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E-MEMO					
	Name	**Company**		**Email Address**	
To	James Catchpole	Built		JamesCatchpole@built.com.au	
From	Aaron Celarc	**Date**	27 July 2020	**Ref**	77919-02BCA
Re	ICS Revised Scope BCA Compliance Memo				

Description of the site

The site comprises two allotments containing the Intercontinental Hotel (incorporating the former NSW Treasury Building) at 115-119 Macquarie Street. The legal description of the site is:

- Lot 40 DP 41315; and
- Lot 4 DP 785393,

The site (115-119 Macquarie Street) contains two interconnected buildings that comprise:

- The 32-storey Intercontinental Hotel tower, which is located on the corner of Phillip and Bridge Streets set above a podium.
- The State Heritage listed former NSW Treasury Building, which is located on the corner of Macquarie and Bridge Streets.

Immediately to the north of the site (99-113 Macquarie Street) is a seven-storey commercial building known as Transport House, which is locally heritage listed. This site was part of the SSD 7693 Concept approval. Works relating to this portion of the Concept SSDA site will be progressed via a separate planning approval/application. The building is separated from the Treasury Buildings by a narrow laneway, known as Macquarie Lane.

Description of the Proposal
The proposal is a Stage 2 (Detailed) SSDA that seeks approval for:

- Various refurbishments to the Intercontinental Hotel tower.
- Alterations to the roof of the Intercontinental Hotel, including expansion of the club lounge and terrace – in compliance with the approved envelope under SSD 7693 (the Concept approval).

The proposed land use is 'tourist and visitor accommodation' (including ancillary uses), consistent with the existing use and what was considered/approved under the Concept approval.
From a staging perspective, no works will be undertaken to Transport House due to its sensitivity and requirement for more consideration, including a competitive design process. It is also noted that internal fit outs to hotel rooms has been progressed via a Complying Development Certificate (CDC) process.
The proposal would increase the GFA of the Intercontinental Hotel tower by 250sqm, equating to a total GFA of 40,895 sqm (across the whole Concept approval site). The proposal also provides a maximum height of building of RL 114.55 (consistent with the envelope approved under the Concept approval).

As Registered Certifiers we have reviewed the 100% SSDA architectural design documents prepared by Woods Baggot (Appendix 1) for compliance with the current building assessment provisions, i.e. the Building Code of Australia 2019 Amendment 1 (BCA).

Compliance with the Building Code of Australia

The Building Code of Australia is a performance based document, whereby compliance is achieved by complying with the Governing Requirements and the Performance Requirements.

Performance Requirements are satisfied by one of the following:

1) A Performance Solution
2) A Deemed-to-Satisfy Solution
3) A combination of (1) and (2)

All new and altered areas of works are to comply with the current code.

The design is capable of complying with the requirements of the relevant sections of the Environmental Planning Assessment Act 1979, the Environmental Planning and Assessment Regulations 2000 and the Building Code of Australia 2019. Compliance is subject to resolution of the identified areas of non-compliance and compliance with the recommendations provided within the report. Further detailed regulatory reviews will need to be progressively undertaken as designs advance and become more resolved to ensure compliance is achieved.

Structure

Structural Provisions (BCA B1):

New structural works are to comply with the applicable requirements of BCA Part B1, including AS/NZS 1170.0-2002, AS/NZS 1170-1-2002, AS/NZS 1170.2-2011 and AS 1170.4-2007.

Depending on the importance level of the building as determined by AS/NZS 1170.0-2002, the non structural elements of the building, including partitions (and non-structural fire walls), ceilings, services and racking/shelving may be required to comply with the seismic restraint requirements of AS 1170.4-2007. Where this is required, certification will be required confirming that the design of the seismic restraints comply with AS 1170.4-2002. This may be provided by a specialist seismic consultant or by the architect and services design engineers.
Glazing is to comply with AS1288-2006, and AS2047-2014.

Prior to the issue of the Construction Certificate structural certification is required to be provided by a Professional Engineer registered on the National Engineering Register.

Access and Egress

Provision for Escape (BCA D1)

The existing egress provisions currently for the building are provided by the following:

- Fire isolated stairways
- External perimeter doorways
- Required non-fire isolated stairways
- External Doors

Exit Travel Distances (BCA D1.4)

The locations of the proposed exits would appear to indicate that the deemed to satisfy requirements in terms of travel distances, distances between alternative exits and egress widths would be satisfied.

The travel distances to exits should not exceed:

Class 5 to 9

- no point on the floor must be more than 20m to a single exit or point of choice and where two exits are provided, a maximum of 40m to one of those exits; and
- exits shall be located to not be more than 60m apart and not closer than 9m

The current egress provisions are not affected by the new works and an egress review has demonstrated that the egress distances meet the DTS requirements above.

It is noted the level 32 rooftop bar/ dining area has an existing egress issue being that a single fire isolated stair is provided in lieu of two. This is to be taken into consideration by the Fire Engineer and a fire safety strategy proposed.

Class 2 & 3

- 6m from an exit or from a point of choice from the entrance doorway of a sole occupancy unit
- 20m from a single exit at the level of egress to a road or open space
- Alternate exits not more than 45m apart

Balustrades and Handrails (BCA D2.16 / BCA D2.17 / D2.24)

<u>Generally</u>

Balustrading to a minimum height of 1000mm with a maximum opening of 124mm in any direction should be provided adjacent to balconies, landings, corridors etc where located adjacent to a change in level exceeding 1000mm, or where it is possible to fall through an openable window located more than 4m above the surface beneath.

Where it is possible to fall more than 4m to the surface below, the balustrade shall not contain any horizontal or near horizontal members that facilitate climbing between 150 – 760mm above the floor.

Handrails should generally be provided at a minimum height of 865mm alongside of all ramps and stairs.

The public stairs and ramps located along an accessible path of travel should be designed in accordance with the requirements of AS1428.1 for persons with disabilities. This requires a handrail on each side of the stair and ramp and for the handrail to extend approximately 550mm – 600mm past the last tread / end of ramp.

In addition to the above, handrails are required to both sides of all stairs with a width of 2m or more.

It is noted that the cortile stair balustrades and existing balcony barriers on level 7 are proposed to be upgraded in order to achieve compline with the above

Further to the above it is noted the existing Bridge street corner entrance is being upgraded to achieve compliance through a combination of DTS construction and performance-based solutions prepared by the Accredited Access Consultant.

Slip Resistance

The adoption of BCA 2014 introduced a requirement for slip resistance of stairway treads and ramp surfaces. The requirements are as follows:

Table D2.14 SLIP-RESISTANCE CLASSIFICATION

Application	Surface conditions	
	Dry	Wet
Ramp steeper than 1:14	P4 or R11	P5 or R12
Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11
Tread or landing surface	P3 or R10	P4 or R11
Nosing or landing edge strip	P3	P4

Services and Equipment

The following section of this report describes the essential fire safety measures and the minimum performance requirements of those measures.

Fire Hydrants (BCA E1.3)

Where new Fire Hydrants are required, they are to be provided in accordance with BCA Clause E1.3 and AS2419.1-2005. Confirmation is to be provided from the fire services consultant that complaint coverage is maintained utilising the existing system or any shortfalls to be identified.

Fire Hose Reels

Any altered or new Fire Hose Reels are to comply with BCA Clause E1.4 and AS2441-2005.

Fire hose reels are to be located within 4m of exits and provide coverage within the building based on a 36m hose length and 4m of water spray. Where required, additional fire hose reels shall be located internally as required to provide coverage. These hose reels are to be located adjacent to internal hydrants.

Fire hose reel cupboards must not contain any other services such as water meters, etc., and doors to fire hose reel cupboards are not to impede the path of egress unless a performance solution is developed under BCA Performance Requirement EP1.1

Confirmation is to be provided from the fire services consultant that complaint coverage is maintained utilising the existing system or any shortfalls to be identified.

Fire Extinguishers (BCA E1.6)

The provision of portable fire extinguishers is required to BCA Clause E1.6 and AS2444 - 2001 to provide coverage.

Table E.6 details when portable fire extinguishers are required:

Occupancy Class	Risk Class (as defined in AS 2444)
General provisions – Class 2 to 9 buildings (except within sole-occupancy units of a Class 9c building)	a) To cover Class AE or E fire risks associated with emergency services switchboards. (Note 1) b) To cover Class F fire risks involving cooking oils and fats in kitchens. c) To cover Class B fire risks in locations where flammable liquids in excess of 50 litres are stored or used (not excluding that held in fuel tanks of vehicles). d) To cover Class A fire risks in normally occupied fire compartments less than 500m^2 not provided with fire hose reels (excluding open deck carparks). e) To cover Class A fire risks in classrooms and associated schools not provided with fire hose reels. f) To cover Class A fire risks associated with Class 2 or 3 building or class 4 part of building.

Fire extinguishers are to be located in accordance with AS 2444 - 2001, often collocated with fire hydrants and/or fire hose reels.

Automatic Sprinkler Protection (BCA E1.5)

New and altered Automatic sprinkler protection systems are required to achieve compliance with Specification E1.5 and AS2118.1-2017.

The sprinkler system shall be connected to and activate an occupant warning system complying with BCA Specification E2.2a.

An occupant warning system should be provided in accordance with BCA Specification E1.5.

Smoke Hazard Management (BCA E2.2)

New or altered smoke hazard management systems are to comply with below:

- Automatic Shutdown of Mechanical Systems in accordance with the requirements of AS/NZS 1668.1-2015 Amendment 1;
- Automatic Smoke Detection and Alarm System in accordance with the requirements of BCA Spec E2.2a and AS 1670.1-2018;
- Automatic smoke detection and alarm system complying with BCA Specification E2.2b and AS/NZS1668.1-2015 Amendment 1;

Exit Signs and Emergency Lighting (BCA E4.2 and BCA E4.5)

Emergency Lighting and Exit Signs indicating exit location paths of travel to exits to be provided in accordance with BCA Part E4 and AS/NZS 2293.1-2018, including the potential use of photo luminescent exit signs.

A site walk revealed the current exit sign locations throughout levels 5, 6 and 7 are non-complaint in location and style. It is recommend the exit signs be upgraded throughout to comply with the current code.

Sound Systems and Intercom Systems for Emergency Purposes (BCA E4.9)

New or altered Sound System and Intercom Systems are required to achieve compliance in accordance with AS1670.4-2018 and BCA Clause E4.9 to the class 3 portions

Fire Protection

Fire Hazard Properties (BCA C1.10 and BCA C1.9)

The fire hazard properties of fixed surface linings and mechanical ductwork will also need to be addressed within the detailed documentation phase pursuant to Specification C1.10 of the Building Code of Australia. The following requirements apply:

Sprinkler Protected Areas

a) Floor Coverings – Critical radiant Flux not less than 2.2kW/m^2
b) Wall and Ceiling Linings – Material Group No. 1,2,3

External Wall Cladding

Since the building is of Type A construction, the following components are required to be completely non-combustible:

External walls, including façade coverings, framing, insulation;
Flooring and framing of lift pits;
Non-loadbearing internal walls required to have an FRL;
All non-loadbearing shafts;
All loadbearing internal walls and loadbearing fire walls, including those that are part of loadbearing shafts.

Please provide product specifications and test reports to AS 1530.1-1994 for all materials to demonstrate compliance

For materials and assemblies that are required to be non-combustible, the material or system must be not deemed combustible when tested in accordance with AS 1530.1-1994.

It is noted that the existing level 32 roof structure has been identified to have existing aluminium composite panels installed, which are likely non-compliant. It is recommended these be replaced to comply with current code.

Combustible Materials

The following materials, though combustible or containing combustible fibres, may be used wherever a non-combustible material is required:

a) Plasterboard.
b) Perforated gypsum lath with a normal paper finish.
c) Fibrous-plaster sheet.
d) Fibre-reinforced cement sheeting.
e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.
f) Sarking type materials that do not exceed 1mm in thickness and have a Flammability Index not greater than 5.
g) Bonded laminated materials where -
   (i) each laminate is non-combustible; and
   (ii) each adhesive layer does not exceed 1 mm in thickness; and

(iii) the total thickness of the adhesive layers does not exceed 2 mm; and
(iv) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole does not exceed 0 and 3 respectively.

It is recommended that once material selections are made, copies of the fire test certificates/reports be provided for review and approval.

Any Aluminium Composite Panels must be labelled in accordance with SA TS 5344.
The BCA does nominate that ancillary elements may not be fixed to an external wall that is required to be non-combustible unless they comprise of the following:

a) An ancillary element that is non-combustible.
b) A gutter, downpipe or other plumbing fixture or fitting.
c) A flashing.
d) A grate or grille not more than 2 m² in area associated with a building service.
e) An electrical switch, socket-outlet, cover plate or the like.
f) A light fitting.
g) A required sign.
h) A sign other than one provided under (a) or (g) that—
   i) achieves a group number of 1 or 2; and
   ii) does not extend beyond one storey; and
   iii) does not extend beyond one fire compartment; and
   iv) is separated vertically from other signs permitted under (h) by at least 2 storeys.

Please provide fire hazard properties reports for any proposed signs and confirm their extent i.e. not spanning more than one storey or fire compartment:

If you have any queries or would like to discuss any of the above items, please contact me.

Regards,

Aaron Celarc
Senior Associate
McKenzie Group Consulting (NSW) Pty Ltd
ACN 093 211 995

Appendix 1- Drawing List

SSDA DRAWING LIST

NUMBER	NAME	REVISION	SCALE
ST2-DA- 00000	COVER SHEET	A	
ST2-DA- 00001	DRAWING LIST	B	
ST2-DA- 10000	SITE CONTEXT PLAN	A	1:1000
ST2-DA- 10001	SITE PLAN	B	1:500
ST2-DA- 11000	STAGING PLANS	B	N.T.S.
ST2-DA- 12000	SHADOW DIAGRAMS	A	1:5000
ST2-DA- 13000	GFA PLANS	A	1:500
ST2-DA- 14000	3D HEIGHT PLANE DIAGRAM	A	N.T.S.
ST2-DA- 15000	PUBLIC DOMAIN PLANS	A	1:250
ST2-DA- 19050	EXISTING FLOOR PLAN - LEVEL 05	A	1:200
ST2-DA- 19060	EXISTING FLOOR PLAN - LEVEL 06	A	1:200
ST2-DA- 19070	EXISTING FLOOR PLAN - LEVEL 07	A	1:200
ST2-DA- 19320	EXISTING FLOOR PLAN - LEVEL 32	A	1:200
ST2-DA- 19330	EXISTING FLOOR PLAN - LEVEL 33 (ROOF)	A	1:200
ST2-DA- 20050	DEMOLITION PLAN - LEVEL 05	A	1:200
ST2-DA- 20060	DEMOLITION PLAN - LEVEL 06	A	1:200
ST2-DA- 20070	DEMOLITION PLAN - LEVEL 07	A	1:200
ST2-DA- 20320	DEMOLITION PLAN - LEVEL 32	A	1:200
ST2-DA- 20330	DEMOLITION PLAN - LEVEL 33 (ROOF)	A	1:200
ST2-DA- 22050	FLOOR PLAN - LEVEL 05	C	1:200
ST2-DA- 22060	FLOOR PLAN - LEVEL 06	C	1:200
ST2-DA- 22070	FLOOR PLAN - LEVEL 07	C	1:200
ST2-DA- 22320	FLOOR PLAN - LEVEL 32	D	1:200
ST2-DA- 22330	FLOOR PLAN - LEVEL 33 (ROOF)	C	1:200
ST2-DA- 24050	RCP - LEVEL 05	A	1:200
ST2-DA- 30001	EXISTING ELEVATION - SOUTH & EAST	A	1:400
ST2-DA- 30002	EXISTING ELEVATION - NORTH & WEST	A	1:400
ST2-DA- 30011	DEMOLITION ELEVATION - SOUTH & EAST	A	1:400
ST2-DA- 30012	DEMOLITION ELEVATION - NORTH & WEST	A	1:400
ST2-DA- 30021	ELEVATION - SOUTH & EAST	A	1:400
ST2-DA- 30022	ELEVATION - NORTH & WEST	A	1:400
ST2-DA- 30201	EXISTING SECTION - OVERALL	A	1:400
ST2-DA- 30211	DEMOLITION SECTION - OVERALL	A	1:400
ST2-DA- 30221	SECTION - OVERALL	A	1:400
ST2-DA- 45001	CITY CORNER ENTRY ELEVATIONS/SECTION	C	1:100
ST2-DA- 45002	CITY CORNER ENTRY DETAILS	A	1:50
ST2-DA- 45101	LEVEL 32 FACADE ELEVATIONS	A	1:100
ST2-DA- 45102	LEVEL 32 FACADE ELEVATIONS	A	1:100
ST2-DA- 45103	LEVEL 32 FACADE DETAILS	A	1:50
ST2-DA- 46001	CORTILE FLOOR PLAN	A	1:100
ST2-DA- 46002	CORTILE INTERNAL SECTIONS	A	1:100
ST2-DA- 46003	CORTILE INTERNAL SECTIONS	A	1:100
ST2-DA- 46004	CORTILE BALUSTRADE DETAIL	A	1:100
ST2-DA- 90000	MATERIAL SCHEDULE	A	N.T.S.
ST2-DA- 90101	PERSPECTIVE MONTAGE - 01	A	N.T.S.
ST2-DA- 90102	PERSPECTIVE MONTAGE - 02	A	N.T.S.
ST2-DA- 90103	PERSPECTIVE MONTAGE - 03	A	N.T.S.
ST2-DA- 90104	PERSPECTIVE MONTAGE - 04	A	N.T.S.