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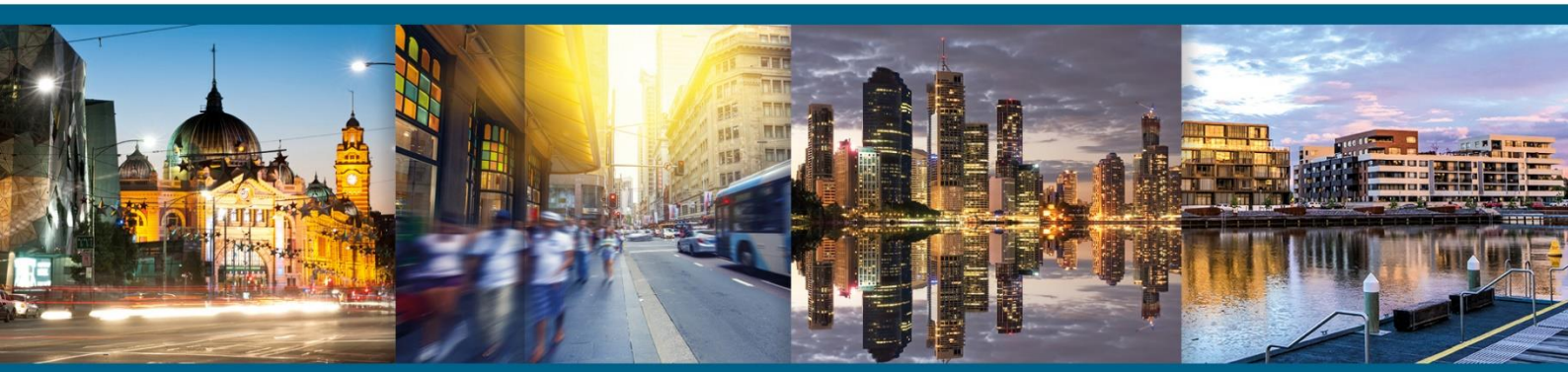
St George Community Housing

11 Gibbons Street, Redfern

BCA Assessment Report to Accompany DA Submission



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Author:	Luke Denny
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Introduction

This report presents the findings of a preliminary assessment of the proposed St George Community Housing 11 Gibbons Street development against the Deemed-to-Satisfy (DtS) provisions of Building Code of Australia (BCA) 2016 (Amendment 1).

It has been prepared by building regulations consultants and certifiers Steve Watson and Partners for St George Community Housing.

Purpose

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

Scope

The scope of this assessment is limited to the design documentation referenced in Appendix A of this report.

Description of Proposed Development

The proposed works involve construction of a new a residential building with a small component of ancillary office and retail.

Summary of BCA Parameters:

Building Use:	Residential, retail and commercial office
Class of Occupancy	Class 2, 5 and 6
Type of Construction Required	Type A
Rise Storeys:	18
Number of Storeys:	18
Effective Height:	57m

Assessment

The following is a summary of an assessment of the proposed design against the relevant Deemed-to-Satisfy provision of the BCA.

Section B: Structure

The structural engineering design of the building will be required to comply with the structural provisions of Part B1 of the BCA.

Section C: Fire Resistance

The building is required to be Type A construction due to the rise in storeys.

Performance based compliance is proposed to separate the community spaces from the residential public corridors.

Section D: Access and Egress

The following areas have been identified with distances exceeding 20m to a point of choice and have been nominated to comply on a performance basis:

- SHGH Office Ground Floor (measures 28m)
- Level 3 communal open space exceeds 20m. (measures 25m)

The following areas have been identified with distances exceeding 6m to a point of choice:

- All residential levels exceeds 6m (Measures 13m)

The following areas have been identified with exits not more than 9m apart and have been nominated to comply on a performance basis

- Residential levels. Scissor stair fire isolated exits are located closer than 9m (Measures 7m)

Access for people with disabilities is to be provided in accordance with the provisions of Part D3 of the BCA and AS1428.1 – 2009

Section E: Services and Equipment

The building are required to be served by a fire hydrant system complying with Clause E1.3 of the BCA and AS 2419.1 – 2005. The following matters are proposed to be dealt with via a performance solution,

- The hydrant booster is not separated from the building with 90min construction extending 2m both side and 3m above
- Hydrant booster not within sight of the main entry.

The remainder of the fire services will be provided in accordance with the deemed to satisfy provisions.

Section F: Health and Amenity

Sanitary facilities have been provided for retail employees only. Any future café or restaurant with more than 20 seats may require additional facilities

An accessible unisex sanitary compartment is required in accordance with Clause F2.4 of the BCA and AS 1428.1 – 2009. A male and female sanitary compartment suitable for a person with an ambulant disability is required in accordance with AS 1428.1 – 2009.

Minimum ceiling heights are to be 2.4m except where 2.1m is permitted in corridors, passageways, bathrooms, sanitary compartments, storerooms or the like.

Artificial lighting is required to all rooms that are frequently occupied, all accessible spaces, all corridors and circulation spaces and path of egress in accordance with AS/NZS 1680.0 – 2009.

Section J: Energy Efficiency

The buildings are to be designed to achieve compliance with the relevant provisions of Part J1 to J8 respectively.

Key compliance items include:

- Roof and ceiling construction will be required to achieve compliance with Clause J1.3;
- External wall construction will be required to achieve compliance with Clause J1.5;
- External glazing will be required to achieve compliance with Clause J2.4;
- Building sealing will be required to windows and doors in accordance with the relevant sections Part J3;
- Air-conditioning and mechanical ventilation systems will need to be designed in accordance with the relevant sections of Part J5;
- Artificial lighting and power will need to be designed in accordance with the relevant sections of Part J6;
- Heated water supply system for food preparation and sanitary facilities to be designed and installed in accordance with Part B2 of the Plumbing Code of Australia; and
- Facilities for energy monitoring in accordance with Clause J8.3.

Alternative Solutions

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
1.	Bounding construction	3.11	The Level 3-4 and 17 open space and community room is not fire separated from the public corridor.	CP2
2.	Exit travel distance	D1.4	The following areas have been identified with distances exceeding 20m to a point of choice: • SHGH Office Ground Floor (measures 28m) • Level 3 communal. (measures 25m) The following areas have been identified with distances exceeding 6m to a point of choice: • All residential levels (Measures 13m)	DP4
3.	Distance between alternative exits	D1.5	The following areas have been identified with exits not more than 9m apart • Residential levels. Scissor stair fire isolated exits are located closer than 9m (Measures 7m)	DP4
4.	Hydrants	E1.3	• The hydrant booster is not separated from the building with 90min construction extending 2m both side and 3m above • Hydrant booster not within sight of the main entry.	EP1.3

Conclusion

This statement has been provided to accompany the Development Application submission following a preliminary assessment of the proposed design. The development adequately satisfies the intent of being able to comply with the requirements of the BCA for the purpose of DA submission.

We confirm the design as shown on the drawings referenced in Appendix A is capable of achieving compliance with the BCA subject to further detail at the design development stage. The design will be subject to a Construction Certificate to ensure all aspects of the design will comply with BCA requirements including any performance-based determinations.

Appendix A – Referenced Documentation

The following documentation was used in the preparation of this report:

Drawing No.	Title	Issue	Date	Drawn By
DA1000	Site Plan	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA1001	Locality Plans	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA1002	Site Analysis Plans	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA1003	Setback Drawing	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA1004	Setback Plan	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA1005	Setback Plan	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA1006	Development Summary	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA1007	Demolition Plan	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA2000	Ground Level	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA2001	Level 1	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA2002	Level 2	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA2003	Level 3	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA2004	Level 4	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA2005	Levels 5-16 Typ.	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA2006	Level 17	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA2007	Roof Level	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA2008	Adaptable Unit Layouts	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA3000	West & North Elevations	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA3001	East & South Elevations	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd
DA3002	Signage Detail	P2	18.09.2018	DKO Architecture (NSW) Pty Ltd

Appendix B – Schedule of proposed statutory Fire Safety Measures

Measure	Standard of Performance
Access panels, doors and hoppers to fire resisting shafts	BCA2016 (AMENDMENT 1) Clause C3.13 and tested prototypes (AS 1530.4 – 2014 and AS 4072.1-2005) Note: Systems tested to AS 1530.4 prior to 1 January 1995 need not be retested to comply with the provisions in AS 4072.1]
Automatic fail safe devices	Scheduled devices release upon trip of smoke detection and/or sprinkler activation in accordance with BCA2016 (AMENDMENT 1) Clauses D2.19 and D2.21.
Automatic fire detection and alarm system (smoke alarm system)	BCA2016 (AMENDMENT 1) Specification E2.2a and AS 3786 – 2015 or 1993 (note may require AS 1670.1 spacing in public corridors and occupant warning system. Class 9a also requires manual call points)
Automatic fire detection and alarm system (smoke detection system to operate stair pressurisation system)	BCA2016 (AMENDMENT 1) Clause 5 of Specification E2.2a and AS/NZS 1668.1 – 2015 and AS 1670.1 - 2015
Automatic fire suppression systems (Sprinklers)	BCA2016 (AMENDMENT 1) Specification E1.5 and AS 2118.1 – 1999
Emergency lifts	BCA2016 (AMENDMENT 1) Clause E3.4
Emergency lighting	BCA2016 (AMENDMENT 1) Clause E4.2, E4.4 and AS 2293.1 – 2005
Sound System and Intercommunication System for Emergency Purposes (aka EWIS)	BCA2016 (AMENDMENT 1) Clause E4.9, Specification G3.8 and AS 1670.4 – 2015
Exit signs	BCA2016 (AMENDMENT 1) Clause E4.5, NSW E4.6, E4.8 and AS 2293.1 – 2005
Fire control room	BCA2016 (AMENDMENT 1) Specification E1.8
Fire dampers	BCA2016 (AMENDMENT 1) Clause C3.15 and AS/NZS 1668.1 – 2015 (AS 1682.1-1990 and AS 1682.2-1990)
Fire doors	BCA2016 (AMENDMENT 1) Specification C3.4 and AS 1905.1 – 2015
Fire hydrants systems	BCA2016 (AMENDMENT 1) Clause E1.3 and AS 2419.1 – 2005
Fire seals protecting opening in fire resisting components of the building	BCA2016 (AMENDMENT 1) Clause C3.15, Specification C3.15 and AS 1530.4 –2014 and AS 4072.1 – 2005 and installed in accordance with the tested prototype. *[Note: Systems tested to AS 1530.4 prior to 1 January 1995 need not be retested to comply with the provisions in AS 4072.1]*
Hose reel system	BCA2016 (AMENDMENT 1) Clause E1.4 and AS 2441 – 2005
Mechanical air handling system *(automatic air pressurisation system)*	BCA2016 (AMENDMENT 1) Table E2.2a and Specification G3.8 and AS/NZ 1668.1-2015
Portable fire extinguishers	BCA2016 (AMENDMENT 1) Clause E1.6 and AS 2444 – 2001
Warning and operational signs	BCA2016 (AMENDMENT 1) Clauses C3.6, D1.17, NSW D2.19, D2.23, D3.6, E3.3, E3.9, E3.10 G4.3, NSW H101.8 and NSW H101.10 and Specifications D1.12, E1.8, E3.1 and G3.8