

Project Case Study

TOTAL
CONSTRUCTION

Concept to Completion

Project

Flight Catering
Facility Building

Location

Sydney Airport, NSW

Client

Alpha Flight Services

Project cost

\$3.5 million

Completion

January 2010



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Sydney Airport Corporation chose Total Construction to build this facility to house a flight catering kitchen for their client, Alpha Flight Services. The contract was in two stages – a building and fit out which was required to meet HACCP standards.

The site is situated on a small portion of land surrounded by 3 runways and General Homes Drive and 2 radar installations near the boundary. Very restrictive height constraints apply to the site being so close to the runway flight paths. The building is constructed to the maximum possible height to keep it under the DVOR (Doppler Very High Frequency Omni-Range Radar) height limit, with an exception for the exhaust flue where special approval from Air Services Australia was required.

The building is metal clad, steel portal structure built on contaminated sandy soil. Internals were finished out to a high standard food preparation grade, with cool rooms, freezers, and commercial kitchen food preparation equipment with the capacity to handle 3,000 to 4,000 complete meals a day.

The project presented several challenges:

- Continuous watering by truck and hand was required to suppress dust from the sandy soil to avoid problems for air traffic controllers.
- A maximum working height allowable of AHD 15.000. Existing ground level was AHD 3.000 to 5.000, so we were restricted to 10.000m height to build a 7.000m high structure. All structural steel had to be erected using Frana cranes with next to no sling height.
- Roof sheeting 40m long was required which meant sheets had to be rolled on site. Lifting onto the roof structure required an 80tonne crane with 60m jib and this had to be done during airport curfew hours between 11pm and 4am, approval of which had to be obtained from Air Services Australia.
- Installation of 12tonne precast water tanks below ground, with the base 600mm below the water table in sandy soil. The ground bearing pressure in the vicinity of the tanks required an 80tonne all terrain crane with a long reach to keep the boom flat beneath the 10.0m maximum height limited.
- Storm water retention tank at the low end of the site which required spear pumps to lower ground water locally to enable the installation of the tank.

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