



## ROAM MARINE

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**Project:** BHP Tug Harbour - Hunt Point

**Client:** BHP

**Contractor:** Lend Lease Engineering (LLE) & Austral Construction

**Year:** 2014-16

**Project scope:**

New tug harbour at Hunt Point for 8 tugs + 4 crew boats moored to pontoons

Additional pontoons at Nelson Point + services upgrade

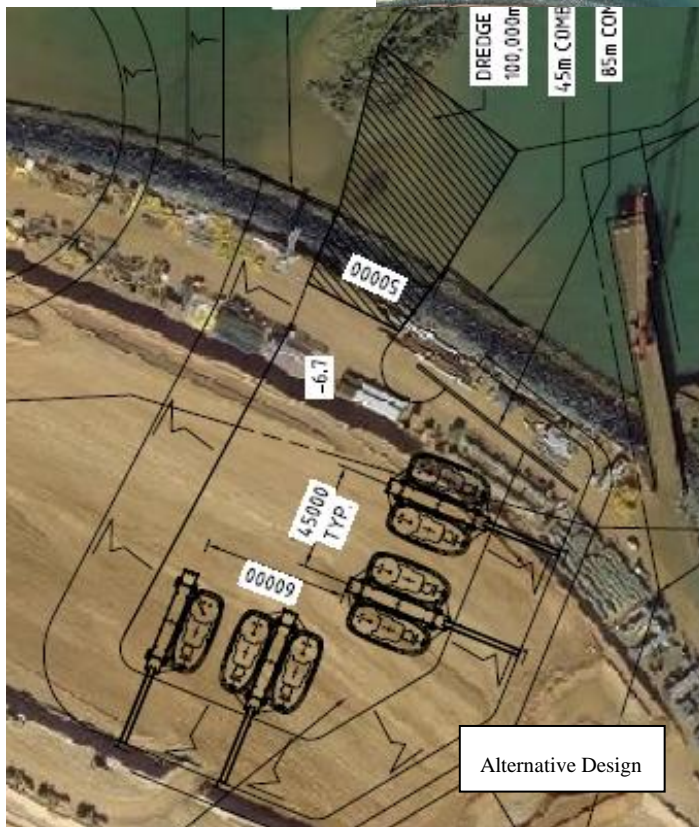
**Roam Marine scope:**

Assist LLE with the tender concept development, engineering, procurement and construction.

**Concept development:**

The tender was for an offshore tug harbour constructed alongside the channel.

The site is exposed to waves on one side which presents design and operational issues. The piled screen wall is expensive and high maintenance. In cyclones the tugs moored between 4 piles rather than to pontoons.



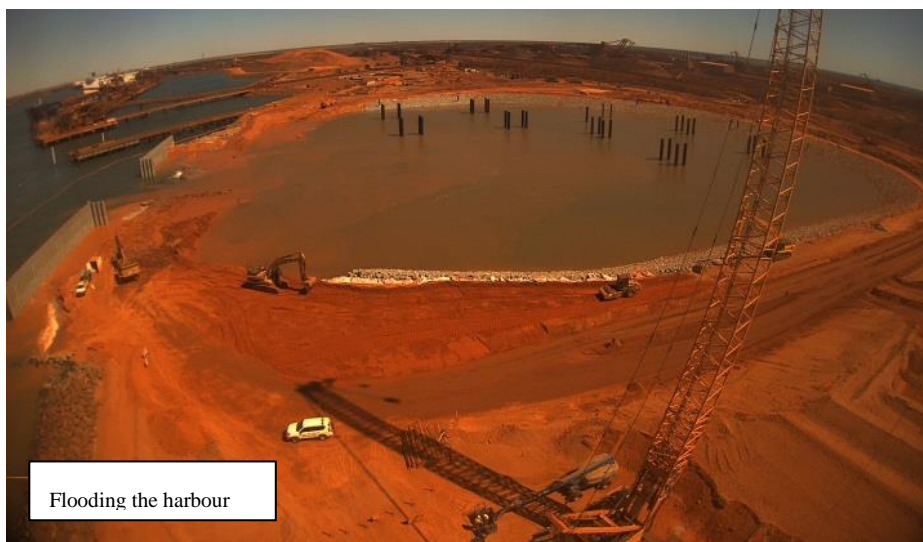
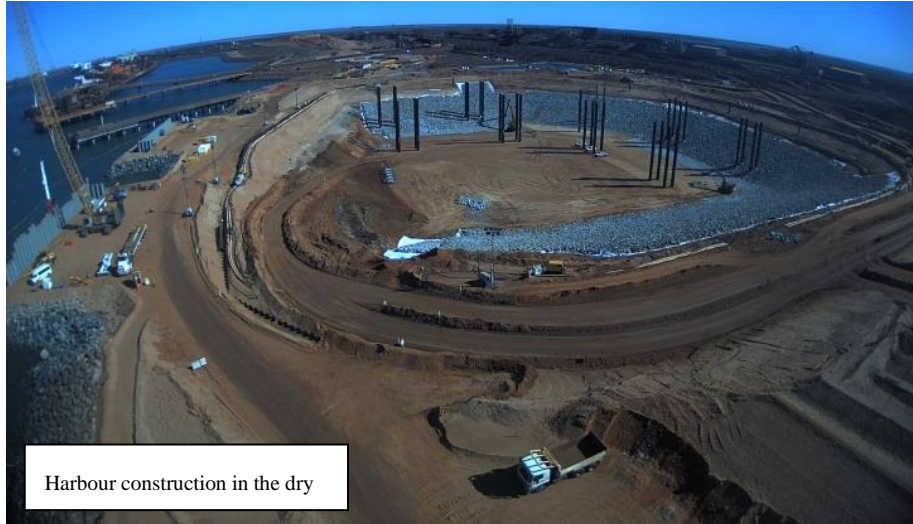
LLE won the contract based on an alternative design developed by Roam Marine that consisted of a sheltered onshore harbour.

The harbour was constructed in the dry onshore and then flooded by removing the seawall at the entrance. A temporary sheetpile cut off wall was used so that the harbour could be excavated and the piles and most of the armour installed in the dry. The harbour was then flooded and the plug removed with a dredge out so the pontoons could float into position. Tugs moor alongside the pontoons even in cyclones.

## Design + construction support:

Roam Marine provided LLE with technical assistance on all marine related items. Scope included:

- Reviewed all marine structural, civil and services drawings – in particular layout, mooring, fendering, constructability, durability and functional considerations.
- Lifting of 180t pontoons and gangways
- Method statement for armour rock installation in the wet



## Temporary works:

Roam Marine designed temporary works for the marine contractor Austral Construction.

Scope included:

- Design of piling gate for combi wall installation including pile stability checks
- Lift engineering for piles and hammer + pile floatation
- Construction barge stability and mooring checks
- Review capacity of loadout wharf



**Site Support:**



Roam Marine provided LLE assistance at site. Scope included:

- Methodology study for installation of remaining rock armour in wet
- Lift studies for marine installation works
- Management on site of marine and onshore subcontractors installing all marine works including pontoons, gangways, fenders, pontoon furniture, electrical & mechanical services, cathodic protection, paint repairs and navigation aids
- MSIC requirements
- Commissioning documents and commissioning,
- Maintenance manuals, spare parts lists

