



STEVE WATSON
& PARTNERS

**Proposed Co-Living Development,
175 – 177 Cleveland Street & 6 – 8
Woodburn Street, Redfern**

BCA Assessment Report
Report 2021/2310 R1.1

Prepared for EG Funds Management Pty Ltd
12th September 2022



Steve Watson and Partners Pty Ltd

SYDNEY	Level 17, 456 Kent Street, Sydney NSW 2000 Phone +61 2 9283 6555 Fax +61 2 9283 8500
MELBOURNE	Level 8, 350 Queen Street MELBOURNE, Victoria 3000 Phone: +61 3 9380 5552 Fax: +61 3 9380 5558
BRISBANE	Level 4, 276 Edward Street BRISBANE, QLD 4000 +61 7 3088 2333 Fax: +61 7 3088 2444
CANBERRA	Suite 8, 14 Lonsdale Street, Braddon ACT 2612 +61 2 6100 6606 Fax: +61 2 6100 6609

info@swpartners.com.au www.swpartners.com.au

ABN 33 600 478 402

Principal Certifying Authority - Steve Watson & Partners



Project Contacts

Client: EG Funds Management Pty Ltd

Architect: Mark Shapiro Architects

SWP Quality System

Job Number/Ref: 2021/2310 Revision Number: R1.1 Issue Date: 12th September 2022

Revision History

Rev No	Date	Revision Details	Author	Verifier
R1.0	25/08/2022	Short BCA statement of compliance to accompany a DA Submission	Joshua Hawke	Andrew Rys
R1.1	12/09/2022	Updated and final short BCA statement of compliance to accompany a DA Submission	Joshua Hawke	Andrew Rys

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 of a new co-living development located in the heart of Redfern 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:	Carparking, storage, ancillary retail and co-living units
Class of Occupancy:	Class 3, 6, 7a and 7b
Type of Construction required:	Type A
Rise in Storeys:	8 Storeys
Number of Storeys:	8 Storeys
Effective Height:	23.9m (Level 6 (RL39.7) – Basement (RL15.8))

Description of Proposal

This SSDA seeks development consent for the development of a privately-operated co-living development. The proposal has been designed to offer and support co-working activities for residents as well as the wider community to promote employment and social interaction throughout the development. Specifically, the proposal involves:

- Construction of a mixed use co-living housing development ranging in height from five (5) to seven (7) storeys, comprising:
 - 7,006.4m² of GFA (FSR of 3.47:1) comprising 927.7m² of retail/commercial and 6,078.7m² of residential GFA;
 - Basement containing 19 car parking spaces; 25 motorcycle spaces and 116 bicycle spaces;
 - 216 co-living rooms (67 single and 149 double rooms) for lodgers and a building manager;
 - Ground and first floor co-working and commercial/retail uses fronting Cleveland, Woodburn and Eveleigh Streets;
 - Communal open space areas (1,458.8m²) including an open to the sky internal courtyard and rooftop garden;
 - Communal living areas (549.4m²) comprising resident amenities; and
 - Associated landscape works (697.5m² landscaped area) and provision of a through-site link.




Assessment

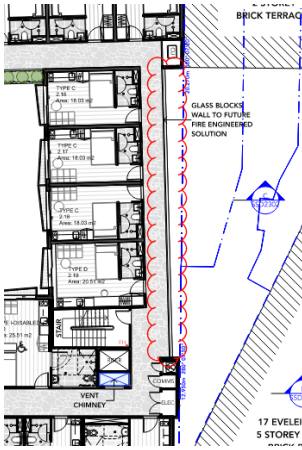
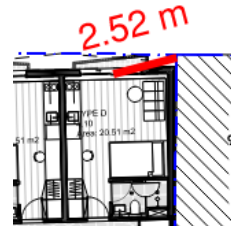

Steve Watson and Partners have undertaken a review of the proposed design that will form part of the application to the department of planning. We confirm the design as shown on the drawings referenced below are capable of achieving compliance with the BCA and the Disability (Access to Premises – Buildings)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

Further detailed regulatory reviews will need to be progressively undertaken as the design develops to ensure compliance is achieved.

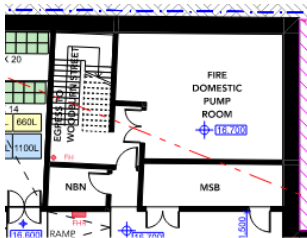
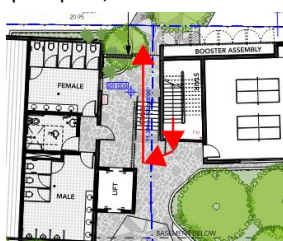

Other aspects of the design are proposed to be addressed by way of a Performance Solution to meet the relevant Performance Requirements of the BCA (Fire Engineering and Access). A detailed review at Construction Certificate stage will need to be undertaken to confirm however, the anticipated compliance issues to be addressed via a Performance Solution as documented by the projects fire engineer MCD Fire Engineering include:

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
1.	Fire Resisting Construction	C1.1 & Spec C1.1	<p>A reduction in FRLS is proposed to the following elements of the development:</p> <ul style="list-style-type: none"> The bicycle racks and other associated storage contributes to an area greater than 10% of the floor area and as such is considered a class 7b storage component. The storage is to be assessed and reduced FRL proposed from 240/240/240 → 120/120/120; and A reduction of the class 6 component from an FRL of 3hrs down to an FRL of 1.5hrs; Based around the installation of a typical curtain wall system, it is noted that the linear gap will be smoke sealed in lieu of fire sealed; and The garbage rooms are technically located at the bottom of a shaft in lieu of a fire rated base. Clause 2.7 of Specification C1.1 does not provide a concession for a room to be located to the bottom of a shaft and as such the technical departure needs to be addressed 	CP1 & CP2
2.	Fire Resting Construction	C1.1 & C3.11	<p>A technical departure occurs on levels 1 - 4 against Clause C3.11 where the non-fire isolated stair and the communal spaces are not fire separated from the corridor space which service the class 3 units</p> 	CP1 & CP2
3.	Public Corridors in class 2 and 3 buildings	C2.14	The residential public corridors located on level 1 – 5 exceeds the 40m length permitted for a smoke corridor within class 3 buildings. Each level contains a smoke corridor of 50m	CP2 & EP2.2
4.	Protection of openings in external	C3.2	The following openings are located within 3m of the site boundaries and are to be assessed through means of a	CP2

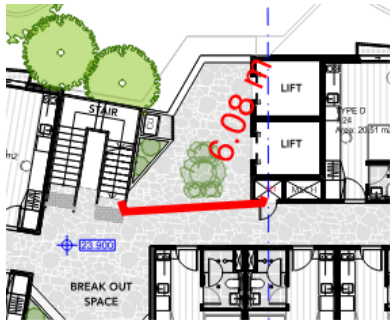
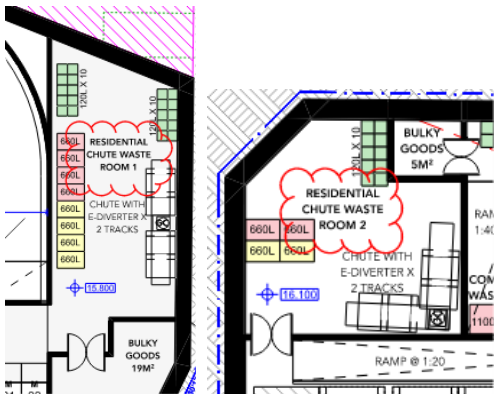


Item	Non-Compliance	DTS Clause	Description	Performance Requirement
	walls		<p>performance-based analysis</p> <p>Levels 1 – 5 – Southern Boundary – Active system comprising more than 1/3 of the façade area to that elevation</p>  <p>Levels 1 – 4 – South Eastern Unit Window</p> 	
5.	When fire-isolated stairways and ramps are required	D1.3	<p>The central stair which services the building as a required exit is not contained within a fire rated shaft. This stair currently serves or passes by 7 storeys in lieu of the permissible 2 storeys within this clause</p> 	CP2, DP5 & EP2.2
6.	Exit Travel Distances	D1.4 & Spec E1.5a	<p>The following travel distances are to be addressed through the projects fire engineer:</p> <p>Basement Level</p> <ul style="list-style-type: none"> 25m to a point of choice in lieu of 20m; 45m to the nearest available exit through a point of choice in lieu of 40m; and 60m between alternative exits <p>Ground Floor</p>	DP4 & EP2.2



Item	Non-Compliance	DTS Clause	Description	Performance Requirement
			<ul style="list-style-type: none"> 35m to a point of choice 50m to the nearest available exit through a point of choice; and 70m between alternative exits <p>Levels 1 – 5 (Class 3)</p> <ul style="list-style-type: none"> 6m to a point of choice; and 60m between alternative exits in lieu of 45m <p>Level 6 (Class 3 Ancillary)</p> <ul style="list-style-type: none"> 35m to a point of choice in lieu of 20m; and 45m between alternative exits <p>Distances to an exit have been assessed on the residential levels to exceed the permissible 12m (14m) under the concessions granted under Specification E1.5a</p>	
7.	Travel via fire isolated exits	D1.7	<p>The following departures around fire isolated stairways are to be addressed through means of a performance solution:</p> <ul style="list-style-type: none"> The fire hydrant and sprinkler pump room is located with direct access off a fire isolated stairway. This room is not afforded with a concession under this BCA Clause  <ul style="list-style-type: none"> Stairs discharge into areas which are not provided with means of being 1/3 open the perimeter and requires occupant to traverse more than 6m to the road or open space; and 	DP4, DP5 & EP2.2
8.	Travel by non-fire-isolated stairways or ramps	D1.9	<p>The interconnecting stair which services the commercial / co-working space requires occupants to traverse 30m before occupants reach a POC and a total of 45m to the road or open space</p> 	DP4 & EP2.2



Item	Non-Compliance	DTS Clause	Description	Performance Requirement
9.	Fire Hydrants	E1.3 & AS2419.1-2009	<p>The following deviations apply to the proposed location of the booster assembly as well as the associated pumps and valves:</p> <ul style="list-style-type: none"> The hydrant booster assembly is not located within site of the main entry as the building contain multiple entries across multiple streets; The booster is not located on the sites known street address; Fire Hydrants located internally to the building are located at a distance greater than 4m from the required egress stair 	EP1.3
10.	Fire Hose Reels	E1.4	<p>Where residential waste rooms with affiliated garbage chutes are installed the walls are to be 2 hour fire rated. A performance solution to omit fire hose reel coverage to these rooms is proposed due to a concession not being granted to allow hose reels to pass through fire rated doors</p> 	EP1.1
11.	Sprinklers	E1.5, Spec E1.5 & AS2118.1-2017	<p>The following deviations apply to the proposed location of the booster assembly as well as the associated pumps and valves</p> <ul style="list-style-type: none"> The sprinkler booster assembly is not located within site of the main entry as the building contain multiple entries across multiple streets; Access to the sprinkler isolation valves is via means of a fire isolated stair to basement level 1 where they are located within the pump room in lieu of being located on a level provided with direct egress to a road or open space; Sprinklers are proposed to be omitted from the following zones: <ul style="list-style-type: none"> Main Switch board room; and 	EP1.4



Item	Non-Compliance	DTS Clause	Description	Performance Requirement
			<ul style="list-style-type: none">○ Within the substation compartment (Due to energy authority requirements)	
12.	Energy Efficiency	Section J	The building is to be assessed by an Energy Efficiency Consultant and non-compliances addressed within a JV3 assessment report.	JP1, JP2 & JP3



Referenced Drawings

The following drawings issued by Mark Shapiro Architects have been assessed as part of this report

DRAWING	DRAWING NAME	SCALE	REV
SSD0000	COVER SHEET		P11
SSD0001	DRAWING LIST/PROJECT STATISTICS		P11
SSD1000	AERIAL IMAGE - SITE & CONTEXT		P11
SSD1001	SITE/LOCATION PLAN		P11
SSD1200	SITE ANALYSIS PLAN	1:250	P11
SSD2000	DEMOLITION PLAN	1:200	P11
SSD2001	BASEMENT PLAN	1:200	P11
SSD2002	GROUND FLOOR PLAN	1:200	P11
SSD2003	LEVEL 1 PLAN	1:200	P11
SSD2004	LEVEL 2 PLAN	1:200	P11
SSD2005	LEVEL 3 PLAN	1:200	P11
SSD2006	LEVEL 4 PLAN	1:200	P11
SSD2007	LEVEL 5 PLAN	1:200	P11
SSD2008	LEVEL 6 PLAN	1:200	P11
SSD2009	ROOF PLAN	1:200	P11
SSD2010	TYPE A,B,B2 TYPICAL ROOM LAYOUTS	1:50	P11
SSD2011	TYPE C,D,D2,D3 TYPICAL ROOM LAYOUTS	1:50	P11
SSD2012	TYPE E,E2,E3,E4 TYPICAL ROOM LAYOUTS	1:50	P11
SSD2013	TYPE F-G TYPICAL ROOM LAYOUTS	1:50	P11
SSD2014	TYPE H-I TYPICAL ROOM LAYOUTS	1:50	P11
SSD2015	TYPE J TYPICAL ROOM LAYOUTS	1:50	P11
SSD2300	SECTION A	1:200	P11
SSD2302	SECTION B	1:200	P11
SSD2302	SECTION C	1:200	P11
SSD2303	SECTION D	1:200	P11
SSD2304	RAMP SECTIONS	1:100, 1:250	P11
SSD2400	WEST ELEVATION (EVELEIGH STREET)	1:200	P11
SSD2401	EAST ELEVATION (WOODBURN STREET)	1:200	P11



DRAWING	DRAWING NAME	SCALE	REV
SSD2402	NORTH ELEVATION	1:200	P11
SSD2403	SOUTH ELEVATION	1:200	P11
SSD2404	STREET CONTEXT ELEVATIONS	1:500	P11
SSD2405	MATERIALS FINISHES - EVELEIGH STREET		P11
SSD9000	GROSS FLOOR AND LANDSCAPED AREAS	1:500	P11
SSD9001	COMMUNAL/COMMERCIAL AREAS	1:500	P11
SSD9002	PHOTOMONTAGE N/E - EXISTING		P11
SSD9003	PHOTMONTAGE N/E - PROPOSED		P11
SSD9007	INDICATIVE SECURITY AND LIGHTING PLAN	1:200	P11
SSD9008	TYPICAL NATURAL CROSS FLOW VENTILATION DIAGRAMS	1:100, 1:50	P11
SSD9009	ADG SEPARATION DISTANCE	1:200	P11
SSD9100	WINTER SOLSTICE PLAN SHADOW DIAGRAMS 9AM-10AM	1:500	P11
SSD9101	WINTER SOLSTICE PLAN SHADOW DIAGRAMS 11AM-12PM	1:500	P11
SSD9102	WINTER SOLSTICE PLAN SHADOW DIAGRAMS 1PM-2PM	1:500	P11
SSD9103	WINTER SOLSTICE PLAN SHADOW DIAGRAMS - 3PM	1:500	P11
SSD9104	EQUINOX PLAN SHADOW DIAGRAMS 9AM-10AM	1:500	P11
SSD9105	EQUINOX PLAN SHADOW DIAGRAMS 11AM-12PM	1:500	P11
SSD9106	EQUINOX PLAN SHADOW DIAGRAMS 1PM-2PM	1:500	P11
SSD9107	EQUINOX PLAN SHADOW DIAGRAMS 3PM	1:500	P11
SSD9108	SUMMER SOLSTICE PLAN SHADOW DIAGRAMS 9AM-10AM	1:500	P11
SSD9109	SUMMER SOLSTICE PLAN SHADOW DIAGRAMS 11AM-12PM	1:500	P11
SSD9110	SUMMER SOLSTICE PLAN SHADOW DIAGRAMS 1PM-2PM	1:500	P11
SSD9111	SUMMER SOLSTICE PLAN SHADOW DIAGRAMS 3PM	1:500	P11
SSD9200	WINTER SOLSTICE SUN EYE VIEW DIAGRAMS 9AM-12PM		P11
SSD9201	WINTER SOLSTICE SUN EYE VIEW DIAGRAMS 1PM-3PM		P11
SSD9204	PROPOSED COURTYARD WINTER SOLSTICE SOLAR ACCESS DIAGRAMS		P11
SSD9205	PROPOSED COURTYARD EQUINOX SOLAR ACCESS DIAGRAMS		P11
SSD9206	PROPOSED COURTYARD SUMMER SOLSTICE SOLAR ACCESS DIAGRAMS		P11



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 Lighting	BCA 2019 Amendment 1 Clause E4.2, E4.4 and AS/NZS 2293.1 – 2018
Exit Signs	BCA 2019 Amendment 1 Clause E4.5, NSW E4.6, 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 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
Lightweight Construction	BCA 2019 Amendment 1 Specifications C1.8, Clause A2.3 and AS 1530.4 – 2014
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>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
Wall Wetting Sprinkler And Drencher Systems	BCA 2019 Amendment 1 Clause C3.4
Warning And Operational Signs	BCA 2019 Amendment 1 Clauses D2.23, D3.6, Specification D3.6, E3.3, E3.9 and E3.10



STEVE WATSON
& P A R T N E R S

BUILDING CODE CONSULTANTS
BUILDING SURVEYORS AND CERTIFIERS

SYDNEY | MELBOURNE | BRISBANE | CANBERRA