



ROAM MARINE

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Project: Garden Island – Stirling Armament Wharf

Client: Duratec Ertech JV

Project scope: DEJV were contracted to extend and upgrade the Armament Wharf at Garden Island, WA. Work included:

- Wharf extension 150m*25-33m wide with access ramp 12m wide
- One berthing dolphin and two mooring dolphins with catwalk access to the wharf
- Installation of 136 dia 1000mm piles
- Installation of formwork for 1m thick wharf & 1.5m thick dolphin concrete deck suspended from the piles
- 19 concrete deck pours up to 400m³ each
- 13 concrete fender panels up to 100t hung along the face of the wharf
- Services
- Demolition of existing concrete dolphin, piles and access catwalks



Complex ramp and transition bend geometry with cantilevered corners

Roam Marine scope:

RM design of temporary works including:

- Suspended formwork system to enable 2*6m bays of the wharf per pour 28-36m wide. Panels consist of a pair of 18m long 800WB at 4.2m centres with 1.8m infill sections along the pile grids.
- Pile caps and hanger bars to support the form



Formwork and rebar for standard 25m*12m pour, Form removal C beams next to 275t crane

- RMD form panels and bracing
- Lifting C beam to enable stripping of a pair of 18m beams complete with 4.2m of form
- Stripping method for the infill panels around piles
- Complex geometry with ramp changes in direction & slope plus cantilevers up to 3.75m
- Fender installation method including precast 55t unit, lifting to vertical and support beams for a total of 100t
- Small boat landing on the back of the old wharf for construction vessels
- Modifications to TAMS piling frame to provide an additional gate and improved access



Boatlanding



Pile cap and stress bars