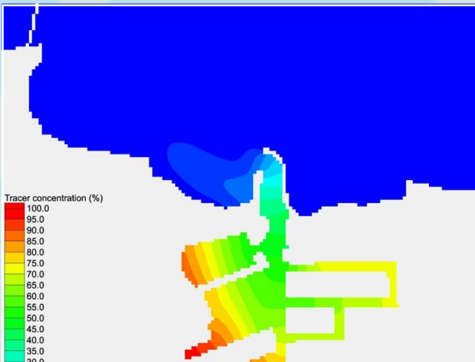
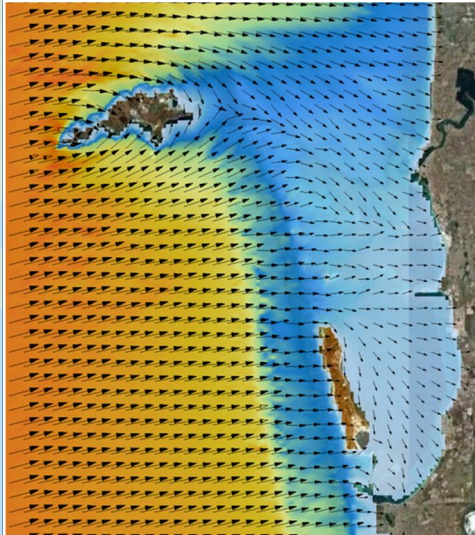


“Where will our knowledge take you?”

Mangles Bay Coastal Assessment

TABEC



Location

Cockburn Sound,
Western Australia

Date

2011- 2012

“ The coastal assessment included a hydrodynamic and flushing study, which identified the water exchange and the residence time of the proposed marina, and a wave modelling study to assess the impact of the proposed structure in the neighbouring coasts. ”

BMT JFA conducted a coastal assessment for a proposed harbour located in the Mangles Bay area of Cape Peron, Rockingham, approximately 47 km south of Perth.

The coastal assessment included a hydrodynamic and flushing study, which identified the water exchange and the residence time of the proposed marina, and an extensive wave modelling study to assess the impact of the proposed structure in the neighbouring coasts.

BMT JFA was involved in various stages regarding concept development for statutory environmental impacts.

The coastal assessment identified the potential impacts of the proposed development on coastal processes and provided suitable management measures to minimise these potential impacts. These findings were supplied to the Public Environmental Review (PER).

As part of the assessment BMT JFA carried out a desktop study of the regional geomorphological, metocean, synoptic setting and historical shoreline movement

also wave transformation modelling and sediment transport studies to determine the long term beach orientation at the site in response to development.

A review of coastal setback management, including sea level rise and beach nourishment was also undertaken and various hard and soft engineering solutions were recommended for the development. The design and layout of recommended coastal infrastructure was developed to enhance amenity of the developed foreshore.

BMT JFA Role

- Assess impacts of the development on the surrounding coastal processes
- Coastal planning / adaptation requirements
- Preliminary hydrodynamic modelling and flushing study
- Proposed coastal protection measures fronting the Mangles Bay development.

Services & Expertise Provided

- Hydrodynamic modelling and Flushing study
- Wave transformation modelling
- Beach response modelling
- Coastal set back assessment and management plan.

Software

- TuFlow_AD
- Bouss2D
- ST_Wave
- SBEACH