



KEY DETAILS

Project:
Dibba Harbour Seawall

Location:
Sharjah, United Arab Emirates

Client:
Government of Sharjah,
Directorate of Public Works

Consultant:
Halcrow

Designer:
VSL

Contractor:
Darwish Engineering

A marina development has a 600m long access canal for light boats to access housing. It's located near the beaches of Dibba Harbour, on the east coast of the United Arab Emirates.

To form the canal, soil is excavated to a 6m depth. The canal banks are then retained by Mechanically Stabilized Earth (MSE) quay walls. The required service life of the MSE quay walls is 75 years.

Alternative material proposals were initially considered, but rejected for the quay walls. These included black steel reinforced pre-cast concrete panels (reduced durability) and mass concrete panels (increased cost). Glass fiber reinforced polymer (GFRP) rebar, **mateenbar™** was selected as it provides excellent whole-of-life savings even in highly corrosive and saline environments.

There are also the added aesthetics benefits. Using a no-rust rebar, such as mateenbar, won't leave unsightly marks or develop concrete jacking. An ideal product for this upmarket housing project.

THE NUMBERS

Earthwork Excavation: 108,000m³
 Concrete: 2,200m³
mateenbar: 15t
 Geo Textiles: 180,000m²
 Rock Materials: 9,000m³
 Gravel: 1,440m³
 Paving Blocks: 4,320m²
 Design Life: 75 years

LONG TERM APPROACH

To achieve the service life requirement, the consultant decided on **mateenbar**, to reinforce over two thousand, 220mm thick pre-cast decorative quay wall panels. The total solution gives a design life of over 100 years. An added advantage, is the reduced concrete cover requirements when using **mateenbar**.

