

Moreton Bay Sub-Tidal Benthic Habitat Mapping Study

Client

Environmental Protection Agency

Date

2007-2008

Services & Expertise Provided

Desktop assessments of known reef communities;

Field works and data collection including acoustic habitat mapping and video spot ground truthing and assessments; and

Collation of all data in GIS layers for reporting.

The Moreton Bay Marine Park Zoning Plan was implemented in 1997 to conserve the unique values of the Marine Park and to provide for the sustainable use of the region and its resources. The Zoning Plan is currently being reviewed, with a new Zoning Plan due to be implemented on the 1st September 2008. The Queensland Environmental Protection Agency (EPA) is responsible for the review and has initiated a process that will involve extensive consultation and negotiation with environmental and community groups, industries and individuals.

As part of the preliminary information and data acquisition stage of the review process, the Queensland EPA invited BMT WBM to undertake a habitat mapping investigation of a large part (1,156 km²) of the Marine Park's oceanic area. Little was known of the sub-tidal habitats in this area, which extend to ~120 m in depth. Habitat mapping in this investigation was based on a combination of methods including:

- Preliminary desktop assessments of the occurrence reef, sand and other habitats based upon existing hydrographic charts, fishing and diving guides, commercial line and trawl fishing information;
- Preparation of a survey grid for acoustic data collection using 50 and 200 kHz echo-sounding methodology (see accompanying figure), based on areas of interest identified above;
- Acoustic surveys along the outlined grid and subsequent data analysis and classification, yielding separate habitat classes based upon their acoustic signature; and
- Spot video surveys as a means of describing the resultant habitat classes and validating acoustic survey results.

The acoustic mapping and video validation works was successfully completed within timeframes. This information provided a key input into the formulation of a representative habitat-based draft zoning plan.

