

Umm Al Quwain Fishing Harbour Expansion

The expansion of the fishing harbour at Umm Al Quwain involved the upgrade and extension of the existing harbour to significantly increase capacity, improve wave attenuation and provide a safe navigable entrance for vessels.



Umm Al Quwain Harbour – Before and After

The harbour expansion provided floating marina berthing for 400 commercial fishing vessels; many of which were previously moored ad hoc on the banks of the Umm Al Quwain estuary. The harbour also included a new UAE Coast Guard facility with reporting berths to monitor fishing and boating operations. The project included:

- Site investigation and hydrographic survey
- Preliminary and detailed design
- Specialist on-site engineering support
- Contract administration

Site Investigation and Hydrographic Survey

ICM were involved with the initial site investigation and planning to provide expert advice on key issues including: wave attenuation, berthing arrangements, siltation, and navigation safety. ICM engineers undertook a hydrographic survey using Ceeducer equipment to be used for wave modelling and design optimisation.

Preliminary and detailed design

Using an agile approach to suit the local contracting plant and methods, ICM developed a design that involved minimising the crest heights and widths using wave returns and by providing a high-level of construction direction and supervision. Cost optimisations were achieved by maximizing the recovery and reusing of existing rock as sub-layers within the breakwater. Using numerical wave modelling to help optimise the alignment and material volumes, the final recommendations and design elements included:

- 500m primary low-crested breakwater
- 250m groyne with vehicle access and parking
- 200m revetment including boat ramp

Specialist on-site support and contract administration

ICM provided specialist support to contractor in areas of planning and construction optimisation. ICM provided full-time engineering support and contract administration services during the 12 month construction stage to ensure that the refined design was constructed to a high standard.

Date

2011 – 2012

Location

Umm Al Quwain,
United Arab Emirates

Client

Al Manzel

Overall Project Value

\$2.3M

Scope

- Site investigation
- Hydrographic survey
- Concept design and options
- Numerical Modelling
- Detailed design
- Contract technical specifications
- Contract administration
- On-site engineering support
- Construction inspection & Certification



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