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Reference: 4395-b

Date: April 28, 2010

To: The Owners of SP 52948

C/- Raine & Horne Strata - Sydney
PO Box 881
Epping NSW 1710

Attention: John Fry

By Email: johnf@bcms.com.au

Re: **1-15 Fontenoy Road**
Macquarie Park NSW 2113

Report
Block D – Internal Wall Cracking at L2

Introduction

As requested, an inspection of the area on level 2 (Entry Level) behind the lift shaft was carried out by the undersigned in joint attendance with you. The purpose of the inspection was to ascertain the significance of cracking which has occurred to the masonry calsil brick walls and assess their any impact, if any, on the structural integrity of the building.

The building is approximately 15 years old and consists of:

- Level 1 - a basement car park level consisting of reinforced concrete slabs cast on grade
- Level 2 to 9 - eight upper levels of residential units consisting of reinforced concrete floor slabs
- Roof- constructed as a reinforced concrete slab

A significant number of project architectural and structural drawings were made available for our perusal and assisted us in the preparation of this report.

Attached are some plans and details as well as photographs of the cracking observed.

The inspection was visual only and non-intrusive (ie. no areas were opened up).

Observations

As far as we can ascertain, the construction consists of:

- a basement slab on ground
- reinforced concrete floor slabs (including the roof) supported by load bearing reinforced concrete walls and columns.

As far as we can ascertain, the brick walls are not load-bearing.

Defects include:

- Cracking or separation of the walls from the slab soffits
- Diagonal wall cracks
- Some slab cracking at the stair landings.

It is most likely that the reinforced concrete building frame was constructed first and the walls were constructed (retro-fitted) afterwards.

The reinforced concrete slabs are susceptible to:

- instantaneous deflections as they are loaded with the dead weight of the walls during construction

- further time-dependant creep deflections which are progressive over several years and could be as much as twice the initial (instantaneous) deflections.

We consider that the wall cracking has occurred as a consequence of the short and long term deflectiond of the supporting suspended floor slabs. These deflection would now have substantially been exhausted and the cracking stabilised.

The slabs, however, will continue to undergo some lesser on going-deflections as 'Live Load' (furniture, fittings, floor coverings, etc) is either added or reduced on the floor slabs.

The slab cracking referred to above is most likely due to slab shrinkage effects and is not considered to be of significance from a structural aspect.

Recommendations

We consider that the defects observed do not adversely impact on the structural adequacy of the building.

Rectification for aesthetic reasons should, however, be carried out.

The rectification work would involve:

- removal and replacement of existing drummy render (walls adjacent to Units 99 & 100 entry doors) and spalled corners (refer photographs P5 & P6). It is worthwhile that we inspect at the start of the carrying out of this part of the works.
- re-pointing the cracked joints with a 1:1:6 (Cement:Lime:Sand) mortar
- tops of walls to underside off slabs should be sealed with an elastomeric sealant
- making good (cornices, etc), painting, etc

We trust that the above is of assistance.
Please contact the undersigned in relation to any queries or clarification.

Yours faithfully
MURDOCCA & ASSOCIATES PTY LTD

V P MURDOCCA; BE (Hons), M Eng Sc, FIE Aust, CPEng
(PRINCIPAL)