

COASTAL PROCESSES

Coastal processes is a collective term that refers to the action of natural forces on a shoreline or seabed such as tides, waves and currents.

Shute Harbour provides a natural safe anchorage for vessels. Extensive studies into the coastal processes of Shute Bay have examined the effects of currents, tides, storm tides, cyclones, sea level rise, winds and waves. The impacts of the marina on the marine environment, Great Barrier Reef World Heritage area and the State Coastal Marine Park were also examined.

Results of these studies indicate:

- a solid breakwater is the most practical design for the marina
- the design is appropriate for extreme cyclonic conditions
- the design allows for a possible 300 mm future sea level rise and an increase in cyclone central pressure due to greenhouse effects
- the proposed marina is very safe by industry standards and will provide safe refuge for boats in events up to the ARI 200 year event
- any scouring or sediment deposition would be minimal with no significant net effect on marine plants or aquatic ecology outside the marina

The proponent has committed to:

- providing emergency services and facilities at the marina that will increase safety standards for the community, including cyclone shelter (car park) and water based emergency service access (marina)
- protecting the water quality of Shute Harbour
- educating recreational boaters
- operating an accredited 'Clean Marina' in accordance with the Marina Industries Association of Australia
- using structures in the marina that will encourage colonisation of marine fauna and fish passage and create habitat complexity
- creating a Reef Conservation Fund that will contribute to the ongoing sustainability of the coral reef
- creating offset mangrove areas as part of the marina design

