



Dredging

An integrated approach to client side management and delivery of capital and maintenance dredging, land reclamation and related coastal management works across the full project life cycle.



Establishing and maintaining port channels and regional waterways can present a major obstacle to Port Authorities, State and Local Governments.

As the maritime industry faces more complex questions and greater public scrutiny on technical and environmental challenges, we provide the quality of evidence and advice our clients need to make defensible decisions that satisfy debate, secure a social licence and ensure their projects sustain momentum.

Our staff have experience in a wide range of dredging and reclamation methods and dredging related issues augmented by our complementary services in project and environmental management.

We offer comprehensive dredging related services, coupling engineering and planning with specialist environmental services across impact assessments and monitoring, hydrodynamic numerical modeling, regulatory approvals, and stakeholder consultations.

Services and expertise provided

Dredging management services

- + Port planning and feasibility studies
- + Dredging and dredged material disposal studies including methods and technologies
- + Procurement strategy and contract administration
- + Full suite of dredging project and program management
- + Dredging site supervision
- + Hydrographic survey planning and supervision
- + Marine geotechnical planning and site supervision
- + Stakeholder consultation and management
- + Expert witness services

Engineering services

- + Channel and navigation design
- + Vessel movement simulations
- + Dredging engineering and design
- + Dredging geotechnical models
- + Land reclamation and onshore disposal design and numerical modelling
- + Beach nourishment planning and engineering
- + Numerical modelling of coastal dynamics and metocean conditions
- + Coastal engineering and management
- + Maritime structural engineering

Environmental monitoring and management

- + Benthic and marine habitat surveys
- + Baseline and impact water quality measurement
- + Ecological impact mapping
- + Biosecurity inspections and eDNA tracking
- + Environmental assessment and regulatory approvals
- + Climate change impact assessment
- + Sediment/contamination data collection and analysis
- + Toxicity analysis
- + Dredging management plans
- + Dredging compliance monitoring and auditing

Our experience

Project 1

Western Australia Maintenance Dredging Program Management



The Department of Transport (DoT) is responsible for the maintenance of its facilities along the Western Australian coast. BMT has, since 2000, held the contract for program management of maintenance dredging/bypassing projects at these 20+ facilities. This work includes full suite of engineering, environmental, project management and public consultation services to deliver the annual maintenance dredging program and restoration of safe navigable depth for both public and commercial users.

BMT deliver the dredging program in accordance with DoT's maintenance dredging environmental management framework (EMF) which was developed and implemented by BMT and is a key document defining DoT's approach to managing the environmental aspects of the maintenance dredging program.

BMT deliver the environmental and heritage services, which vary among sites based on site-specific sensitive environmental receptors and typically includes a desktop risk assessment, environmental sampling based on likely cause-effect pathways, environmental impact assessment, environmental management plan, and relevant State or Federal approvals (environmental and heritage) if required, during dredging monitoring and project closeout.

Services and expertise provided:

- Long term dredging planning and strategy
- Ongoing monitoring to ensure safe access for all users
- Geotechnical investigations
- Survey monitoring
- Project management
- Environmental management and regulatory approvals
- Maintenance dredging planning and supervision
- Sand bypassing works
- Coastal management and beach nourishment works
- Marine health

Project 2

Broome Channel Optimisation

Broome required development of a deep-water access channel to facilitate all tide cruise access in challenging 10m tidal range environment.

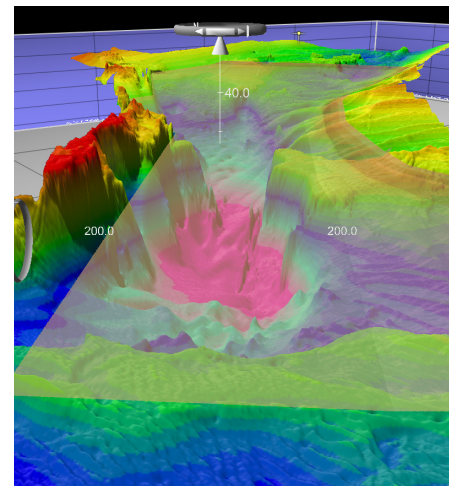
BMT was commissioned by Kimberly Ports Authority (KPA) as the main consultant of the project to undertake feasibility studies, environmental impact assessment (EIA), dredging, channel design and navigational simulation. As part of the scope, BMT established a large-scale 3D TUFLOW flexible mesh hydrodynamic model to assess the potential environmental impact due to the dispersion of dredge plumes.

Following the completion of planning, navigation infrastructure design,

environmental approvals and site investigation (environmental, geophysical and geotechnical) and detailed design works, BMT was engaged by the KPA to provide site superintendency services for dredging operations.

Services and expertise provided:

- Onsite supervision of dredging works
- Commercial contract consultancy
- Capital dredging works
- Construction program management



Project 3

Cairns Channel Upgrade Works

BMT was engaged to provide on-site dredging supervision, project management and environmental monitoring services. The project involved the widening and deepening of the Cairns in order to accommodate large cruise ships Cairns Entrance Channel that frequently visit the region and allow such ships to moor along Trinity Wharves, bringing significant regional economic benefits.

Services and expertise provided:

- Environmental impact statement
- Dredging design
- Reclamation design
- Contract administration
- Project management
- Site supervision





For more information on our services
or details of how BMT can help you improve your
dredging - get in touch.

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