File: 2013/1528

Thursday, 17 June 2015

Harbord Diggers – Mounties Group
c/o Cerno Management
Suite 2, Level 4
280 George Street
SYDNEY NSW 2000

Email: gharding@cerno.com.au

Attention: Mr Grant Harding

RE: BCA REVIEW OF ARCHITECTURAL DOCUMENTATION FOR HARBORD DIGGERS REDEVELOPMENT
80 EVANS STREET, FRESHWATER NSW 2096

1.0 INTRODUCTION

This statement has been provided following an assessment of the architectural documentation for the proposed Harbord Diggers Redevelopment at 80 Evans Street, Freshwater. The assessment has been undertaken against the Deemed-to-Satisfy provisions of the relevant sections of the BCA 2015.

2.0 PURPOSE

The assessment is undertaken for the purpose of, and to the extent necessary for, submission with the Section 96 Development Application submission to Council under Part 4 of the Environmental Planning and Assessment Act.

3.0 BUILDING USE

The proposed project consists of a redevelopment of the existing Harbord Diggers Community Club to include a number of community facilities and senior's independent living apartments. The mixed use nature of the development has resulted in a number of BCA classifications. A summary of the classifications and building particulars is provided below:

AREA	BCA CLASSIFICATION	AREA	BCA CLASSIFICATION
Community Club	Class 9b	Seniors Independent Living	Class 2
Gymnasium	Class 9b	Carparks and loading docks	Class 7a
Child Care Centre	Class 9b	Retail tenancies	Class 6
Seniors Living Lounge	Class 9b	Community Recreation areas (Billiards, Cinema, Art Room)	Class 9b
Swimming Pool & ancillary facilities	Class 10b & 9b		

3.1 SUMMARY OF CONSTRUCTION DETERMINATION

NUMBER OF STOREYS CONTAINED	8
RISE IN STOREYS	6
TYPE OF CONSTRUCTION REQUIRED	Type A
EFFECTIVE HEIGHT	19.05m (Bld F 35.34 – LG Bin Area16.40m)

4.0 NEW WORK

Clause 145 of the Environmental Planning and Assessment Regulation 2000 (EPAR) requires that all new work comply with the current requirements of the Building Code of Australia (BCA).

5.0 DESCRIPTION OF WORKS

The proposed works involve:

- The excavation and construction of two levels of basement carparking;
- The partial demolition and adaptive reuse of the existing community club to construct a new Community Club that will include food and beverage tenancies as well as a Gymnasium, Child Care Centre, Community Recreation Facilities and an Aquatic Centre.
- The construction of six buildings above the podium level to accommodate 96 sole occupancy units for independent seniors living.

6.0 COMPLIANCE WITH THE BUILDING CODE OF AUSTRALIA

A preliminary review of the proposed design that will form part of the Section 96 Development Application submission to Warringah Council has been undertaken. We confirm the design as shown on the drawings referenced in Appendix A are capable of achieving compliance with the BCA. Some aspects of the design are proposed to be addressed by way of a fire engineered Alternative Solution to meet the relevant Performance Requirements of the BCA. These aspects include but are not limited to the below items which will need to be addressed by an accredited C10 Fire Engineer and verified by Steve Watson and Partners prior to the issue of a Construction Certificate –

- To permit reduced horizontal spandrel dimensions;
- To permit active fire walls in lieu of passive fire walls;
- To permit unprotected openings to be within 3m of the adjoining parcel of land;
- Extended egress travel distances in commercial and residential areas;
- Configuration and discharge points of fire-isolated stairways;
- Protection of paths of travel to the road from discharge point of fire-isolated stairways;
- To permit travel by non-fire isolated stairs that are not continuous by way of its own flights and landings;
- To permit the discharge of some exits to not discharge to open space;
- To permit paths of travel on the Upper Ground Floor passing within 3m of the openings to Palm Gully and the Void space;
- To permit the hydrant pump room to not be directly accessed from a road or open space;
- To permit openings in the building to be within 2m of the hydrant booster outlet;
- To permit a minimum of two outlets (each with 10 L/s capacity) operating simultaneously in lieu of the required three outlets for a fire compartment >10,000m2 – applicable to the Class 7a carpark areas;
- To permit the indoor pool to be served by portable fire extinguishers in lieu of fire hose reels;
- To permit the FIP to be located in a room that is not directly connected to a road or open space;
- To permit the use impulse jet fans in the basement car parks in lieu of a traditional ducted system.

Further assessment of the detailed design documents is required prior to the issue of a Construction Certificate.

If you have any queries please do not hesitate to contact me on (02) 9283 6555.

Kind regards,

David Cartwright
Building Regulations Consultant
Steve Watson & Partners Pty Ltd

7.0 APPENDIX A - REFERENCED DRAWINGS

A preliminary BCA assessment has been undertaken on the proposed design as shown in the documentation listed below:

Drawing No.	Drawing Title	Issue	Drawn by
DA000	Cover Sheet & Drawing List	B	Architectus & Chrofi
DA001	Location Plan	A	Architectus & Chrofi
DA002	Site Plan	A	Architectus & Chrofi
DA003	Site Photographic Analysis	A	Architectus & Chrofi
DA004	Site Analysis	A	Architectus & Chrofi
DA006	SEPP 65 Compliance – Solar Access	A	Architectus & Chrofi
DA007	SEPP 65 Compliance – Ventilation	A	Architectus & Chrofi
DA100	Basement 3	C	Architectus & Chrofi
DA101	Basement 2	C	Architectus & Chrofi
DA102	Basement 1	C	Architectus & Chrofi
DA103	Lower Ground	C	Architectus & Chrofi
DA104	Upper Ground	C	Architectus & Chrofi
DA105	Level 1	C	Architectus & Chrofi
DA106	Level 2	C	Architectus & Chrofi
DA107	Level 3	C	Architectus & Chrofi
DA108	Level 4	C	Architectus & Chrofi
DA109	Roof Plan	C	Architectus & Chrofi
DA111	Elevation 1 Evans Street	C	Architectus & Chrofi
DA112	Elevation 2 Carrington Parade	C	Architectus & Chrofi
DA113	Elevation 3 Lumsdaine Drive	C	Architectus & Chrofi
DA114	Elevation 4 McKillop Park	C	Architectus & Chrofi
DA115	Courtyard Elevation – Sheet 1	C	Architectus & Chrofi
DA116	Courtyard Elevation – Sheet 2	C	Architectus & Chrofi
DA117	Courtyard Elevation – Sheet 3	C	Architectus & Chrofi
DA120	Section A	B	Architectus & Chrofi
DA121	Section B	B	Architectus & Chrofi
DA122	Section C	B	Architectus & Chrofi
DA123	Section D	B	Architectus & Chrofi
DA124	Section E	B	Architectus & Chrofi
DA125	Section F	B	Architectus & Chrofi
DA126	Section G	B	Architectus & Chrofi
DA130	Detail Part Elevations – Street Side	B	Architectus & Chrofi
DA131	Detail Part Elevations – Screen Side	B	Architectus & Chrofi

DA132	Detail Part Elevations – Headland Buildings	B	Architectus & Chrofi
DA136	Staging Plan – Existing Structure	A	Architectus & Chrofi
DA137	Staging Plan – Proposed Buildings	A	Architectus & Chrofi
DA138	Demolition Plan	B	Architectus & Chrofi

8.0 APPENDIX B – CONSTRUCTION DETAILS

TYPE A CONSTRUCTION: FRL OF BUILDING ELEMENTS				
Building element		**Class of building - FRL:** (in minutes) Structural adequacy/Integrity/Insulation		
	2, 3 or 4 part	5, 9 or 7a	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any fire-source feature to which it is exposed is-				
For loadbearing parts-				
less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/60	120/ 90/ 90	180/180/120	240/240/180
3 or more	90/60/30	120/ 60/ 30	180/120/90	240/180/ 90
For non-loadbearing parts-				
less than 1.5 m	-/90/90	- /120/120	- /180/180	- /240/240
1.5 to less than 3 m	-/60/60	- / 90/ 90	- /180/120	- /240/180
3 m or more	- / - / -	- / - / -	- / - / -	- / - / -
EXTERNAL COLUMN not incorporated in an external wall, where the distance from any fire-source feature to which it is exposed is-				
less than 3 m	90/ - / -	120/ - / -	180/ - / -	240/ - / -
3 m or more	- / - / -	- / - / -	- / - / -	- / - / -
COMMON WALLS and FIRE WALLS	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS-				
Fire-resisting lift and stair shafts-				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-loadbearing	- /90/90	- /120/120	- /120/120	- /120/120
Bounding public corridors, public lobbies and the like-				
Loadbearing	90/90/90	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- /60/60	- / - / -	- / - / -	- / - / -
Between or bounding sole-occupancy units-				
Loadbearing	90/90/90	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- /60/60	- / - / -	- / - / -	- / - / -
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of Combustion-				
Loadbearing	90/90/90	120/ 90/ 90	180/120/120	240/120/120
Non-loadbearing	- /90/90	- / 90/ 90	- /120/120	- /120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS	90/ - / -	120/ - / -	180/ - / -	240/ - / -
FLOORS	90/90/90	120/120/120	180/180/180	240/240/240
ROOFS	90/60/30	120/ 60/ 30	180/60/30	240/ 90/ 60

9.0 APPENDIX C – SCHEDULE OF PROPOSED STATUS

Measure	Standard of Performance
Access panels, doors and hoppers to fire resisting shafts	BCA2015 Clause C3.13 and tested prototypes (AS 1530.4 – 2005)
Automatic fail safe devices	Scheduled devices release upon trip of smoke detection, fire detection or sprinkler activation in accordance with BCA2015 Clause D2.21.
Automatic fire detection and alarm system *(smoke detection system)*	BCA2015 Specification E2.2a and AS 1670.1 – 2004
Automatic fire detection and alarm system *(smoke alarm system)*	BCA2015 Specification E2.2a and AS 3786 – 1993
Automatic fire suppression systems *(Sprinklers)*	BCA2015 Specification E1.5 and AS 2118.1 – 1999
Emergency lighting	BCA2015 Clause E4.2, E4.4 and AS 2293.1 – 2005
Sound System and Intercommunication System for Emergency Purposes (aka EWIS)	BCA2015 Clause E4.9, and AS 1670.4 – 2004
Exit signs	BCA2015 Clause E4.5, NSW E4.6, E4.7, E4.8 and AS 2293.1 – 2005
Fire dampers	BCA2015 Clause C3.15 and AS/NZS 1668.1 – 1998 (AS 1682.1-1990 and AS 1682.2-1990)
Fire doors	BCA2015 Specification C3.4 and AS 1905.1 – 2005
Fire hydrants systems	BCA2015 Clause E1.3 and AS 2419.1 – 2005
Fire seals protecting opening in fire resisting components of the building	BCA2015 Clause C3.15, Specification C3.15 and AS 1530.4 – 2005 and AS 4072.1 – 2005 and installed in accordance with the tested prototype.
Fire shutters	BCA2015 Specification C3.4 and AS 1905.2 – 2005
Hose reel system	BCA2015 Clause E1.4 and AS 2441 – 2005
Lightweight construction	BCA2015 Specifications C1.8, Clause A2.3 and AS 1530.4-2005
Mechanical air handling system *(automatic shut down of air-handling system)*	BCA2015 Clause E2.2 and AS/NZ 1668.1-1998
Mechanical air handling system *(carpark mechanical ventilation system)*	BCA2015 Table E2.2a and Clause 5.5 of AS/NZ 1668.1-1998 and fans with metal blades suitable for operation at normal temperature may be used and the electrical power and control cabling need not be fire rated
Portable fire extinguishers	BCA2015 Clause E1.6 and AS 2444 – 2001
Smoke dampers	AS/NZS 1668.1 – 1998 (AS 1682.1-1990 and AS 1682.2-1990)
Smoke detectors and heat detectors *(detectors for the automatic closing operation of fire doors and fire shutters in fire walls)*	BCA2015 Clause C3.5 and AS 1670.1 – 2004
Smoke detectors and heat detectors *(detectors for the automatic closing operation of horizontal exits)*	BCA2015 Clause C3.7 and AS 1670.1 – 2004

Measure	Standard of Performance
Smoke detectors and heat detectors *(detectors for the automatic closing operation of fire doors to fire isolated exits)*	BCA2015 Clause C3.8 and AS 1670.1 – 2004
Wall wetting sprinkler and drencher systems	BCA2015 Clause C3.4 and AS 2118.2 – 1995
Warning and operational signs	BCA2015 Clauses D1.17, NSW D2.19, D2.23, D3.6, E3.3, E3.9, E3.10, and Specifications E3.1