

Woodside Marine Structures Phase 1

PROJECT DETAILS:

Location:	North West Shelf, Western Australia
Contract Value:	A\$25 million (1983)
Contract Period:	11 months



CLIENT: Woodside Offshore Petroleum

Scope of Work:

The Harbourworks Clough Joint Venture was awarded a contract to construct the Dolphin Berth for Woodside's North West Shelf development project. The berth was a remote component of the total planned marine loadout facility to be used to load condensate vessels until the LNG phase was constructed.

Included in the scope of work were the supply, fabrication and installation of 10 large monotube or single pile dolphins some 800m offshore, together with interconnecting catwalks and two submarine pipelines to link the berth to the onshore piping network.

Monotube dolphins of such a large size (120 tonnes, 3.11m diameter by 37m long tubes) had never previously been used in Australia. The design and mobilisation of the specialist equipment to handle and install the dolphins was a tremendous challenge.

Features of the project included:

- The driving, drilling and pinning of the largest and heaviest piles ever seen in Australia (3.1m diameter and up to 120 tonnes in weight).
- The laying of submarine pipelines and power cable in a pre-dredged trench and backfilling of the trench with graded rockfill material to stabilise and protect the lines for their full length.
- Tie-in and testing of the electrical supply cable and installation of all powered facilities on the berth.

Apart from some specialist proprietary items, all fabrication was performed in Western Australia, using primarily Australian-made materials.