



fraser straits marina case study

Fraser Straits Marina Environmental Assessment Report

August 2007 to August 2008

frc environmental were contracted by Kellogg Brown and Root (KBR) to contribute to an Environmental Assessment Report for the proposed Fraser Straits Marina, with regards to tidal lands, species of conservation significance, marine plant communities and fisheries productivity. Using our vast experience, we were able to provide a detailed report that KBR could confidently use to support approvals and guide detailed design.

Project requirements overview

frc environmental described the existing environment within and immediately adjacent to the proposed area to be disturbed, and the likely value of these habitats to commercial and recreational fisheries; summarised the positive and negative impacts of the disturbance to fisheries habitats and productivity; assessed the effects of increased recreational boat traffic on marine species; and suggested strategies to mitigate impacts to dolphins both during and after development.

The conservation significance of the proposed marina site was an important consideration. The site supported flora and fauna of conservation significance (e.g. marine plants, dolphins and dugongs), and was surrounded by the Great Sandy Marine Park (although within the designated Snapper Creek Boat Harbour area) and adjacent to the Great Sandy Strait Ramsar site.



A senior ecologist collecting benthic microalgal (BMA) samples from the proposed development site, contributing to a strategic and rigorous data collection process

Project Performance

- Fisheries values were assessed using rapid assessment protocols developed in-house by **frc environmental**, and accepted by Government agencies
- Survey design was statistically robust providing defensible data; statistical results were displayed visually and explained in plain English to ensure their meaning was easily understood
- Our underwater photography capabilities ensured that there was a visual record of the habitat to be impacted
- Our in-house GIS (geographical information system) capabilities effectively supported the application to disturb marine plants under the Fisheries Act 1994
- **frc environmental** staff successfully consulted with dolphin, dugong and turtle experts from academic institutions and Government Agencies



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Always in the field - one of our senior ecologist surveying seagrass and benthic epifaunal communities



Subtidal benthic community adjacent to the proposed development site

Our tailored approach and methodology

We surveyed and collected samples from the western and eastern section of the proposed site, and from four nearby comparative sites. Both intertidal and subtidal habitat was surveyed and sampled.

The two sites in the proposed development footprint represented areas to be directly affected by the proposed development. A range of human impacts associated with existing infrastructure currently affects these sites (such as swing moorings, recreational use of the mangrove and tidal flat areas, and catchment inputs such as stormwater discharge). At each site we assessed community composition and fisheries values of marine plant, epifaunal and benthic infaunal communities using a combination of on-foot, boat-based and snorkel surveys.

Fisheries values were assessed using rapid assessment protocols. These protocols were created and developed by **frc environmental** and are accepted by Government agencies such as Queensland Primary Industries and Fisheries.

We were able to conclude that where construction and operation of the marina is properly managed through an appropriate Environmental Management Plan (EMP), no long-term impacts of marina construction or operation to fisheries habitats or species of conservational significance are expected.

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