



Construction Materials - Major Project Case Study

BARANGAROO SOUTH, SYDNEY, AUSTRALIA

Large scale concrete – demanding pump environment – sustainability focused mixes



Barangaroo South Site - Sydney, 2014.

CLIENT/CONSTRUCTION TEAM

Client: Lend Lease Building Pty Ltd

Project Developer: Lend Lease (Millers Point) Pty Ltd

Location: Hickson Road, Sydney Harbour, Sydney, NSW, Australia

Products: Boral Concrete supply (conventional & ENVISIA® mixes)

Services: Concrete placement by Boral's premium placing arm - De Martin and Gasparini.

PROJECT OVERVIEW

Barangaroo is a 22 Hectare former container terminal on the western edge of Sydney Harbour. Boral Construction Materials has been engaged by Lend Lease to supply concrete to Barangaroo South - the southern 7.5 hectares of the Barangaroo redevelopment.

Concrete supply is via a bespoke Onsite batch plant with a centralised pumping system that pumps into four separate lines to cover the entire site.

Boral's project involvement also extends to concrete placement through De Martin and Gasparini.



Boral's Onsite batch plant

Disclaimers:

1. Boral Laboratory Testing, March 2013, indicated that the manufacture of ENVISIA® concrete with ZEP® technology resulted in a 27% reduction in embedded carbon levels compared to Boral standard 50 MPa PT concrete.

2. Please note that individual products are not reviewed or certified under the Green Star rating system. Green Star credit requirements cover the performance of materials in aggregate, not the performance of individual products or brands. www.gbca.org.au/green-star

PROJECT SCOPE/AIMS

- Offer a Boral concrete solution to assist the client to meet its ambitious sustainability goal - a 20% reduction in embodied carbon across the entire site versus standard methods of construction.
- Tailored concrete mix designs to optimise results under demanding pumping conditions, continuous high volume pours and within a congested Sydney Harbour site layout.
- Boral built a tailored Onsite batch plant to substantially reduce traffic movements – in line with the project's safety and sustainability goals.
- Boral developed a centralised pumping system to substantially reduce the need for agitators on site.

KEY FACTS

- 383,000m³ - Total concrete volume across Barangaroo South.
- Boral supplies ENVISIA® lower carbon concrete¹ and Green Star 3² customised concrete mixes to support world leading sustainable targets.
- Boral's purpose built Onsite concrete batch plant -
 - substantially reduces traffic movements to site and on site;
 - is designed for a demanding pumping environment;
 - supplies directly into four concrete pumps, sending concrete up to 300 lineal metres before pumping up the towers.
- Unique long line concrete mix options to solve difficult pumping environment of long distances plus high towers.
- Australian first for Boral in commercial/residential construction - Agitators not needed for majority of pours
- Elimination of testing cylinders through temperature tagging.

CONTACT US

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