

“Where will our knowledge take you?”

Oakajee 2D Physical Model Testing

Oakajee Port and Rail



“ As part of the port design process, 2D physical modelling was required to be performed on the breakwater structures to allow stability and overtopping to be assessed. ”

The State Government of Western Australia signed a development agreement with Oakajee Port and Rail (OPR) for the development of a new rail line and deep water port for the export of bulk iron ore from Oakajee, Western Australia.

The Oakajee site is exposed to challenging metocean conditions and the development of an appropriate design for the port saw the development of a breakwater that, amongst other aspects, required in excess of 3.3 Mm³ of placed quarried material, extended approximately 1.9 km offshore and terminated in water approximately 23 m deep.

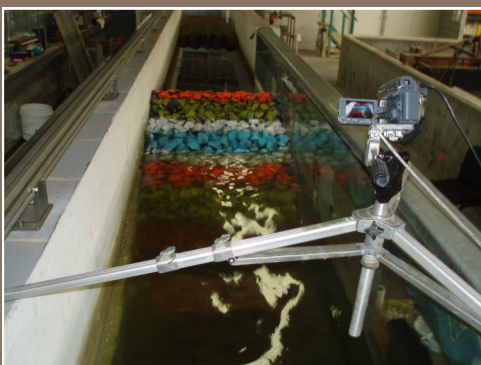
As part of the port design process, 2D physical modelling was required to be performed on the breakwater structures to allow stability and overtopping to be assessed. This model testing was undertaken in a wave flume at Manly Hydraulics Laboratory located in Sydney, NSW.

BMT JFA Role

- Appointed to manage all aspects of the 2D physical model testing
- Contract management services including the preparation of tender documentation and assessment to select the laboratory
- Development of testing schedule and scope
- Site supervision of all testing and the provision of technical advice to facilitate any required adjustments
- Review of the performance of breakwater structure and providing solutions for design improvements.

Services & Expertise Provided

- Physical modelling
- Wave force investigations
- Breakwater and seawall design.



Location

Sydney, New South Wales

Date

2010