

MARE HARBOUR STEEL DOLPHIN PILES

CASE STUDY

ESC Steel Structures fabricated and supplied 13 steel mono piles to Edgen Murray Europe. The project was part of the Mare Harbour base improvements in the Falkland Islands. Each steel dolphin pile included fender mounting brackets and stiffeners, bollard supporting plates and topside deck plates.

ESC Steel Structures in conjunction with their regional agent Edgen Murray Europe supplied the mono-piles used as the mooring and breasting dolphins. Each pile was nearly 2.5 metres in diameter and lengths between 19.5m up to 34.8m per piece. The dolphin pile design incorporated a mounting flange for a cone fender system that weighed in excess of 15 metric tons that was each capable of absorbing over 300 ton metres with over 250 tons reaction force. Each dolphin consisted of the steel pile and an upper section bolted on to the top of the steel pile via internal flanges for the bollard and walkway deck mounting.

The service environment as classified under BS EN ISO 12944-2 was Category C5-M – Offshore Environments which is a very high marine atmospheric corrosivity category in regions with high salinity. The selected corrosion protection system for the steel dolphin mono-piles utilized a 380 microns dry film thickness approved coating.

The production was completed successfully and was loaded to be shipped to the Falkland Islands in May 2017.



Get in Touch: T +852 8198 0239
E info@escsteelstructures.com
W www.escsteelstructures.com

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