

PORT BOTANY EXPANSION PROJECT

DYNAMIC COMPACTION, MARINE & LAND VIBRO COMPACTION, WICK DRAINS AND JET GROUTING



Client: Sydney Ports Authority Ltd

Contractor: Boulderstone JDN Joint Venture
Specialist Contractor: Menard Bachy Pty Ltd

THE PROJECT

In 2005, Sydney Ports Corporation obtained Government approval for the expansion of the existing port through reclamation of 60 hectares of land. The expansion is being constructed adjacent to the existing Patrick terminal and will provide significant additional capacity to meet projected long-term trade growth.

Features of the expansion:

- 1,850 metres of additional wharf face for five extra shipping berths.
- 60 hectares of reclaimed terminal land
- deep water berths with depths of up to 16.5 metres
- dredging of approximately 7.8 million cubic metres of fill material to create shipping channels and berth boxes
- dedicated road access to the new terminal area
- additional rail sidings to provide rail access to the new terminal area
- additional tug berths and facilities
- rehabilitation and expansion of Penrhyn Estuary to create a secure estuarine environment
- community facilities including boat ramp, look outs, pathways

MENARD BACHY'S ROLE

Menard Bachy was subcontracted to carry out the Ground Compaction Works for all fill material dredged from Botany Bay and placed behind the new quay wall of the proposed post extension.

- **Marine Vibro Compaction** – Carried out from a marine barge using V48 vibroflot supplied by Vibro Services GmbH mounted on a 130t Sumitomo crane. The bottom level of compaction was -30m from water level and we treated up to -13m. The overall volume of material treated was 800,000 cubic metres.
- **Land Vibro Compaction** – Carried out using a crane mounted V48 vibroflot supplied by Vibro Services GmbH. The depth of ground compacted was down to -22m. The overall quantity of material compacted was 1.37M cubic metres.
- **Dynamic Compaction** – This utilised a specialist Leibherr 883 and 885 crane dropping a 25t dynamic compaction weight from a height of 23m. The volume of material treated with this method was 5.87M cubic metres.

Ancillary works carried out were jet grouting and installation of wick drains.