

583 Darling Street, Rozelle NSW 2039
Telephone: 9555 7230
Facsimile: 9555 7239
Email: birzulis@tpg.com.au

28 October 2009

**STRUCTURAL REPORT
WELLES THOMAS PLAZA DEVELOPMENT
AT THOMAS STREET AND ALBERT AVENUE, CHATSWOOD**

We have provided consulting structural engineering advice for the Welles Thomas Plaza development from the inception of this project. The proposed development consists of up to five levels of basement construction, plaza level commercial space together with pedestrian open spaces, a 21 storey office building and a 30 storey apartment building.

Basements

We are familiar with the ground conditions in Albert Avenue, Chatswood as we have previously provided engineering services for the multi storey Willoughby Council carparking structures in Albert Avenue. We envisage construction of contiguous concrete pier basement walls surrounding the excavation and basement floor slab construction to withstand possible uplift pressures from groundwater flows. The basement floors would be post tensioned concrete band beam construction supported on reinforced concrete blade columns placed between carparking spaces spanning generally three carparking bays.

Plaza

The plaza slabs will be post tensioned slabs supported on beams and blade columns extending from the basement structure. Tanking membranes will be provided on the external plaza areas to prevent water ingress into the basements.

Office Building

The office building will be a reinforced concrete framed structure with concrete columns on a grid of 8.4m by 8.1m. This column spacing lends to an economical flat plate post tensioned concrete floor system that will allow free circulation of service ducts in the ceiling space. The lift and stair shafts will be of reinforced concrete construction.

Apartment Building

Will consist of reinforced concrete column and reinforced concrete wall system supporting post tensioned concrete floors. The dividing walls between apartments will be concrete walls that will provide the load carrying ability and also will provide good acoustic separation between the units. It is envisaged that the concrete walls will be constructed in pre-formed permanent panel wall formwork that will allow for economical and fast construction of the walls.

We have made preliminary structural frame analysis of the office and apartment buildings under wind and earthquake loadings. We have found that the proposed building frames have adequate strength to withstand the lateral loads and the horizontal deflections due to the lateral loading is well within acceptable engineering limits.

Yours faithfully



ALDIS BIRZULIS
Director