6. Weather Information

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 when mean wind speeds are in excess of 40 knots measured either at Maritime Safety Queensland's weather station at Gatcombe Head or any other reliable source, such as Bureau of Meteorology, vessel movements in the port of Gladstone will be suspended.

LNG vessels will not be handled in weather conditions that make operations hazardous, (typically wind speeds in excess of 25 knots and wave heights above 3.0 m): however, these figures are a guide and the actual limiting weather conditions are to be determined at the time of the manoeuvre in consultation between the harbour pilots and vessel's master.

During extreme weather events (cyclones, floods, storms), mariners are to follow the procedures within the Gladstone Extreme Weather Event Contingency Plan. An outline of the Alert Status Levels are shown below.

A Yellow Alert Advice message is issued by the Regional Harbour Master when destructive, winds, swell, rain or riverine flooding is forecast within 24 – 28 hours. This may include the Bureau of Meteorology (BoM) forecasting a cyclone or a significant rain event across the catchment of the Calliope River and Awoonga Dam.

An Orange Alert Watch and Act message is issued by the BoM for an extreme weather event or developing event likely to affect the area within 12 - 24 hours.

A Red Emergency Warning message is issued when extreme weather is forecast within 6 hours.

A Yellow Advice is issues during recovery phase. Mariners to wait for all clear from the Regional Harbour Master prior to recommencing vessel movements within the port.

Cyclone warnings and reports may be obtained from the Australian Bureau of Meteorology (BOM) website (www.bom.gov.au). (appendix –Cyclone Tracking Chartlet).

6.1 Tidal Information

The mean spring tidal range is 3.24 metres and the mean neap range is 1.54 metres. The tides are much affected by the prevailing winds and the stream sets are very strong at times in the channels. Tidal rates in excess of four knots have been observed in sections of the harbour at some spring tides. Since the tides run with a velocity of from 1.5 to 2.5 knots regularly, due caution will have to be observed and proper allowance made for tidal influence when navigating these channels, especially in the Golding Channel and on the Wild Cattle Cutting leads where the tide sets obliquely across the channel.

Between the Boyne leads and Gatcombe Head, the flood tide sets towards the West Bank and the ebb towards the East Bank.

6.1.1 Tide Boards/Gauges

Gladstone is a standard Port in the Queensland Tide Tables. Maritime Safety Queensland has erected a tide board and gauge at Auckland Point Wharf (Western end).

MSQ also has a tide gauge located at Cement Australia wharf Fishermans Landing and in the south channel. The gauges refer to LAT and show the actual tide height above LAT.

Maritime Safety Queensland provides tidal predictions for pilotage areas. The tidal times and heights for standard Queensland ports are available in the Queensland Tide Tables on the MSQ website and may be accessed at the Bureau of Meteorology website.

Tidal stream predictions for standard Queensland ports are available upon request through the Regional Harbour Master's office.

6.2 Water Density

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

6.3 Lightning Detection

Gladstone VTS utilises a long-range lightning alert service that delivers timely information about the proximity and movement of lightning near the Port of Gladstone. This service enhances safety and improves port efficiency by allowing for early assessment of conditions to support effective decision-making regarding shipping movements. Gladstone VTS will inform all necessary parties should scheduled movements be affected by a detected lightning event.