Appendix 23

BCA Report

City Plan



Building Code of Australia

Preliminary Issues Report

Project Address: East Quarter, 22-34 Berry Road, 21-31Holdsworth Avenue & 42-46 River Road, St Leonards

Client: CIFI St Leonards Development Management Pty Ltd Report Number: 200459 Revision: 02

10 May 2022



REPORT REVISION HISTORY

Date Issued	Revision Description	
09.03.22	Draft BCA Preliminary Issues	
	Prepared by	Verified by
	Aroha Bates Senior Building Regulations Consultant	Brendan Bennett Managing Director
10.05.22	Final BCA	
	Brendan Bennett	
	Managing Director	
	09.03.22	09.03.22 Draft BCA Preliminary Issues Prepared by Aroha Bates Senior Building Regulations Consultant 10.05.22 Final BCA Brendan Bennett

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1. INTRODUCTION

1.1. General

This preliminary report has been prepared as a high-level assessment for compliance with the Building Code of Australia in respect to proposed development, located at East Quarter, 22-34 Berry Rd, 21-31 Holdsworth Ave & 42-46 River Rd, St Leonards within the local government area of the Lane Cove Municipal Council. The development consists of 5 residential towers / buildings, with a shared basement carpark.

Residential Buildings A, B, C, D & E Basement Carpark



1.2. Report Basis

The following information has been directly referenced or relied upon in the preparation of this preliminary report:

- Architectural plans prepared by Koichi Takada Architects, as identified in the attached Appendix 2.
- The Building Code of Australia 2019 Amendment 1, inclusive of NSW variations (See Note 1).
- Environmental Planning and Assessment Act 1979.
- Environmental Planning and Assessment Regulation 2000.
 - Note1: Building Code of Australia (BCA) 2019 Amendment 1 was adopted in NSW on 1 July 2020. The amendment of the BCA in force at the date of lodgement of a Construction Certificate is the version called up by Clause 98 of the Environmental Planning & Assessment Regulation 2000 for the purpose of the building design. Therefore, comments may be subject to changes to comply with updated versions of the Building Code of Australia.

1.3. Exclusions and Limitations

- 1. This report has been prepared by City Plan for CIFI St Leonards Development Management Pty Ltd and may only be used and relied on by CIFI St Leonards Development Management Pty Ltd for the purpose agreed between City Plan and CIFI St Leonards Development Management Pty Ltd, as set out in section 2.1 and 2.2 of this report.
- 2. City Plan otherwise disclaims responsibility to any person other than CIFI St Leonards Development Management Pty Ltd arising in connection with this report. City Plan also excludes implied warranties and conditions, to the extent legally permissible.
- 3. City Plan Services Pty Ltd undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.



- 4. The services undertaken by City Plan in connection with preparing this report are limited to those specifically detailed within the report and subject to scope limitations as set out in the report but specifically exclude:
 - Structural design in any form or content.
 - The Disability Discrimination Act 1992.
 - Disability (Access to Premises Building) Standards 2010.
 - The existing level of Building Code of Australia compliance unless specifically identified in Section 2.3 within this report.
 - The operational capabilities or compliance of any existing services installed within the building.
 - Assessment of any existing Performance Solutions, including Fire Safety, addressing compliance with the Performance Requirements of the BCA.
- 5. This report is not a Part 4A compliance certificate under the Environmental Planning & Assessment Act 1979 or Regulation 2000.
- 6. The opinions, conclusions and any recommendations within this report are based on conditions encountered and information reviewed at the date of preparation of the report. City Plan has no responsibility or obligation to update this report to account for events or changes occurring after the date that the report was prepared.
- 7. The methodologies adopted within this report specifically relate to the subject building and must not be used for any other purpose.
- 8. City Plan has prepared this report based on information provided by others, including but not limited to Architectural Plans and Annual Fire Safety Statements. City Plan has not independently verified or checked beyond the agreed scope of work the validity of the documentation prepared and provided by others. City Plan accepts no liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions within the information relied upon.
- The documentation relied upon has been reviewed only to the degree reasonable as pertaining to City Plan's scope, as defined within the contract and fee agreement. It is expressly not City Plan's responsibility to:
 - Familiarise ourselves with all information and documentation relating to the project, or the potential BCA, Access, or fire safety aspect derivatives thereof,
 - Conduct a "full BCA audit or compliance assessment" in any way defined, implied, or assumed, for matters outside of City Plans scope.
 - Prepare a holistic BCA, Access or Fire Safety strategy for the building or carry out a full assessment of all information and documentation relating to the project, or the potential BCA, Access, or Fire Safety aspect derivatives thereof.



2. BUILDINGS A, B, C, D & E

2.1. Classification (Part A6)

The proposed building consists of:

Building	Class	Use	Area
Buildings A, B, C, D & E	7a	Carparking	Basement levels B04, B03, B02, B01
	7a, 7b	Carparking / Loading Dock	Basement Mezzanine
	2	Residential	Ground Level to Level 09
	10b	Swimming Pool	Ground Level

2.2. United Buildings (Part A7)

Buildings A, B, C, D & E are considered <u>United Buildings</u> as they are connected via a shared basement carpark.

2.3. Effective Height (Schedule 3)

The proposed united building will have an effective height of greater than 25m (42.45m). (Level 09 RL 92.050 – Basement 04 RL 49.600 = 42.45m).

₹295.150 RL ROOF	
232.050 RL LEVEL.03 -	
∇88.950 RL 1FVFL08	
V85.850 RL LEVEL 07	LEP 3'
\nu_{82.750 RL LEVEL 06 \nu_{100 RL	EFFECTIVE HEIGHT
279.650 RL LEVEL.05	
₹76.550 RL LEVEL.04	RL 92.050 - RL 49.600 = 42.45m
₹73.450 RL LEVEL.03	
₹770,350 RL 16 VEL 02 - 60	17900
Ver 010 RL LEVEL 01	LEP 15M HEIGHT LIMIT
Ver oto RL LEVEL GND	
Vei.050 RL LOADING DOCK	BUILDING E
	3 STOREYS
	Store and a store of the store
255.800 RL BAGEMENT 02	802
	803

Note: Effective height means the vertical distance between the floor of the lowest storey included in the calculation of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heading, ventilating, lift or other equipment, water tanks or similar service units).

2.4. Rise in Storeys (C1.2)

The proposed building will consist of a rise in storeys of Fifteen (15).



2.5. Type of Construction (C1.1)

Type A construction in accordance with Specification C1.1 of the BCA, is the applicable type of construction.

2.6. Climate Zone (A1.1)

The building is located within Climate Zone 8 within the local government area of the Lane Cove Municipal Council.

2.7. Floor Area and Volume Limitations (Table C2.2)

The building is compliant with maximum floor area and volume limits of:

Class 2 - The Class 2 portions of these buildings are not subject to floor area and volume limitations of C2.2 as Table 3 of Specification C1.1. Clause C3.11 of the BCA regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.

Class 7a, 7b	Maximum Floor Area	5,000m ²
	Maximum Volume	30,000m ³

The Basement Carpark Levels do not exceed the maximum floor area / volume permitted by C2.2.



BCA Preliminary Issues Buildings A, B, C, D & E East Quarter, 22-34 Berry Rd, 21-31 Holdsworth Ave & 42-46 River Rd, St Leonards Project 200459 May 2022

No.	DTS	PR	DESCRIPTION	REQUIRE OF COMF	ED ACTION/EVIDENCE PLIANCE	STATUS COMPLETE DATE
1.	C1.1	CP1	General FRL's Class 2 – 90/90/90 structure Class 7a - 120/120/120 structure Class 7b - 240/240/240 structure A Performance based solution has been proposed to justify reduced FRL's to:- • Basement Mezzanine Class 7b loading dock from 4hrs to from to 2hrs	complia Structur verify co FRL's fo	cture details to verify ance ral engineers details to ompliance or structure to be ed on plans	
2.			All ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion bearing shaft must comply with Specification C1.1.ShaftsLoad bearing FRLNon bearing FRLClass 290/90/90-/90/90Class 7a120/90/90-/90/90Class 7b240/120/120-/120/120	complia Structur verify co	ral engineers' details to ompliance or shafts to be identified	
3.	C2.2	CP2	 The building is to be Type A construction Fire walls are to be provided in the following locations: Basement 03, 02, 01, Mezzanine Residential / Carpark 	complia Service	cture details to verify ance es to address fire rtmentation	
4.	D1.2	DP4	Access to at least two exits from every part of the floor is to be demonstrated. The following areas are <u>not</u> provided with two exits: Building E • Basement 01 • Basement Mezzanine	Possible	e PS	
5.	D1.4	DP4	Areas within the current design have extended travel to the POC & exits exceeding DTS: - • Performance Solution Permits: • Maximum 12m in residential areas Building A - Residential • Ground Level – Approx. 19m to POC >12m PS to exit • Level 01 – Approx. 22m to Exit	 Possib POC o 	le PS where < 12m to r Exit	



BCA Preliminary Issues Buildings A, B, C, D & E East Quarter, 22-34 Berry Rd, 21-31 Holdsworth Ave & 42-46 River Rd, St Leonards Project 200459 May 2022

No. DTS PR	DESCRIPTION	REQUIRED ACTION/EVIDENCE OF COMPLIANCE	STATUS COMPLETE
	 Level 02 – 04 - Approx. 15m to POC >12m PS to exit Level 05 – 06 - Approx. 13m to POC > 12m PS to exit Level 07 – Approx. 12m to POC Level 08 – Approx. 7m to POC 		DATE
	 Level 03 – Approx. Am to FOC Building B - Residential Level 01 – Approx. 25m to Exit Level 02 – Approx. 12m to POC Level 03 – 05 - Approx. 18m to POC > 12m PS to exit Level 06 – Approx. 16m to POC > 12m PS to exit Level 07 - Approx. 15m to POC > 12m PS to exit Level 07 - Approx. 15m to POC > 12m PS to exit Level 08 – Approx. 11m to POC 		
	 Building C - Residential Ground Level - Approx. 12m to POC Level 01 - 05 - Approx. 18m to POC > 12m PS to exit Level 06 - Approx. 16m to POC > 12m PS to exit Level 07 - 08 - Approx. 14m to POC > 12m PS to exit 		
	 Building D - Residential Ground Level – Approx. 18m to POC > 12m PS to exit Level 01 – Approx. 25m to exit Level 02 – 04 - Approx. 18m to POC > 12m PS to exit Level 05 – Approx. 16m to POC > 12m PS to exit Level 06 – Approx. 15m to POC > 12m PS to exit Level 07 – Approx. 14m to POC > 12m PS to exit 		
	 Building E – Residential B03 - Approx. 15m to POC >12m PS to exit B02 – Approx. 10m to POC B01 – Roof Approx. 39m (if this area has access other than for maintenance) 		
	 Basement Mezzanine Approx. 9m to Exit Swimming Pool Deck / Common Area Clarification of egress arrangement form the Swimming Pool Deck / Area required for 		



No.	DTS	PR	DESCRIPTION	REQUIRED ACTION/EVIDENCE STATUS OF COMPLIANCE COMPLETE DATE
			further assessment of travel distances.	
6.	D1.5	DP5	The following exit travel distances to alternative exits within residential areas appear to be less than 9m apart:	Design Change Required
			• Distance between alternative exits to Buildings A, B, C & D is Approx. 5m.	
			The Performance solution permits 7.5m between alternate exits in residential areas.	
7.	D1.6	DP6	The proposed exit widths are generally greater than 1m.	Capable of Complying
8.	D1.7	DP4	Each fire isolated stair is required to have its own discharge to road or open space.	Confirm FS01, FS02, FS03, FS04 discharge.
			FS01, FS02, FS03, FS04 all discharge internally in lieu of directly to road / open space or to a fire-isolated passage that leads directly to road / open space.	
9.	D1.7	DP4	The discharge of fire stair exposed to openings in the external wall of the building are required to be protected. Any path of travel within 6m of external wall, requires the external wall/openings to be protected in accordance with C3.4.	 Capable of Complying Confirm FS01, FS02, FS03, FS04 discharge.
			Discharge from FS01, FS02, FS03, FS04 appears to necessitate passing within 6m of the external wall of the same building.	
10.	D1.10	DP4/ 5	If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by: -	Capable of Complying
			• A ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to-Satisfy Provisions of Part D3.	
			 A stairway complying with the Deemed-to-Satisfy Provisions of the BCA. 	
11.	D2.4		Fire-isolated Stairs 1, 2, 3, 4 & 5 appear to be descending from residential levels and rising from basement levels.	 Capable of Complying Particular attention is required to any issues with stair pressurisation.
			Separation in accordance with D2.4 & Clause 2 of Specification C2.5 to be achieved.	



No.	DTS	PR	DESCRIPTION		REQUIRED ACTION/EVIDENCE OF COMPLIANCE	STATUS COMPLETE DATE
12.	2.12		If an exit discharges to a roof of a building, such as the 'green space', the roof must have an FRL not less than 120/120/120 and not have any roof lights or other openings within 3m of the path of travel of persons using the exit to road or open space. One on the roof, a safe path of travel must be provided to a public road.	•	Capable of Complying	
13.	D2.16 D2.17		Handrails and balustrades are required to all stairs and ramps throughout the building and to the external paths of travel in accordance with Clause D2.16 and D2.17.	•	Architect to verify compliance to be achieved	
14.	D2.20	DP5	A swinging door in a required exit or forming part of a required exit must swing in the direction of egress.	•	Performance Solution Proposed	
			Where fire-isolated stairs are discharging into residential lobbies, plans currently indicate that they are <u>not</u> swinging in the direction of egress.			
15.	D2.22	DP5	Doors of Fire-isolated exits serving any storey above an effective height of 25m must not be locked from the inside, unless the doors are fitted with a fail-safe device that automatically unlocks the door upon the activation of a fire alarm. Also, on every fourth storey, the doors are not able to be locked and sign provided stating that re-entry is available.	•	Capable of Complying Particular attention is required to strategy for compliance.	
16.	Part D3		Access is required from a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level.	•	Access consultant to provide report satisfying accessible requirements of the BCA.	
			To and within not less than 1 of each type of room or space for use in common by the residents			
17.	E1.3	EP1.3	Hydrants are to be provided to all fire stairs in accordance with AS 2419.1. Fire hydrant booster / pump room locations to be provided.	•	Particular attention is required to clarify if any component of the system is not intended to comply.	
			Internal hydrants to fire stairs are to be shown.			
18.	E1.4	EP1.1	Fire Hose Reels are to be provided in accordance with E1.4 & AS 2441	•	Particular attention is required to clarify if any component of the system is not intended to comply.	



No.	DTS	PR	DESCRIPTION	REQUIRED ACTION/EVIDENCE STATUS OF COMPLIANCE COMPLETE DATE
19.	E1.5	EP1.4	A sprinkler system is required throughout the building in accordance with E1.5 & AS 2118.1	 Particular attention is required to clarify if any component of the system is not intended to comply. Clarify area for pump/valve room with direct access. Possible PS
20.	E1.6	EP1.2	Portable fire extinguishers shall be provided in accordance with E1.6 and AS 2444	 Particular attention is required to clarify if any component of the system is not intended to comply.
21.	E1.8	EP1.6	A fire control centre is to be provided with suitable equipment as detailed in Spec E1.6.	Architect to clarify location
22.	E2.2	EP2.2	 A smoke hazard management system is to be provided in accordance with Table E2.2a - Stair Pressurisation Carpark Exhaust Residential Levels The following stairs are required to have stair pressurisation - All fire isolated stairs serving storeys above 25m effective height. 	 Capable of Complying Particular attention is required to clarify if any component of the system is not intended to comply.
23.	Part E3		Lifts are to achieve compliance with stretcher facilities and emergency lift requirements in accordance with Part E3 & AS 1735.	Capable of Complying
24.	Part E4		An emergency warning and intercom system must be installed in accordance with E4.9, AS 1670.4	 Particular attention is required to clarify if any component of the system is not intended to comply.
25.	Part F2		Ground Level Residential Amenities arrangement to be clarified for further assessment.	Architect to verify compliance to be achieved
26.	Part F4	FP4.1	Natural light is required provided to all habitable rooms. Natural light does not appear have been provided to 'Study' areas on in the following buildings / levels: - Building E • Basement 04 Building A • Ground – Level 07 Natural ventilation is required to be provided in accordance with F4.5(a)	Architect to verify compliance to be achieved



No. 27.	DTS Part J	PR	DESCRIPTION		Residential portion will be subject to BASIX and parts of section J.	STATUS COMPLETE DATE
28.	Part G		Note: A building must be provided with a safe manner of cleaning any windows located 3 or more storeys above the ground level via either windows that can be cleaned wholly from within the building or provision for the cleaning of the windows by a method complying with the WH&S Act 2001 and regulations made under that Act.	•	Architect to verify compliance to be achieved	
29.	Part G6		 The following areas are deemed as an occupiable outdoor area and are required to comply with Part G6 provisions: Building E – Basement 01 Roof 	•	Architect to verify compliance to be achieved	



BCA Preliminary Issues Buildings A, B, C, D & E East Quarter, 22-34 Berry Rd, 21-31 Holdsworth Ave & 42-46 River Rd, St Leonards Project 200459 May 2022

APPENDIX 1

Refer to CPS mark-up of the drawings.



APPENDIX 2

Assessed plans prepared by Koichi Takada Architects

Plan Title	Drawing No	Revision	Date
Basement 04 (River Road Ground)	A0095	D	25.02.22
Basement 03	A0096	E	25.02.22
Basement 02	A0097	E	25.02.22
Basement 01	A0098	E	25.02.22
Basement Mezzanine	A0099	D	25.02.22
Ground Floor Plan	A0100	E	25.02.22
Level 01 Floor Plan	A0101	E	25.02.22
Level 02 Floor Plan	A0102	E	25.02.22
Level 03 Floor Plan	A0103	E	25.02.22
Level 04 Floor Plan	A0104	E	25.02.22
Level 05 Floor Plan	A0105	E	25.02.22
Level 06 Floor Plan	A0106	E	25.02.22
Level 07 Floor Plan	A0107	E	25.02.22
Level 08 Floor Plan	A0108	E	25.02.22
Level Roof	A0110	D	25.02.22
Elevation North	A0200	В	25.02.22
Elevation East	A0201	В	25.02.22
Elevation South	A0202	В	25.02.22
Elevation West	A0203	В	25.02.22
Site Section 03	A0302	В	25.02.22
Site Section 04	A0303	В	25.02.22



APPENDIX 3

Preliminary Fire Safety Schedule – Buildings A, B, C, D & E

The following table is a list of the required fire safety measures for this development. This list is to be treated as a guide as to what the buildings are considered to require.

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
1.	Access panels, doors & hoppers to fire resisting shaft	BCA 2019 Amdt 1 C3.13 & AS 1905.1-2015 Amdt 1	YES
2.	Automatic fail-safe devices	BCA 2019 $_{\rm Amdt1}$ Spec C3.4 automatic smoke doors; D2.21 (b)(iv) auto unlock of doors; D2.22 (re-entry from fire stairs)	YES
3.	Automatic fire detection and alarm system	BCA 2019 _{Amdt 1} E2.2, Spec E2.2a Clause 5 (combination smoke alarm and smoke detection); Clause 6 (smoke detection for smoke control systems) & AS 1670.1-2018 & AS 3786-2014 _{Amdt 1} & 2	YES
4.	Automatic fire suppression system	BCA 2019 Amdt 1 E1.5, Spec E1.5 & AS 2118.1-2017 Amdt 1	YES
5.	Emergency Lifts	BCA 2019 Amdt 1 E3.4	YES
6.	Emergency lighting	BCA 2019 Amdt 1 Clause E4.2, E4.3, E4.4, E1.8	YES
7.	Exit signs	BCA 2019 Amdt 1 E4.5, E4.6, E4.8 Spec E4.8 & AS 2293.1-2018	YES
8.	Fire control centre	BCA 2019 Amdt 1 E1.8 & Spec E1.8	YES
9.	Fire dampers	BCA 2019 Amdt 1 C3.12, C3.15 & AS1668.1-2015 Amdt 1, AS 1668.2-2012 Amdt 1 & 2	YES
10.	Fire doors	BCA 2019 _{Amdt 1} C2.12 (separation of equipment); C2.13 (electricity supply systems); C3.4, Spec C3.4; C3.5 (doorways & fire walls); C3.8 (openings in fire isolated exits), C3.11 (bounding construction), C3.13 (openings in shafts) & AS 1905.1 – 2015 _{Amdt 1}	YES
11.	Fire rated lift landing doors	BCA 2019 Amdt 1 C3.10 & AS 1735.11-1986	YES
12.	Fire Hose reel systems	BCA 2019 Amdt 1 E1.4 & AS 2441-2005 Amdt 1	YES
13.	Fire hydrant systems	BCA 2019 Amdt 1 E1.3 & AS 2419.1-2005 Amdt 1	YES
14.	Fire seals protecting openings in fire resisting components of the building	BCA 2019 _{Amdt 1} C3.12, C3.15 & Spec C3.15, AS 4072.1-2005 _{Amdt 1} , AS 1530.42014	YES
15.	Lightweight construction	BCA 2019 Amdt 1 C1.8 & Spec C1.8	YES
16.	Mechanical air handling system	BCA 2019 _{Amdt 1} E2.2, Table E2.2a; NSW Table E2.2b, Spec E2.2a, Spec E2.2b & AS 1668.1-2015 _{Amdt 1} . Class 7a (carpark building mechanical ventilation systems) BCA 2019 _{Amdt 1} E2.2, Table E2.2a and Clause 5.5 of AS 1668.1-2015 _{Amdt 1} .	YES



NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
17.	Portable fire extinguishers	BCA 2019 Amdt 1 E1.6 & AS 2444-2001	YES
18.	Pressurising system	BCA 2019 Amdt 1 Clause E2.2 & AS 1668.1-2015 Amdt 1	YES
19.	Smoke alarms & heat alarms	BCA 2019 Amdt 1 E2.2, Spec E2.2a & AS 3786-2014 Amdt 1 & 2	YES
20.	Emergency warning and intercom system	BCA 2019 Amdt 1 E4.9 & AS 1670.4-2018	YES
21.	Warning and operational signs	EPA Regulation 2000 (Clause 183), BCA 2019 _{Amdt 1} D2.23 (signs on exit doors) & E3.3 (lifts).	YES
22.	Fire Engineered Performance Solution	ТВА	