm, which was accumulated at Crohamhurst and the 1829mm from Mooloolah. The rainfall totals in both Figures 5 and 6 were taken in most cases from the archived operational weather charts and daily Weather Bureau reports posted daily in the Brisbane Courier Mail. Archived copies of the Courier Mail are held at the Queensland State Library.



**Figure 6.** Rainfall totals (mm) over the 4 day period from 9am 31 January 1893 to 9am 4 February 1893.

**References :**

- Brunt A. T. 1958. The Crohamhurst Storm of 1893. Proceedings from the Bureau of Meteorology Conference on Estimation of extreme Precipitation Melbourne April 22-24 1958.
- Somerset , H. P. Recollections of the 1893 Flood. MS., Fryer Library, University of Queensland.