



Swansea Marina

Swansea, South Wales

Client

Swansea City Council

Consultant

Swansea City Council

Works Completed

1983

System

TerraClass®

Wall Area

2827m²

Max. Height

10m

Design Load

HA

Design Life

60 years

As part of the redevelopment of the Mumbles Marina, a car park and boat launching slipway were required alongside the existing coastal road

Challenge

The foundation had to be laid and the first row of panels installed during periods of low tide. At high tide the sea level can rise to 1m below the final level of the wall and so up to 9m of wall height could be submerged twice every day.

When designing the structure it was assumed that at ebb tide the difference between the level of the sea and the level of the water inside the structure was 2.5m.

Solution

The wall rests on a bed of drainage material, the footing for the wall panels was prefabricated in sections and secured to the lower panels, thus avoiding the need to pour concrete on site.

After construction in the tidal zone was completed, erection proceeded quickly, as on a land based project. The base of the structure is protected against erosion by a stone embankment 1.5m thick.

Reinforced Earth is a proven and effective construction technique which can offer cost savings and rapid construction when applied to marine structures.

