



Dun Laoghaire Harbour, Dublin

Client

Dun Laoghaire Harbour Company

Consultant

Mouchel

Contractor

Ascon Ltd

Work Completed

2011

As part of the continuing development of the existing Dun Laoghaire Harbour, there was a requirement for a 430m long breakwater.

During the project tender, the main contractor Ascon Ltd offered an alternative design for the breakwater using the Reinforced Earth Company Precast concrete panel system with geosynthetic soil reinforcements.

This alternative demonstrated significant cost savings over the reinforced concrete caissons shown in the project tender documents.

The Reinforced Earth Company design was accepted by the client and Ascon Ltd. were awarded the project using Reinforced Earth technology.

Construction of the breakwater commenced in the summer of 2000 following the completion of dredging works and placing of the submerged rock fill core. Construction was substantially complete by November 2000.

The construction was performed between tides by starting from the shore and progressing into the harbour. In this way all of the labour, plant and materials required for construction travelled along the partially completed breakwater from a land base. This procedure virtually eliminated the need for expensive floating plant.

The Reinforced Earth breakwater was designed to withstand traffic loading, diurnal tidal variations and a substantial lateral wave force from a specified 'design wave'. Furthermore, by using a synthetic soil reinforcement strip and connection system, potential corrosion difficulties were eliminated.

This project demonstrates the suitability and cost savings that can be achieved by using the Reinforced Earth Company polymeric reinforcement systems in marine and coastal environments.

