

# Construction risk in coastal engineering: Phase 2

At present there is a significant ongoing programme of government capital investment in coastal infrastructure to replace and reinforce defences in the face of rising sea levels and increased storminess.

The risks associated with undertaking such an investment programme prompted this project as a means to summarise the information, guidelines and good practice methods which, if adopted, would minimise the risks inherent in coastal construction. The work was undertaken in collaboration with the Department of the Environment, Transport and the Regions, industrial partners and the Agency.

Coastal engineering works include a wide range of forms of construction which are influenced by the action of tides, currents and wave action. The manual considers the following types of construction:

- Rock works
- Concrete armour unit protection works
- Concrete seawall and revetment works
- Beach recharge works
- Navigational dredging works
- Caisson works
- Outfalls and intakes works
- Coastal piling works

The manual seeks to illustrate the complexity of risks associated with coastal engineering, expose the risks of all the parties involved, draw together existing knowledge, experience and research results and provide a protocol of recommended procedures and mitigation measures required to take account of, and control or reduce, construction risks at all stages of project development and implementation.

To enable ease of use and allow sections of interest to be referenced quickly, the manual is structured in three parts:

- Part A – Protocol
- Part B – General risk management in coastal engineering
- Part C – Structure specific risks

It has been designed to serve the needs of a wide audience including clients, project funders, contractors, consulting engineers, insurers and all those interested in the risks associated with coastal engineering. It will also provide useful information to enable different parties to appreciate the risks that others have to manage.

It is hoped that the manual will become a standard reference document for managers and engineers involved in coastal construction projects.

This R&D Technical Summary relates to information from Project W5-005 contained in the following output:

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