

SYDNEY AIRPORT

PARALLEL RUNWAY FREYSSIMIX JET GROUTING BARRIER



Sustainable Technology



Client: Sydney Airport Corporation Ltd
Consultant: Douglas Partners

Contractor: Boulderstone Hornibrook
Specialist Contractor: Austress Menard Pty Ltd

THE PROJECT

Austress Menard (**AM**) completed, for Boulderstone Hornibrook, the Parallel Runway Rectification Project at Sydney International Airport. Rectification of the retaining walls of Runway 16L/34R (Millstream and Seawall) are carried out by construction of in-situ jet grouted soilcrete (Freyssimix) columns immediately behind the pre-cast concrete panels of the existing mechanically stabilised earth wall.

The soilcrete columns are arranged to form a continuous barrier behind the existing wall. The purpose of the in-situ barrier is:

- To form a mass gravity retaining wall for Runway 16L/34R and the Millstream diversion;
- To stop migration of sand through horizontal and vertical joints of the existing concrete wall panels;
- To stop migration of sand to assist corrosion protection for the steel straps at the connection between soilcrete and precise concrete facing panels.

AUSTRESS MENARD'S ROLE

AM was appointed as a geotechnical specialist contractor to assist in the design and construct of the works. The preliminary phase involved the mobilisation of qualified experts in jet grouting from Menard international team to work in close co-operation with **AM** local staff and the geotechnical consultant as well as the main contractor. **AM** performed several preliminary trial areas on site in order to optimise the jet grouting methodology and working parameters. The works involves the installation Freyssimix jet grouting columns down to a maximum depth of 9 metres and ranging in diameter from 1 to 2.7 metres.

With over 5,000 columns in total, it is the largest jet grouting project in Australia to date.

SYDNEY

13-15 Lyonpark Road, Macquarie Park NSW 2113
Tel: 61 2 9491 7100 Fax: 61 2 9491 7111

BRISBANE

20 Bogan Street, Albion, QLD 4010
Tel: 61 7 3862 1511 Fax: 61 7 3862 1516

MELBOURNE

41 Boundary Road, North Melb. VIC 3051
Tel: 61 3 9321 1333 Fax: 61 3 9326 8996

AUCKLAND

PO Box 72734, Papakura, Auckland NZ
Tel: 64 9 236 3385 Fax: 64 9 236 3385