

28 May 2008

081052

61 – 67 HALL STREET, BONDI STRUCTURAL REPORT

61 – 67 Hall Street, Bondi is a seven-storey residential and retail development with 3 basement carparking levels. The building spans over four separate lots and is located between Hall and O'Brien Streets.

Foundations and Shoring

The existing building comprises of three (3) buildings with no basements and the Hakoah Club, which has 2 carparking basements and shoring walls.

The proposed development involves excavating down to RL 8.8, which is 13 metres below Hall Street and 10 metres below O'Brien Street.

A geotechnical investigation is currently being carried out by Douglas Partners.

The proposed foundation system is pad footings bearing on rock.

The shoring system proposed is a contiguous piled wall system temporarily restrained by ground anchors that would be located under the neighbouring properties of both Hall and O'Brien Streets. The shoring system is further complicated in the Hakoah Club area as the new shoring system must be located inside the line of the existing concrete retaining walls and its foundations.

Structure

The structure is a concrete framed building with lift and stair shafts to provide lateral stability.

The basement and retail levels are a post tensioned banded slab with a column grid based on a three car bay (8.6 m).

The residential and hotel levels (level 1 to level 7) are a post tensioned flat plate.

The roof structures are of concrete construction.

The pool located on the ground level is to be acoustically isolated. This will be achieved by supporting the water containing structure on acoustic isolation bearings which in turn will be supported on reinforced concrete beams spanning under the pool to the adjacent columns on each side. In addition to this a perimeter isolation joint will be used to prevent acoustic transmission horizontally at the pool edge.

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The facade of the building consists of glazed elements, masonry walling and concrete facade units. These units may be of in situ or precast concrete and will be a minimum of 120 mm thick in order to achieve the correct level of durability in the marine atmosphere. They are non-structural elements, their self weight being supported by the building floor slabs at each level.

There are several beam transfer structures at ground level which will be used where the column grid of the accommodation above ground level does not line up with a car parking grid in the basement levels. These will be prestressed concrete bands.

We have undertaken a level of structural analysis to confirm the key structural element dimensions, the results of this analysis is marked up on the attached drawings which also include expected reinforcement rates, transfer depths, column and core sizes and other structural information.

Design Loads

	Superimposed Dead Loads	Design Live Load
Residential	2.5 KPa	2 KPa
Retail	3.5 KPa	5 KPa
Loading Docks	1.0 KPa	15 KPa
Plant	1.0 KPa	10 KPa
Carpark	0.5 KPa	2.5 KPa

For and on Behalf of
TAYLOR THOMSON WHITTING (NSW) PTY LTD



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