

6. Weather information

6.1 General

The prevailing winds tend to be easterly to south easterly. Although calmer conditions occur during the winter months, they may become very difficult during the summer months when the sea breeze augments the prevailing south easterlies. As a general rule, high windage vessels will not be moved when the sustained wind speed exceeds 25 knots.

[Coastwatch](#) is a website with useful nautical information links.

6.1.1 Extreme Weather Contingency Plan

The Cairns Extreme Weather Contingency Plan can be found at the following link on the MSQ website: <https://www.msq.qld.gov.au/Safety/Preparing-for-severe-weather>

6.2 Tidal information

Cairns is a standard port in the Queensland Tide Tables.

- An automatic tide gauge is located at Trinity wharf number 7;
- After heavy rain and during the ebb tide a strong set to the east may be experienced in the channel between beacons C7 and C9. This set is caused by the run-off from the Barron River estuary;
- On the flood tide, a south westerly set is experienced in the channel between beacons C9 and C17; it then becomes more south–south westerly, following the cut of the channel. After passing beacon C20, a more southerly set is evident;
- The ebb runs north between beacons C17 and C20; the ebb is more pronounced after seasonal rain and on spring tides. In general the ebb tide is stronger than the flood.

6.2.1 Tide boards/gauges

The tide board refers to lowest astronomical tide (LAT) and gives the actual tide above LAT. The tidal times and heights for standard Queensland ports are available in the Queensland Tide Tables and are also available on the [Bureau of Meteorology](#) website.

6.2.2 Tidal information – tsunami effects

The north/west and east coasts of Australia are bordered by active tectonic plates which are capable of generating a tsunami that could reach the coastline within two to four hours. The resultant change in swell height could have an adverse effect on a vessel with a minimum under keel clearance navigating within or close to port areas.

The [Joint Australian Tsunami Warning Centre](#) (JATWC) has been established to monitor earthquake activity that may lead to a tsunami forming.

Mariners are advised to take heed of such warnings, plan their bar crossings, and tend their mooring or anchorages accordingly.

6.3 Water density

Sea water is usually 1025kg/m³ but will vary during the summer months after periods of heavy rain.