

Doha Corniche, Qatar

Case study

Focus product: Intercrete® 4841

Client: Ministry of Municipal Affairs & Agriculture (MMAA)

Contractor: Apollo Enterprises

Summary: Protection of new pre-cast concrete section from tidal action and chloride ingress

Background

The 10km Corniche in Doha is one of the focal points for the local people who spend leisure time on its broad promenades and parks.

Protection from high seas is provided by a concrete breakwater which suffers from erosion from wave action and chloride induced corrosion of the steel reinforcement. When a 500m extension was constructed, the use of a chloride barrier was stipulated to extend the life.

The solution

Following consideration of a number of coating systems and specific intensive testing, guided by Halcrow International & Partners, the Ministry specified a 2mm layer of Intercrete 4841. Applied in just 2 coats by spray equipment and bonding intimately to the concrete, Intercrete 4841 is fast drying to provide a durable waterproof layer which will not break down under the harsh direct sunlight. However, the most outstanding feature of this formulation is the resistance to the diffusion of chloride ions which is demonstrated in an independent test which has now run for over 16 years without allowing the passage of chlorides.

