

9 March 2020

Richard & Kellie Spurrett
21/61 North Steyne
Manly NSW 2095

Email: spurrett@bigpond.net.au

Dear Richard and Kellie,

**19020 – 21/62 North Steyne, Manly
Proposed Unit Renovations**

Further to our involvement with the above project and review of the documentation attached to your email dated 9 March 2020 (as noted below and dated 20 and 24 February 2020), we comment as follows.

A01/E	F01/E	H01/E
A02/E	F02/E	H02/E
A03/E	F03/E	H03/E
A04/E	F04/E	M01/E
A05/E	F05/E	AD01/E
A06/E	E01/E	AD02/E
P01/E	E02/E	Renovation Technical Notes (14 pages)

We have provided structural engineering advice to the Executive Committee and individual Unit owners of this building for approximately ten years. Based on (limited) available drawings and our historical observations, the building consists of a load bearing concrete frame (stair/lift shafts, columns and floor slabs), with non-load bearing masonry walls (in theory).

However, the masonry walls can be built against the concrete soffits over, resulting in the walls being partially load bearing in practice. Under this circumstance, removal of any wall section could result in deflections of the floors over that are high enough to crack tiling and any other brittle finishes. Hence, we request individual confirmation on site that there is a gap to the soffit over, otherwise the addition of support beams would be required.

Based on our 24 April 2019 site inspection and the subsequent photographic survey provided, we are satisfied that gaps occur to the tops of all (approximately 18 linear metres) of the existing walls proposed for removal and therefore no beams will be required. Non-percussive equipment shall be used to remove the walls in small sections so as not to send significant vibrations throughout the building.

Where the two small sections of masonry wall are being retained adjacent to the entry, these will need to be inspected following demolition work and retrofitted with head restrained ties, should these ties not exist in the current construction.

At the proposed mechanical ventilation penetrations through the external masonry walls (three locations), wall stiffeners will need to be installed, as shown on the attached Drawing Nos. 19020/SK1 and 19020/SK2. It is noted that no additional hydraulic penetrations will be required through the concrete structure as part of the works.

We note that it is intended to remove all of the magnesite floor topping. The concrete surface should be inspected by this office following these removal works, in order to determine if any concrete repair works are required prior to replacement with an alternative topping for levelling (if required), prior to installation of the acoustic flooring.

As there are no drawings available of the existing floor slab reinforcement, we are unable to confirm the quantum of additional load that the floor can carry or its deflection and therefore performance with respect to brittle finishes such as tiles. Hence, we strongly recommend that the existing finished levels at the balconies are not exceeded as part of the new tiling works. Similarly, we strongly recommend that the total build up for the internal acoustic flooring does not exceed 50kg/m² and that this flooring is placed with liberally spaced control joints.

There will be a nett reduction in the dead load on the full area of the floor of the Unit in question. This dead load reduction is negligible compared to the total loads in the columns and footings of the building (which are constantly changing with building live load) and hence the work will have no negative impact on these structural components and therefore the building as a whole.

Please contact the undersigned should any clarification of the above be required.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Mark Manning', with a long horizontal flourish extending to the right.

MARK MANNING for
GCA CONSULTANTS