



STEVE WATSON
& PARTNERS

The Salvation Army – 23 Dalcassia Street, Hurstville

BCA & Fire Safety Report Reference 2020/3293 R1.0

The Salvation Army (New South Wales) Property
Trust

16th December 2020



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Client: The Salvation Arm (New South Wales) Property Trust

Architect: Integrated Design Group

SWP Quality System

Job Number/Ref: 2020/3293 Revision Number: R1.0 Issue Date: 16th December 2020

Revision History

Rev No	Date	Revision Details	Author	Verifier
R1.0	16.12.20	DA Issue	Joshua Hawke	Nick Hontas

Disclaimer:

This report is based on a desktop audit of preliminary DA documentation only.

Details contained in the report address issues of significance to broad BCA compliance relevant to this stage of design resolution.

This report is based on a review of the DA design documentation only. It represents a compliance report for "documentation to this point in time" and will be subject to amendment and further detailed assessment at the Construction Certificate stage.



Introduction

An assessment of the proposed design has been undertaken against the Deemed-to-Satisfy (DtS) provisions of the relevant sections of the Building Code of Australia 2019 (Amendment 1) and the applicable Building Regulations.

Summary of BCA Parameters

Building Use:	Residential, Café, Carpark and Community Facilities (incl. place of worship)
Class of Occupancy:	Class 3, 6, 7a and 9b
Type of Construction required:	Type A
Rise in Storeys:	9 Storeys
Number of Storeys:	12 Storeys
Effective Height:	> 25m

Description of Proposal

The proposal comprises the construction of a new high-rise residential accommodation and community facilities development in Hurstville with 4 levels of basement carparking and rooftop terrace. Vehicular access will be provided from Bond Street.



Assessment

Steve Watson and Partners have undertaken a review of the proposed design that will form part of the application to Council. We confirm the design as shown on the drawings referenced below are capable of achieving compliance with the BCA and the Disability (Access to Premises – Buildings) Standards 2010.

Further detailed regulatory reviews will need to be progressively undertaken as the design develops to ensure compliance is achieved, in particular Section J. Compliance is proposed to be achieved by satisfying the relevant DtS provisions and/or JV3 Assessment undertaken by qualified ESD consultant.

Other aspects of the design are proposed to be addressed by way of Performance Solutions to meet the relevant Performance Requirements of the BCA. These include but are not limited to:

1. Location and access to fire hydrant pumphouse
2. Location and access of sprinkler valves enclosure
3. Location of fire hydrant and sprinkler booster assemblies
4. Discharge arrangement of fire-isolated stairways
5. Extended travel distances to a point of choice
6. Distance between alternative exits
7. Configuration and protection of fire-isolated exits and exposure to window openings
8. Access to two exits on all storeys including roof terrace

A detailed review at Construction Certificate stage will need to be undertaken to verify compliance.



Referenced Drawings

The following documentation issued by Integrated Design Group was used in the preparation of this report:

Drawing No.	Title	Issue	Date	Drawn By
0001	Cover page	-	23.09.20	Integrated Design Group
0002	Location plan	D	28.09.20	Integrated Design Group
0003	Site analysis	D	28.09.20	Integrated Design Group
CC0100	Site plan	B	29.09.20	Integrated Design Group
0101	Subdivision plan	B	29.09.20	Integrated Design Group
CC0200	Demolition plan	B	29.09.20	Integrated Design Group
1001	Upper basement	C	28.09.20	Integrated Design Group
1002	Lower basement	B	28.09.20	Integrated Design Group
1003	Basement 3	A	28.09.20	Integrated Design Group
1004	Basement 4	A	28.09.20	Integrated Design Group
1100	Ground floor plan	C	28.09.20	Integrated Design Group
1101	Level 1 floor plan	B	28.09.20	Integrated Design Group
1102	Typical residential floor plan	D	29.09.20	Integrated Design Group
1103	Level 6 floor plan	C	29.09.20	Integrated Design Group
1104	Roof terrace	C	29.09.20	Integrated Design Group
2000	West elevation	C	28.09.20	Integrated Design Group
2001	South elevation	B	28.09.20	Integrated Design Group
2002	East elevation	B	28.09.20	Integrated Design Group
2003	North elevation	B	28.09.20	Integrated Design Group
3000	Section 01	C	29.09.20	Integrated Design Group
3001	Section 02	B	28.09.20	Integrated Design Group
7001	Design analysis and summary	D	29.09.20	Integrated Design Group
7002	3D view 01	C	29.09.20	Integrated Design Group
7003	3D view 02	C	29.09.20	Integrated Design Group
7004	3D view 02	C	29.09.20	Integrated Design Group
7005	GFA diagrams	A	29.09.20	Integrated Design Group
9200	Notification plan	A	29.09.20	Integrated Design Group
9300	Finishes schedule	A	29.09.20	Integrated Design Group



Fire Rating Requirements – Type A Construction

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 within it) 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-				
For loadbearing columns	90/ - / -	120/ - / -	180/ - / -	240/ - / -
For non-loadbearing columns	- / - / -	- / - / -	- / - / -	- / - / -
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



Statutory Fire Safety Measures

Measure	Standard of Performance
Access Panels, Doors And Hoppers To Fire Resisting Shafts	BCA 2019 Amendment 1 Clause C3.13 and tested prototypes (AS 1530.4 – 2014)
Automatic Fail Safe Devices	Scheduled devices release upon trip of smoke detection, fire detection and sprinkler activation in accordance with BCA 2019 Amendment 1 Clause D2.21.
Automatic Fire Detection And Alarm System (<i>Smoke Detection System</i>)	BCA 2019 Amendment 1 Clause 4 of Specification E2.2a and AS 1670.1 – 2018
Automatic Fire Detection And Alarm System (<i>Smoke Detection System To Automatically Shutdown Air-Handling System</i>)	BCA 2019 Amendment 1 Clause 6 of Specification E2.2a and AS 1670.1 – 2018
Automatic Fire Suppression Systems (<i>Sprinklers</i>)	BCA 2019 Amendment 1 Specification E1.5 and AS 2118.1 – 2017
Building Occupant Warning System	BCA 2019 Amendment 1 Clause 7 of Specification E2.2a and AS 1670.1 – 2018
Emergency Lifts	BCA 2019 Amendment 1 Clause E3.4
Emergency Lighting	BCA 2019 Amendment 1 Clause E4.2, E4.4 and AS/NZS 2293.1 – 2018
Emergency Warning And Intercommunication System	BCA 2019 Amendment 1 Clause E4.9 and AS 1670.4 – 2018
Exit Signs	BCA 2019 Amendment 1 Clause E4.5, NSW E4.6, E4.7, E4.8 and AS/NZS 2293.1 – 2018
Fire Alarm Monitoring System	BCA 2019 Amendment 1 Clause 8 of Specification E2.2a and AS 1670.3 – 2018
Fire Control Centre	BCA 2019 Amendment 1 Specification E1.8
Fire Dampers	BCA 2019 Amendment 1 Clause C3.15 and AS 1668.1 – 2015 (AS 1682.1 – 2015 and AS 1682.2 – 2015)
Fire Doors	BCA 2019 Amendment 1 Specification C3.4 and AS/NZS 1905.1 – 2015
Fire Hydrants Systems	BCA 2019 Amendment 1 Clause E1.3 and AS 2419.1 – 2005
Fire Seals Protecting Opening In Fire Resisting Components Of The Building	BCA 2019 Amendment 1 Clause C3.15, Specification C3.15, AS 1530.4 – 2014, AS 4072.1 – 2005 and installed in accordance with the tested prototype.
Hose Reel System	BCA 2019 Amendment 1 Clause E1.4 and AS 2441 – 2005
Mechanical Air Handling System (<i>Automatic Shut Down Of Air-Handling System</i>)	BCA 2019 Amendment 1 Clause E2.2 and AS 1668.1 – 2015
Mechanical Air Handling System (<i>Automatic Air Pressurisation System</i>)	BCA 2019 Amendment 1 Table E2.2a and AS 1668.1 – 2015



Measure	Standard of Performance
Mechanical Air Handling System (<i>Carpark Mechanical Ventilation System</i>)	BCA 2019 Amendment 1 Table E2.2a, Clause 5.5 of AS/NZ 1668.1 – 2015 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	BCA 2019 Amendment 1 Clause E1.6 and AS 2444 – 2001
Warning And Operational Signs	BCA 2019 Amendment 1 Clauses D2.23, E3.3 and E1.8

NOTE: Fire safety schedule may need to be amended subject to the inclusion of a fire engineered performance solution.



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