S I M O N R O S E W E L L

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28.10.13

BUILDING COMPLIANCE REPORT TO BE READ IN CONJUNCTION WITH THE SECTION 149B CERTIFICATE FOR 3/28 REDDALL STREET, MANLY

UNIT 3 MAIN STAIR

The original stair was not compliant with the BCA;

- risers were greater than allowable
- risers were of inconsistent height
- there was no landing at the top of the flight
- there was no balustrade as required due to a drop of over 1m to the lower section of the stair
- the handrail to the lower section of the stair was at the wrong height

Replacement was necessary from a safety point of view as well as from a structural point of view. The engineer engaged by the Company advised the lower section of the stair was required to be rebuilt and the Company agreed to the reconstruction.

The Company appointed engineer recommended the course of action to rectify the collapse of the stair. The stair was partially rebuilt as per the engineer's specification and drawing.

The location and configuration of the main stair to Unit 3 remains essentially as it was originally and is now compliant with the BCA Part D2 Construction of Exits. The lower section of the stair that was agreed to be re-built contains an additional tread which is under 300mm in order to make the stair compliant.

the extract from the BCA stipulates the minor modifications as noted below:

D2.13 Goings and risers

A stairway must have-

(a) not more than 18 nor less than 2 risers in each flight; and
(b) except as permitted by (i), going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13; and
(c) except as permitted by (i), goings and risers that are constant throughout in one flight; and
(d) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and
(e) treads which have a non-slip finish or an adequate non-skid strip near the edge of the nosings; and
(f) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and
(g) in a Class 9b building - not more than 36 risers in consecutive flights without a change in direction of at least 30°; and
(h) in the case of a required stairway, no winders in lieu of a landing; and
  (i) in the case of a non-required stairway- (i) not more than 3 winders in lieu of a quarter landing; and
  (ii) not more than 6 winders in lieu of a half landing; and
  (iii) the going of all straight treads must be constant throughout the same flight; and
  (iv) the going of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight provided that the going of all such winders is constant.

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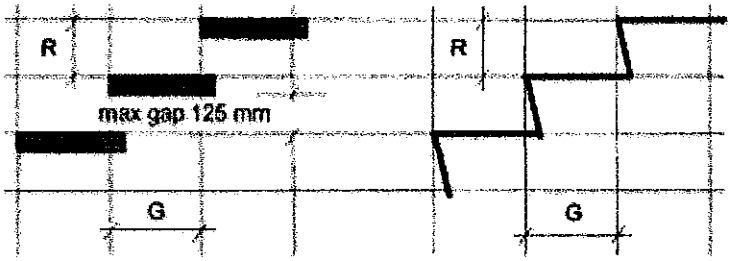
Table D2.13

RISER AND GOING DIMENSIONS (mm)

	Riser (R)		Going (G)[b]		Quantity (2R+G)	
	Max	Min	Max	Min	Max	Min
Public stairways	190	115	355	250	700	550
Private stairways[a]	190	115	355	240	700	550



Note:

(a) Private stairways are-

(i) stairways in a *sole-occupancy unit* in a Class 2 building or Class 4 part; and

(ii) in any building, stairways which are not part of a *required exit* and to which the public do not normally have access.

(b) The going in tapered treads (except winders in lieu of a quarter or half landing) in a curved or spiral stairway is measured-

(i) 270 mm in from the outer side of the unobstructed width of the stairway if the stairway is less than 1 m wide (applicable to a non-*required* stairway only); and

(ii) 270 mm from each side of the unobstructed width of the stairway if the stairway is 1 m wide or more.

D2.14 Landings

In a stairway-

(a) landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must-

(i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and

(ii) have a non-slip finish throughout or an adequate non- skid strip near the edge of the landing where it leads to a flight below; and

(b) in a Class 9a building-

(i) the area of any landing must be sufficient to move a stretcher, 2 m long and 600 mm wide, at a gradient not more than the gradient of the stairs, with at least one end of the stretcher on the landing while changing direction between flights; or

(ii) the stair must have a change of direction of 180°, and the landing a clear width of not less than 1.6 m and a clear length of not less than 2.7 m.

D2.15 Thresholds

The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless-

(a) in patient care areas in a Class 9a health-care building, the door sill is not more than 25 mm above the finished floor level to which the doorway opens; or

(b) in a Class 9c aged care building, a ramp is provided with a maximum gradient of 1 in 8 for a maximum height of 25 mm over the threshold; or

(c) in other cases-

(i) the doorway opens to a road or open space, external stair landing or external balcony; and

(ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.

D2.16 Balustrades or other barriers

(a) A continuous balustrade or other barrier must be provided along the side of any roof to which public access is provided, any stairway or ramp, any floor, corridor, hallway, balcony, verandah, mezzanine, access bridge or the like and along the side of any path of access to a building, if-
  (i) it is not bounded by a wall; and
  (ii) its level above the surface beneath, is more than- (
    A) 4 m where it is possible for a person to fall through an openable window; or
    (B) 1 m in any other case,

except at the perimeter of a stage, rigging loft, loading dock or areas referred to in D2.18.

(b) A balustrade or other barrier in-
  (i) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and
  (ii) Class 7 (other than carparks) and Class 8 buildings and parts of buildings containing those classes, must comply with (f) and (g)(i).

(c) A balustrade or other barrier in stairways and ramps, other than those covered in (b), must comply with (f) and (g)(ii).

(d) A balustrade or other barrier along the side of a horizontal or near horizontal surface such as a-
  (i) roof to which public access is provided and any path of access to a building; and
  (ii) floor, corridor, hallway, balcony, verandah, mezzanine, access bridge or the like, must comply with (f) and (g)(ii).

(e) A balustrade or other barrier in front of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b building must comply with (f)(iv) and (g)(ii).

(f) The height of a balustrade or other barrier must be constructed in accordance with the following:
  (i) The height is not less than 865 mm above the nosings of the stair treads or the floor of a ramp or other path of travel with a gradient not less than 1:20.
  (ii) The height is not less than-
    (A) 1 m above the floor of any access path, balcony, landing or the like where the path of travel has a gradient less than 1:20; or
    (B) 865 mm above the floor of a landing to a stair or ramp where the balustrade or other barrier is provided along the inside edge of the landing and does not exceed a length of 500 mm; or
    (C) 865 mm above the floor beneath an openable window.

  (iii) A transition zone may be incorporated where the balustrade or other barrier height changes from 865 mm on the stair flight or ramp to 1 m at the landing.
  (iv) For a balustrade or other barrier provided under (e), the height above the floor must be not less than-
    (A) 1m;or
    (B) 700 mm and a horizontal projection extends not less than 1 m outwards from the top of the balustrade.

(g) Openings in a balustrade or other barrier must be constructed in accordance with the following:
  (i) For a balustrade or other barrier provided under (b)-
    (A) the space between balusters or the width of any opening (including any openable window or panel) must not be more than 300 mm; or
    (B) where rails are used, a rail must be provided at a height of not more than 150 mm above the nosings of the stair treads or the floor of the landing, balcony or the like and the space between rails must not be more than 460 mm.

(ii) For a balustrade or other barrier other than those provided under (b)-
    (A) any opening does not permit a 125 mm sphere to pass through it and for stairs, the space is measured above the nosings; and
    (B) for floors more than 4 m above the surface beneath, any horizontal or near horizontal elements between 150 mm and 760 mm above the floor must not facilitate climbing.

D2.17 Handrails

(a) Except for handrails referred to in D2.18, handrails must be-
  (i) located along at least one side of the ramp or flight; and
  (ii) located along each side if the total width of the stairway or ramp is 2 m or more; and
  (iii) not more than 2 m apart in the case of intermediate handrails; and
  (iv) in a Class 9b building used as a primary school-
    (A) have one handrail fixed at a height of not less than 865 mm; and
    (B) have a second handrail fixed at a height between 665 mm and 750 mm, measured above the nosings of stair treads and the floor surface of the ramp, landing or the like; and

(v) in any other case, fixed at a height of not less than 865 mm above the nosings of stair treads and the floor surface of the ramp, landing, or the like; and

(vi) continuous between stair flight landings and have no obstruction on or above them that will tend to break a hand-hold.

(b) Handrails–

(i) in a Class 9a health-care building must be provided along at least one side of every passageway or corridor used by patients, and must be-

(A) fixed not less than 50 mm clear of the wall; and

(B) where practicable, continuous for their full length.

(ii) in a Class 9c aged care building must be provided along both sides of every passageway or corridor used by residents, and must be-

(A) fixed not less than 50 mm clear of the wall; and

(B) where practicable, continuous for their full length. (c) Handrails required to assist people with disabilities must be provided in accordance with D3.3(a)(ii).

Any minor dimensional differences to the stair are a direct result of constructing the stair to meet required NSW standards of construction. The compliant construction was also necessary for safety to the public, to satisfy Council requirements, for legal obligations to the Company, for insurance and liability requirements, as well as for certification.

There is no environmental impact as a result of the minor modifications to bring the stair into compliance, and this was required to be undertaken as noted above.

UNIT 3 REAR STAIR

The original stair was not compliant with the BCA;

- risers were of inconsistent height
- there was no landing at the top of the flight
- the handrail was not compliant

Replacement was necessary from a safety point of view as well as from a structural point of view, due to the evident decay of the existing timber stair.

The Company approved the re-building of this stair

The location and configuration of the rear stair to Unit 3 remains essentially as it was originally and is now compliant with the BCA Part D2 Construction of Exits. A landing had to be added to the top of the stairs as per D2.14 & D2.15 and it has been created to the minimum permissible dimension of 750mm.

Any minor dimensional differences are a direct result of constructing the stair to meet required NSW standards of construction. The compliant construction was also necessary for safety to the public, to satisfy Council requirements, for legal obligations to the Company, for insurance and liability requirements, as well as for certification.

There is no environmental impact as a result of the minor modifications to bring the stair into compliance, and this was required to be undertaken as noted above.

UNIT 3 MINOR MODIFICATIONS

There have been a few minor changes to the layout of the apartment and the kitchen has been retained on the northern side as it was originally. These minor changes to internal walls are classified as exempt development under the governing legislation at the time, which was the Manly Council LEP 1988

Manly Local Environmental Plan 1988
Schedule 8 Exempt development
Minor internal alterations and exterior maintenance and renovation

generally

- *Non-structural;*
- *Relates to previously completed building;*
- *Does not apply to food shops;*
- *Does not apply to buildings identified as a heritage item nor within an identified conservation street or area;*

This was the Planning Control relating to such work at the time (note the State controls did not override this legislation at the time). The minor works undertaken in variance to the DA are non-structural; the structural component having been previously approved as a component of the Development Approval. These works are also covered under the Complying Development provisions and have been certified accordingly.

There is no environmental impact as a result of the minor modifications to the apartment, the minor modifications noted are consistent with the regulatory controls and are all minor works consistent with a residential dwelling and are all components of the original apartment that has been refurbished and undergone the approved alterations and additions.

SUPPORTING CERTIFICATION

This submission includes the following relevant articles of certification which support compliance with the Planning Controls, Building Regulations and legal obligations – see Appendix

- Engineer's entry stair plan issued to the Company and built to
- Engineers Certificate for the Stairs
- Builders Compliance Statement
- Record of inspection from the Building Certifiers
- Construction Certificate

CONCLUSION

it is evident that the minor modifications to the stairs had to occur due to safety, the works had to comply with current regulations and they have been constructed to satisfy these regulations with the minimum variation. The minor modifications to the approved plans are works consistent with exempt and complying development. As with the minor modification to the stairs the works have no environmental impact.

APPENDIX

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