

Dredged Material Management



Dredged Material Solutions

BMT Group and Golder Associates regularly collaborate on projects to provide port, local government, and private industry clients with a highly experienced and effective cross-disciplinary team.

With extensive experience in dredged material management studies throughout Australia and Asia-Pacific, we can assist in all facets of a dredging project from pre-feasibility through to construction and settlement and preparation for final use.

Our advice is underpinned by specialist technical expertise and experience, allowing us to provide our clients with the knowledge of worldwide best practice approaches, lessons learned, and practical, cost effective solutions.



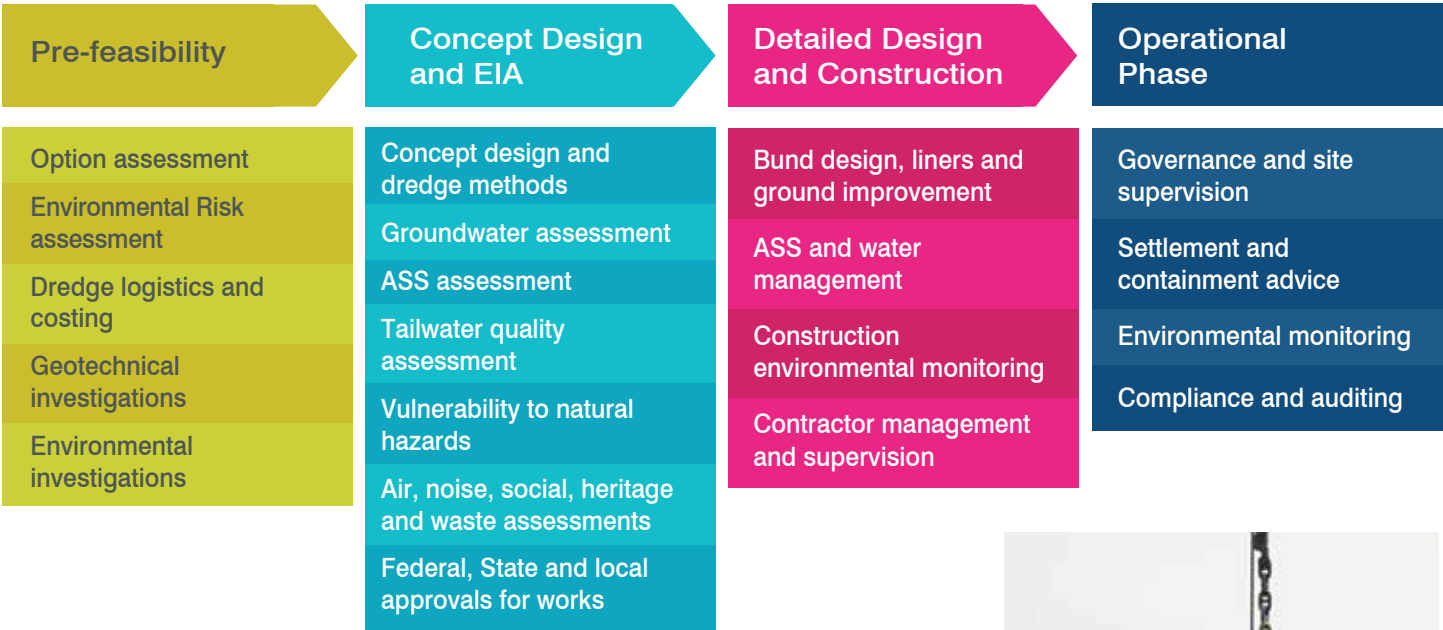


Placement Options

As part of the implementation of the Great Barrier Reef 2050 Long-Term Sustainability Plan, the Australian and Queensland State Governments have recently moved to legislate a ban on the placement of material from capital dredging projects at sea. The decision reinforces principles under the National Assessment Guidelines for Dredging which seek to beneficially re-use dredged material wherever possible.

For large quantities of dredged material that are generated to deepen and expand port facilities, this regularly takes the form of sub-tidal reclamation. However, there is increasing pressure from regulatory agencies to look at placement and containment of dredged material on land above high water mark so as to avoid impacts to sensitive nearshore environments such as seagrass and fringing reefs.

Dredged Material Management Specialist Services Across the Life Cycle of the Project



Engineering and Environmental Challenges

Placement of dredged material in reclamations, or on dry land above high water mark, brings additional engineering and environmental challenges compared to traditional at sea disposal. These include:

- **Site selection** – including baseline investigations and option analysis
- **Environmental Management** – Compliance Management Systems development, implementation and assurance
- **Containment requirements** – including long-term storage predictions
- **Dredge logistics** – understanding and managing dredge logistics
- **End land use** – including soil improvement and material reuse leading to the final landform and closure
- **Tailwater discharge** – prediction of tailwater characteristics for environmental release
- **Groundwater** – mitigating against contamination and impacts to salinity
- **Acid Sulphate Soils** – characterisation and development of appropriate management strategies for soil and runoff from oxidising soils
- **Costs** – accurate estimation of whole-of-life project costs
- **Design and construction** - civil design of earthworks and infrastructure associated with containment

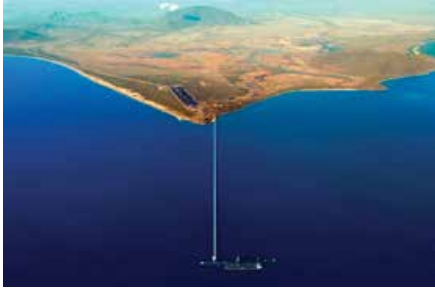
Together, BMT Group and Golder Associates have the necessary specialist expertise to tackle the challenges and provide a 'solutions focused' service to clients.



Our Experience

Dredging and dredged material management is our core business. Recent and relevant projects include:

Abbot Point Dredged Material Placement North Queensland



Golder Associates, BMT JFA and BMT WBM have been involved in multiple phases of off-shore and onshore characterisation, placement design, tender package preparation, and specialist advice to the project environmental impact assessments.

State-wide Maintenance Dredging Program Western Australia



BMT JFA and BMT Oceanica have provided an integrated service for the Department of Transport's maintenance dredging program, which covers approximately 30 facilities state-wide, since 2000. The provided services encompass overall program management, environmental approvals, geotechnical investigations, strategic reviews of dredged material placement options, detailed design of land-based placement facilities, and full project management and supervision of the works.

Port Botany Sydney NSW



Golder Associates led the geotechnical aspects of the dredging and reclamation design and construction for the Port Botany Expansion (PBE) project in Sydney. The project involved dredging approximately 11 million cubic metres of Botany Bay Sands to form the 63 Hectare reclamation. Dredging and reclamation works for the project commenced in 2008 and were completed in 2010. The bulk dredging works were carried out using cutter section dredgers and various reclamation techniques were used including land discharge (pipelines), spreader pontoon and aerial discharge (rainbowing).

Brisbane Airport New Parallel Runway Brisbane, Queensland



Involving the placement of 15 million cubic metres of dredged sand material on the low lying, tidally influenced Airport land, Golder and BMT WBM were heavily involved in the EIS, preliminary design, approvals and management of construction associated with the project. Work continues to monitor settlement of the dredged material post placement in 2015.

Contact Us

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