

“Where will our knowledge take you?”

## Specialist Dredging Services

### Unexploded and Explosive Ordnance Investigations



The presence of remnant explosive ordnance is an increasingly common issue affecting port expansion and development works. The origin of such items is generally attributable to the training activities undertaken by military forces (referred to as unexploded ordnance (UXO)), although cases have also been recorded where explosive ordnance (EXO) has been encountered which had historically been dumped offshore during post-war destocking operations. The potential or actual presence of UXO or EXO represents a significant threat to dredging operations, both in terms of occupational health and safety during the works, as well as a substantial potential commercial

“ **BMT JFA has developed a strong capability in the management and supervision of operations designed to locate, investigate, and clear potential ordnance.** ”

risk to the client. Consequently, where historical evidence suggests the potential presence of ordnance, significant benefits can be attained by undertaking pre-works investigations to locate and clear any potentially dangerous items. These works include the use of geophysical survey techniques to identify and locate magnetic anomalies (including both single sensor magnetometers surveys and higher resolution magnetic gradiometer surveys), as well as diver based seabed investigation and clearance works. BMT JFA has also provided expert witness services in a dispute relating to the cost implications for dredging which related to the presence of EXO, as well as future clearance costs. This dispute was settled in an out of court agreement that resulted in BMT JFA's client being paid for the estimated damages as well as court costs.

#### Key Capabilities

- Planning of site investigation works
- Tendering and contract management
- Project management and site supervision.

#### Related Projects

- Albany Port Authority - EXO Clearance Project and Expert Witness Services
- Oakajee Offshore Magnetometer Survey, Diver Investigations and UXO Clearance Works
- Oakajee Onshore UXO Survey
- Southdown - Offshore Magnetometer Survey, Diver Investigations and UXO Clearance Works.

#### Services Offered

- Liaison with FESA or other relevant regulatory bodies to assess likelihood of EXO/UXO being encountered (based on historical records) and to determine appropriate level of investigations
- Determination of an appropriate work plan and project execution methodology, including validation/verification requirements for geophysical data collection
- Tender preparation, including appropriate general and special conditions of contract, specifications and payment schedules (geophysical surveys as well as diver investigations)
- Evaluation of Tenders and preparation of recommendation report
- Project management and site supervision during the works, including regular liaison with key stakeholders (FESA, etc.)
- Safety and environmental compliance auditing of all site operations
- Data assessment and provision of strategic guidance to the client regarding work requirements.