



PROJECT CASE STUDY CS 005

Project:
Marine Supply Base

Location:
Darwin

Client:
ShoreASCO/NT Government

Main Contractor
Macmahon

Pile Type:
Clutched steel tube retaining wall.

Project Duration:
March 2013 – August 2013

Project Value:
\$5M

MARINE SUPPLY BASE, PORT OF DARWIN

Frankipile Australia was the specialist foundations & geotechnical contractor selected to install the retention wall for the Marine Supply Base development in the Port of Darwin.

The new \$110 million berth, to be owned and operated for 20 years by ShoreASCO, will be built on 8.55 hectares of vacant land adjacent to East Arm Wharf and will play an important role in cementing Darwin's position as a major oil and gas hub. The base will include three marine berths with water, fuel, chemical and drilling mud connections, hard stand and lay down areas, waste management, warehousing and storage capacity, office space and associated facilities. The base will have the capacity to service in excess of 1000 vessels per annum with a 12 hour turn around.



Frankipile installed over 200 steel tubes (1450mm and 1200mm diameter) which were clutched together to form the wharf's sea wall.

The piles were driven to a depth of around 22m with pre-boring and internal relief drilling used to overcome the very challenging ground conditions, including quartz veins of 150MPa and a fluctuating water table.



Locations

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The material in front of the wall will be dredged out under a separate contract to a depth of 15m. High strength anchors will be installed through a heavy concrete capping beam to tie-back the head of the new wharf wall.

Some of the equipment utilised included:

- Fundex 3500 piling rig;
- Soilmec drilling rigs;
- 16T and 20T hydraulic driving hammers (fixed leader and hanging);
- 16T hydraulic vibrators;
- Purpose built driving dollies and other ancillary equipment.



Other related services offered by Frankipile include:

- Large Diameter Bored Piles;
- Enlarged Base "Franki" Piles;
- Driven Precast Piles;
- Continuous flight auger piles;
- Displacement Piles.