



Owner : Grocon Constructors Pty Ltd
Architect : Fender Katsalidis Architects
Engineering consultant : Connell Mott McDonald

Subsidiary(ies) : Freyssinet Australia

Beginning of works : 08/2002
End of works : 11/2006



Description of the work :

The Eureka Tower project, when completed, will lay claim as the tallest residential tower in the world. The 92 level tower reaching 300m above ground is situated along the Yarra River in Melbourne's Southbank district. Construction cost for the tower is estimated at around \$500M. The residential tower consists of 10 levels of parking to serve tenants and public on 82 levels above. Eureka Tower will boast the world's highest nightclub at Level 87 and the world's second highest apartment at level 84. The total floor area of post-tensioned slabs is approximately 110,000m². The residential tower comprises three typical floor plates, Levels 12 to 56 (typically 1300m² floor plates), Level 57 to 65 (typically 1000m² floor plates) and Levels 66 to 92 (typically 650m² floor plates). The typical residential floor plates are a combination of post-tensioned and reinforced slabs and beams. Original design consisted of 150mm thick reinforced slabs spanning to 450 deep x 1500 wide post-tensioned band beams. Post-tensioned bands typically span from central core to building perimeter. A combination of 800 deep reinforced and post-tensioned beams make-up the perimeter. During a value engineering exercise of the structure, two band beams were removed from the floor plates. To accommodate the larger span, the 150mm reinforced slabs were replaced with a 210mm post-tensioned slab. By adjusting the floor plate layout, Grocon Constructors were able to reduce concrete, reinforcement and formwork quantities and increase construction productivity.

Freyssinet mission :

Freyssinet Australia was awarded the design & construct contract by Grocon Constructors. During the tender period Freyssinet Australia's design team worked with Grocon Constructors to develop a number of floor schemes to enable a cost effective floor system. During the construction phase, our design team worked closely with Grocon and Connell Mott MacDonald in order to co-ordinate the design interfaces, building services and develop techniques to maximise efficiencies in construction.