

The Multi Service Group.

Parallel Runway Rectification

Sydney Airport, Australia



In 1993 Sydney's international Airport was extended with a new runway built into the Botany Bay. The seawalls were constructed using reinforced earth with a 4-5m high precast concrete facing and steel reinforcing strips.

In recent years subsidence of fill was noticed in the fill behind the precast concrete panels.

In cooperation with Bilfinger Berger's Australian subsidiary Baulderstone Hornibrook Pty. Ltd. the Bilfinger Berger Spezialtiefbau GmbH developed a modification concept for the existing construction based on the jet grouting method.

6,900 jet grouted columns form an 8.8 km continuous jet grouted wall behind the existing precast wall, in order to seal the joints and to form a gravity wall.

The major part of the wall was too close to taxiways and runways, so the only possibility was to execute works in nightshift during curfew hours (11pm to 6am) in order to avoid interfering with flight operations.

Unlimited mobility of all jet grouting equipment was required in order to meet airport safety requirements to clear the apron after each shift and to evacuate the area in emergency situations.

Only the fully automated grout batching plant (type BB Mix 60) was stationary installed outside the airfield. The grout was delivered with special tank-trucks to the jet grouting units on site.

A close cooperation with Sydney Airport made it possible to comply with all special safety and security requirements of the international airport. Due to many years of experience in jet grouting operation the high quality standards were met and construction time was significantly shorter than estimated.

Quantities:

6,900 Columns (approx. 100,000 m³ Jet Grouting)

Contract Value (net):

14.1 Mio. EURO

Construction Period:

08/2005 - 09/2006

Client:

Sydney Airport Cooperation Limited

Services:

Jet Grouting

Contact:

Bilfinger Berger Spezialtiefbau GmbH
Goldsteinstrasse 144
60528 Frankfurt

GERMANY

www.foundation-engineering.bilfingerberger.com

Baulderstone Hornibrook Pty. Ltd.
Civil Engineering
Level 10
40 Miller Street
North Sydney NSW 2060

AUSTRALIA