

Friday, 11 December 2020

19-21 The Corso - Essential Fire Safety Measures Schedule

Re: DA application for refurbishment and conservation works at 19-21 The Corso

The property at 19-23 The Corso is subject to a Fire Safety Upgrade (Order No.1) under the EP&A Act 1979 issued by Northern beaches Council on 26 November 2020 (attached). The following schedule of Essential Fire Safety Measures is taken from the Building Code of Australia Fire Upgrade Report prepared by CityPlan 25 May 2020 (attached).

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE
1	Automatic smoke alarm system (Within residential SOUs) - <i>Upgraded</i>	BCA 2019 E2.2, Spec E2.2a (Clause 3) (smoke alarm system) & AS 3786-2014 Amdt 1
2	Automatic fire suppression system - <i>Upgraded</i>	BCA 2019 E1.5, Spec E1.5 & AS 2118.1-2017 Amdt 1
3	Emergency lighting - <i>Upgraded</i>	BCA 2019 Clause E4.2, E4.3, E4.4, E1.8 & AS 2293.1 – 2018
4	Exit signs - <i>Upgraded</i>	BCA 2019 E4.5, E4.6, E4.8 Spec E4.8, AS 2293.1- 2018 Exit signs (non-illuminated) BCA 2019 E4.7
5	Fire doors - <i>Upgraded & Existing</i>	BCA C3.11 & AS 1905.1 – 2015 Amdt 1 AS1905.1 - 1990
6	Fire Hose reel systems - <i>Upgraded</i>	BCA 2019 E1.4 & AS 2441-2005 Amdt 1
7	Fire hydrant systems - <i>Upgraded</i>	BCA 2019 E1.3 & AS 2419.1-2005
8	Fire seals protecting openings in fire resisting components of the building - <i>Existing</i>	BCA C3.15 & Spec C3.15 and AS 1530.4.
9	Lightweight construction. To underside of timber floors. - <i>Upgraded</i>	BCA 2019 C1.8 & Spec C1.8
10	Portable fire extinguishers - <i>Upgraded</i>	BCA 2019 E1.6 & AS 2444-2001
11	Warning and operational signs - <i>Upgraded</i>	BCA 2019 D2.23 (signs on exit doors)
12	Fire engineering requirements to be added to the above	

Yours Faithfully,
NBR



Alice Steedman
Associate

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26 NOVEMBER 2020

PROPRIETORS OF STRATA PLAN 12989
19-23 THE CORSO
MANLY NSW 2095

Dear Sir/Madam

Re: Order No. 1 (Fire Safety Upgrade)
Environmental Planning and Assessment Act 1979
Premises: 19-23 The Corso MANLY NSW 2095
Ref No: EPA2020/0234

Council is writing to you, as it has come to the organisations attention that a matter under your control is required to be addressed.

Please find enclosed Order No. 1 in regard to the abovementioned property. The circumstances and reasons for this course of action are detailed in the formal Order documentation attached to this letter.

Council issued a Notice of Intention dated 25 September 2020. After reviewing and considering any representations made concerning the proposed Order, Council has determined to give an order in accordance with the proposed order.

Council is to be advised within 90 days from the issue date of the Order of the appropriately qualified person who will be managing the implementation of the fire safety upgrade.

If you require any further information in relation to this matter, please contact Council's Senior Building Surveyor, Troy Sullivan on 1300 434 434 during normal business hours between 9:00am to 5:00pm or by council@northernbeaches.nsw.gov.au

Yours faithfully



Troy Sullivan
Senior Building Surveyor & Fire Safety Specialist

cc Fire Safety Branch - Fire & Rescue NSW
Email FireSafety@fire.nsw.gov.au

cc timpeterson@hilrokproperties.com.au

scottr@cityplan.com.au

NORTHERN BEACHES COUNCIL DEVELOPMENT CONTROL ORDER

Pursuant to Section 9.34 of the
Environmental Planning and Assessment Act, 1979 (NSW)

DATE:	26 NOVEMBER 2020
TO WHOM:	PROPRIETORS OF STRATA PLAN 12989
PREMISES:	19-23 THE CORSO MANLY NSW 2095

You are hereby given an **Order No 1** pursuant to schedule 5, part 2 of the *Environmental Planning and Assessment Act, 1979 (NSW)* (the 'Act') that the Northern Beaches Council, as the appropriate authority under the Act, has been made aware that provisions for fire safety awareness are not adequate to prevent fire, suppress fire or prevent the spread of fire or ensure or promote the safety of persons in the event of fire on the above premises.

DESCRIPTION OF THE ORDER THE COUNCIL INTENDS TO GIVE:

ORDER NO. 1

TO DO WHAT:

- (1) Carry out the RECOMMENDATIONS by City Plan detailed in BCA Fire Safety Upgrade Report Ref No: 200173 Revision 3 dated 8/9/20.
- (2) All building works must be carried out in accordance with the requirements of the Building Code of Australia (BCA).
- (3) The works are required to be carried out in accordance with all relevant Australian standards including AS2601.2001- demolition of Structures.
- (4) Unless authorised by Council:
Building construction and delivery of material hours are restricted to:
 - 7am to 5pm inclusive Monday to Friday,
 - 8am to 1pm on Saturday,
 - No work on Sundays and Public Holidays.
- (5) No building or demolition material of any nature shall be placed on Council's footpaths, roadway, parks or grass verges without Council Approval.
- (6) Hazardous or intractable wastes arising from the demolition process shall be removed and disposed of in accordance with the requirements of SafeWork NSW and the Environmental Protection Authority and the provisions of all relevant Acts, regulations and Guidelines.

- (7) Upon completion, provide a Certificate from a Registered Practicing Structural Engineer confirming that all structural works relevant to the Fire Safety Upgrade have been carried out adequately.
- (8) Schedule of Essential Fire Safety Measures
On completion of the works, the owners must provide a list of all fire safety measures incorporated in the building and pursuant to the Fire Safety Measures as identified by City Plan detailed in BCA Fire Safety Upgrade Report Ref No: 200173 Revision 3 dated 8/9/20.
- (9) Provide Council and the NSW Fire Brigade with an Interim Fire Safety Certificate upon completion of each stage and a Final Fire Safety Certificate upon completion of the fire safety upgrade.
Following this initial certification, Council and the NSW Fire Brigade will require Annual Fire Safety Statements to ensure that all Fire Safety Measures continue to perform to the relevant standard of performance.
- (10) The property must be registered as 19-21 The Corso, MANLY with The Land Titles Office NSW prior to the Order being finalised.
- (11) Upon completion of all works submit a finalisation letter (supported by certificates) addressed by a Registered Building Surveyor (Unrestricted) or by a Certifier-Fire Safety (Registered with Fair Trading NSW) stating that all the matters/works described above have been satisfactorily completed.

REASONS FOR THE ORDER: (Schedule 5, Part 4, clause 5 of the Act)

A BCA Fire Safety Upgrade Report prepared by City Plan Ref No: 200173 Revision 3 dated 8/9/20 confirmed that existing provisions for fire safety or fire safety awareness are not adequate to prevent fire, suppress fire or prevent the spread of fire or ensure the safety of persons in the event of fire at the property.

PERIOD OF COMPLIANCE WITH THE ORDER

- Stage 1 works by 26 MAY 2021.
- Stage 2 works by 26 MAY 2022.
- Stage 3 works by 26 NOVEMBER 2022.

FAILURE TO COMPLY WITH THE ORDER

OFFENCE

It is an offence against the *Environmental Planning and Assessment Act 1979* (NSW) not to comply with any Order: see Part 9, of Division 9.3, Clause 9.37 of the *Environmental Planning and Assessment Act 1979* (NSW). In the event that an Order is issued and you do not comply, Council may issue penalty infringement(s) or commence Court Proceedings to compel compliance and / or undertake a criminal prosecution.

PENALTY

The maximum penalty for non-compliance with this order is (a) in case of a corporation \$5 million, and for a continuing offence a further \$50,000 for each day the offence continues; or (b) in the case of an individual \$1 million, and for a continuing offence a further \$10,000 for each day the offence continues: see Part 9, Division 9.6, Clause 9.52 of the *Environmental Planning and Assessment Act 1979* (NSW).

EXECUTION OF ORDER BY COUNCIL

If you fail to comply with the terms of an Order Council may do all such things as are necessary or convenient to give effect to the terms of the Order, including the carrying out of any work required by the Order, and may, among other things, recover from you the costs incurred by Council in so doing: see Part 11, Clause 34 of Schedule 5 of the *Environmental Planning and Assessment Act 1979*.

COMPLIANCE COSTS

Schedule 5 Part 12 of the EP&A Act 1979 and clause 281C of the Environmental Planning and Assessment Regulation 2000 allows **compliance cost notices** to be issued by Council to you in respect to all or any reasonable costs or expenses incurred by Council in connection with:

- (a) monitoring action under the order, and
- (b) ensuring that the order is complied with, and
- (c) any costs or expenses relating to an investigation that leads to the giving of the order, and
- (d) any costs or expenses relating to the preparation or serving of the Notice of intention to give an order, and
- (e) any other matters associated with the Order.

RIGHT OF APPEAL AGAINST ORDER

If you wish to appeal against an Order you must appeal to the **Land and Environment Court**, Level 4, 225 Macquarie Street, Sydney NSW 2000, within **28 days** after the service of the Order on you: see Part 8, Division 8.5, Clause 8.18 of the *Environmental Planning and Assessment Act 1979*.

TREE PRESERVATION

This Order does not grant any approval for tree work. A general Tree Preservation Order applies to all trees in the Northern Beaches Local Government Area. This order prohibits the ringbarking, cutting down, topping, lopping, pruning, transplanting, injuring, or wilful destruction of such trees except without the prior written consent of Council.

Troy Sullivan

Troy Sullivan
Senior Building Surveyor & Fire Safety Specialist

A large graphic element consisting of a dark blue diagonal band across the middle of the page. Behind this band is a grayscale image of a city skyline with a grid of white-outlined 3D rectangular blocks overlaid on it.

Building Code of Australia

Fire Safety Upgrade Report

Project Address: 19 - 21 The Corso Manly

Client: Hilrock Properties

Report Number: 200173

Revision: 1

25 MAY 2020

REPORT REVISION HISTORY

Revision	Date Issued	Revision Description				
0 - Draft	15.05.2020	Draft Report for client review/comment.				
		<table border="0"> <tr> <td style="width: 50%;">Prepared by</td> <td style="width: 50%;">Verified by</td> </tr> <tr> <td>Scott Reid <i>Senior Building Regulations Consultant</i></td> <td>Name Surname <i>Position title</i></td> </tr> </table>	Prepared by	Verified by	Scott Reid <i>Senior Building Regulations Consultant</i>	Name Surname <i>Position title</i>
Prepared by	Verified by					
Scott Reid <i>Senior Building Regulations Consultant</i>	Name Surname <i>Position title</i>					
1	25.05.2020	Revised following client comments				
		<table border="0"> <tr> <td style="width: 50%;">Prepared by</td> <td style="width: 50%;">Verified by</td> </tr> </table>	Prepared by	Verified by		
Prepared by	Verified by					



Scott Reid
Senior Building Regulations Consultant



Brendan Bennett
Managing Director

Disclaimer

This report has been prepared by City Plan Services P/L with input from a number of other expert consultants (if relevant). To the best of our knowledge, the information contained herein is neither false nor misleading and the contents are based on information and facts that were correct at the time of writing. City Plan Services P/L accepts no responsibility or liability for any errors, omissions or resultant consequences including any loss or damage arising from reliance in information in this publication.

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1. EXECUTIVE SUMMARY

The building, the subject of this report, is located at 19 – 21 The Corso, Manly. The building comprises retail and office tenancies on the Ground Floor and residential apartments from Levels 1 to 3. The building is constructed of loadbearing external and internal masonry walls, timber floors and a timber framed, metal clad roof. The building has frontages to The Corso and Market Place to the south and north respectively and abuts private properties to the east and west. The owner intends to undertake a voluntary fire safety upgrade of the building.

The building, which is located within the local government area of Northern Beaches Council, is one of a group of buildings which are listed as a local heritage item in the Manly Local Environmental Plan 2013.



19 – 21 The Corso, Manly

This report has been prepared on behalf of Hilrock Properties to identify the non-compliances with the deemed-to-satisfy provisions of Sections C, Parts D1 and D2, Sections E and F of the Building Code of Australia 2019 (BCA) and includes recommendations and timeframes for fire safety upgrade works.

The recommendations within this report includes timeframes for compliance as follows:

1. Stage 1 works - to be completed within 6 months;

2. Stage 2 works - to be completed within 18 months;
3. Stage 3 works – to be completed within 24 months.

Summary of recommendations

Works to be completed within 6 months		
NSW D2.13 & D2.14	Goings, risers and landings	It is recommended that slip resistant strips to be provided on all nosings of stair treads and landings.
NSW D2.15	Thresholds	A door has been installed at the bottom of the main stair such that the door is within the distance of the door leaf from the step resulting in a non – compliance with this clause. It is recommended that this door be removed.
NSW D2.21	Operation of latch	There are numerous doors throughout the building which do not have compliant hardware. It is recommended that all non – compliant hardware be removed and compliant hardware be installed on all exit door and doors in the path of travel to exits.
E1.6	Portable fire extinguishers	It is recommended that extinguishers are to be provided as prescribed by current requirements.
Works to be completed within 18 months		
C3.7	Protection of doorways in horizontal exits	It is recommended that the doorway at the rear of the retail tenancy leading to the public corridor be fitted with a self - closing, - /180/30 fire door, or, be subject to a performance base, fire engineered solution should reduced FRLs to the structure be identified by a structural engineer.
NSW D2.16	Barriers to prevent falls	Barriers on balconies and the rooftop parapet do not achieve the minimum 1m in height. It is recommended that complying barriers be provided on all balconies and that the height of the parapet be increased to not less than 1m.
D2.17	Handrails	Handrails are not provided on the 2 non – required stairs. It is recommended that handrails be provided on one side on each flight on both of these stairs.
D2.24	Protection of openable windows	It is recommended all bedroom windows be provided with compliant protection. It should be noted that the Strata Schemes Management Act requires all windows more than 2m above the surface beneath to be provide with protection.
NSW C3.11	Bounding construction	It is recommended that all doorways to rooms opening to the public corridor on the Ground Floor be fitted with self-closing, - /60/30 fire doors.
E2.2	Smoke Management	It is recommended that the existing detection and alarm system be upgraded to current requirements.

E4.2 to E4.4	Emergency lighting requirements	It is recommended that the emergency lighting system be upgraded to current requirements
E4.5 to E4.8	Exit signs	It is recommended that exit signs be upgraded to current requirements.
Works to be completed within 24 months		
C2.8	Separation of classifications in the same storey	<p>The retail tenancy on the Ground Floor is required to be separated from the remainder of this level by a fire wall with a FRL of 180 minutes.</p> <p>The office areas and the public corridors on the Ground Floor are required to be separated by a fire wall with a FRL of 120 minutes.</p> <p>It is recommended that a structural engineer provide the FRLs of the existing elements. Should the existing masonry walls not achieve the required FRL, a performance based, fire engineered solution will be provided to ensure compliance.</p>
C2.9	Separation of classifications in different storeys	<p>The building has timber floors throughout which do not comply with the required fire resistance levels.</p> <p>It is recommended that the underside of the floors be lined with a fire protective covering (ie: 13mm thick fire grade plasterboard). In conjunction with the proposed sprinkler system, a performance based, fire engineered solution can be provided to ensure compliance can be achieved.</p>
C2.13	Electricity supply system	If electric sprinkler or hydrant pumps are required, the main switch room is to be fire separated by construction with an FRL of 120/120/120 and doorways with a FRL of -/120/30, self-closing fire doors. All penetrations in enclosures are to be appropriately fire stopped as prescribed above.
C3.2	Protection of openings in external walls	There are numerous openings on the eastern elevation of the building which are exposed to the adjacent boundary which not protected. A performance based, fire engineered solution will be provided to ensure compliance.
C3.5	Doorways in fire walls	<p>Doorways in fire walls are to have the FRL's and features required by this clause.</p> <p>It is recommended that the doorways from the Class 5 - Office areas leading to the public corridor on the Ground Floor be fitted with self -closing, -/120/30 fire door, or be subject to a performance base, fire engineered solution should reduced FRLs to the structure be identified by a structural engineer.</p> <p>It is recommended that the doorway at the rear of the retail tenancy leading to the public corridor is to be fitted with a self -closing, -/180/30 fire door or, subject to a performance base, fire engineered solution should</p>

		reduced FRLs to the structure be identified by a structural engineer.
3.1	Fire resistance of building elements	<p>It is recommended that a structural engineer determine the FRLs of existing elements, including the columns and beams within the retail area.</p> <p>Apart from the concrete slab on the ground floor, the floors throughout the building are of timber construction which do not achieve the required FRL.</p> <p>The walls bounding the residential units on the top storey do not extend to the underside of the non-combustible roof cladding. It is recommended that ceilings with a resistance to the incipient spread of fire to the roof space between the ceiling and the roof of not less than 60 minutes be provided on the top storey.</p> <p>A performance based, fire engineered solution is to be provided for the timber floors and any reduced FRLs found within the existing structure.</p>
D1.12	Non-required stairways, ramps or escalators	The building contains 2 non – required stairs which connect all 4 storeys. These stairs are not fire isolated as required. It is recommended that these stairs be subject to a performance based, fire engineered solution to ensure compliance is achieved.
E1.3	Fire hydrants	The building is currently served by external hydrants which do not provide the required coverage. It is recommended that hydrants be provided to ensure coverage is achieved. It is noted that the external hydrants are located at the rear of the building in Market Place. A hydrant booster located at the rear of the building will require a performance based, fire engineered solution.
E1.4	Fire hose reels	<p>It is recommended that hose reels be provided to each individual compartment as hoses cannot traverse through fire doors. Hose reels are not required in the Class 2 – residential part of the building.</p> <p>Portable fire extinguishers may be used in lieu of hose reels subject to the provision of a performance based, fire engineered solution.</p>
E1.5	Sprinklers	It is recommended that a sprinkler system be installed throughout the whole building Direct access to the sprinkler valve enclosure is to be provided from the outside of the building.

2. INTRODUCTION

2.1. General

The building, the subject of this report, is located at 19 – 21 The Corso, Manly. The building comprises retail and office tenancies on the Ground Floor and residential apartments from Levels 1 to 3. The building is constructed of loadbearing external and internal masonry walls, timber floors and a timber framed, metal clad roof. The building has frontages to The Corso and Market Place to the south and north respectively and abuts private properties to the east and west. The owner intends to undertake a voluntary fire safety upgrade of the building.

The building, which is located within the local government area of Northern Beaches Council, is one of a group of buildings which are listed as a heritage item in the Manly Local Environmental Plan 2013.

2.2. Purpose of Report

This report has been prepared on behalf of Hilrock Properties to identify the non-compliances with the deemed-to-satisfy provisions of Sections C, Parts D1 and D2 and Section E of the Building Code of Australia 2019 (BCA) and includes recommendations for fire safety upgrade works.

The recommendations for upgrades within this report includes timeframes for compliance as follows:

1. Stage 1 works - to be completed within 6 months;
2. Stage 2 works - to be completed within 18 months;
3. Stage 3 works – to be completed within 24 months.

2.3. Report Basis

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

- (a) Visual inspection of the building on 1 and 12 May 2020;
- (b) The deemed to satisfy provisions of Section C, Parts D1 and D2, Sections E and F of the Building Code of Australia 2019, inclusive of NSW variations.
- (c) Environmental Planning and Assessment Act 1979;
- (d) Environmental Planning and Assessment Regulation 2000.

2.4. Exclusions and Limitations

This report does not consider the following, except where specifically mentioned:

- Structural design;
- Section B, Part D3 and Sections G, H and J of the BCA;
- The Disability Discrimination Act 1992;
- Disability (Access to Premises – Building) Standards 2010.

3. BUILDING CODE OF AUSTRALIA DESCRIPTION

3.1. Classification (Part A6)

The building consists of:

Ground Floor	Part Class 2 - residential, Part Class 5 - Office and Part Class 6 – retail
First Floor	Class 2 – residential

BCA Clause	Title	Assessment and Comment	Status
		3. A loadbearing internal wall and loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1. 4. The requirements of (1) and (2) do not apply to gaskets, caulking, sealants, termite management systems, glass, thermal breaks associated with glazing systems & dampproof courses. 5. The following materials 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) Fire-reinforced cement sheeting. (e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (f) Sarking that does not exceed 1 mm thickness and have a flammability index of not greater than 5. (g) Bonded lamination materials where – (i) Each lamina, including any core, is non-combustible; and (ii) Each adhesive layer does not exceed 1mm in thickness and the total thickness of the adhesive layers does not exceed 2mm; and (iii) The Spread of Flame Index and the Smoke-Developed Index of the bonded laminated materials as a whole do not exceed 0 and 3 respectively.	
C1.10	Fire hazard properties	Internal linings, materials and assemblies are to comply with the required fire hazard properties of Specification C1.10. <i>The fire hazard properties of existing floor linings cannot be determined. Upgrade is not considered necessary as the building will sprinkler protected throughout.</i>	Unknown. Upgrade not considered necessary.
C1.11	Performance of external wall in fire	Not applicable	N/A

BCA Clause	Title	Assessment and Comment	Status
C1.12	Clause deleted	Clause deleted	Clause deleted
C1.13	Fire protected timber: Concession	Not applicable	N/A
C1.14	Ancillary Elements	<p>An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following:</p> <ol style="list-style-type: none"> 1. An ancillary element that is non-combustible. 2. A gutter, downpipe or other plumbing fixture or fitting. 3. A flashing. 4. A grate or grille not more than 2m² in area associated with a building service. 5. An electrical switch, socket-outlet, cover plate or the like. 6. A light fitting. 7. A required sign. 8. A sign other than one provided under (1) or (7) that- <ol style="list-style-type: none"> (a) Achieves a ground number of 1 or 2; and (b) Does not extend beyond one storey; and (c) Does not extend beyond one fire compartment; and (d) Is separated vertically from other signs permitted under (8) by at least 2 storeys. 9. An awning, sunshade, canopy, blind or shading hood other than one provided under (1) that – <ol style="list-style-type: none"> (a) Meets the requirements of Table 4 of Specification C1.10 as for an internal element; and (b) Serves a storey – <ol style="list-style-type: none"> (i) At ground level; or (ii) Immediately above a storey at ground level; and (iii) Does not serve an exit, where it would render the exit unusable in a fire. 10.A part of a security, intercom or announcement system. 11.Wiring. 12.A paint, lacquer or a similar finish. 13.A gasket, caulking, sealant or adhesive directly associated with (1) to (11). 	Complies

BCA Clause	Title	Assessment and Comment	Status
C2.2	General floor area and volume limitations	<p>The following maximum fire compartmentation floor area and volume limitations apply to the compartments in buildings of Type A construction:</p> <p>Class 5</p> <p>Floor area – 8,000 m²</p> <p>Volume – 48,000 m³</p> <p>Class 6</p> <p>Floor area – 5,000 m²</p> <p>Volume – 30,000 m³</p> <p><i>Floor area and volume limits for the above compartments are not exceeded.</i></p> <p><i>Floor area and volume limits do not apply to the Class 2 – accommodation part of the building.</i></p>	Complies
C2.3	Large Isolated buildings	Not applicable	N/A
C2.4	Open space and vehicular access	Not applicable	N/A
NSW C2.5	Class 9a and 9c buildings	Not applicable	N/A
C2.6	Vertical separation of openings in external walls	<p>Not applicable.</p> <p><i>The building will be protected with a sprinkler system throughout</i></p>	N/A
C2.7	Separation by fire walls	No parts of the building are required to be separated from other parts of the building by fire walls.	N/A
C2.8	Separation of classifications in the same storey	<p>If a building has parts of different classifications located alongside one another in the same storey,</p> <ul style="list-style-type: none"> ▪ each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or ▪ the parts must be separated in that storey by a fire wall. <p><i>The retail tenancy on the Ground Floor is required to be separated from the remainder of this level by a fire wall with a FRL of 180 minutes.</i></p>	Upgrade required

BCA Clause	Title	Assessment and Comment	Status
		<p><i>The office areas and the public corridors on the Ground Floor are required to be separated by a fire wall with a FRL of 120 minutes.</i></p> <p><i>It is recommended that a structural engineer provide the FRLs of the existing elements. Should the existing masonry wall not achieve the required FRL, a performance based, fire engineered solution will be provided to ensure compliance.</i></p>	
C2.9	Separation of classifications in different stories	<p>In buildings required to be of Type A construction —</p> <p>The floor separating the Ground Floor retail and the residential units above is required to have FRL of 180/180/180.</p> <p>The floors separating residential units are required to have a FRL of 90/90/90</p> <p><i>The building has timber floors throughout which do not comply with the required fire resistance levels.</i></p> <p><i>It is recommended that the underside of the floors be lined with a fire protective covering (ie: 13mm thick fire grade plasterboard). In conjunction with the proposed sprinkler system, a performance based, fire engineered solution can be provided to ensure compliance can be achieved.</i></p>	Upgrade required.
C2.10	Separation of lift shafts	Not applicable	N/A
C2.11	Stairways and lifts in one shaft	Not applicable	N/A
C2.12	Separation of equipment	<p>The following equipment are required to be fire separated from the remainder of the building by 120/120/120 FRL construction:</p> <ul style="list-style-type: none"> ▪ Lift motor rooms and lift control panels. ▪ Emergency Generators. ▪ Central smoke control plant. ▪ Boilers. ▪ Battery systems. <p>The building does not contain any of the above rooms and the requirements of this provision do not apply.</p>	N/A
C2.13	Electricity supply system	Any main switchboard located in the building which sustains emergency equipment operating in emergency mode, is required to be fire	Upgrade required.

BCA Clause	Title	Assessment and Comment	Status
		<p>separated from the remainder of the building by 2 hr fire resisting construction.</p> <p>Construction should achieve an FRL of 120/120/120, doorways are required achieve an FRL of -/120/30 and to be self-closing and all penetrations in enclosures are to be appropriately fire stopped.</p> <p>All switchboards in the electrical distribution system, which sustain the electricity supply to the emergency equipment, must provide full segregation by way of enclosed metal partitions designed to prevent the spread of any fault from non-emergency equipment switchgear to the emergency equipment switchgear.</p> <p>Electrical conductors and switchboards are required to comply with this clause.</p> <p><i>If electric sprinkler or hydrant pumps are required, the main switch room is to be fire separated by construction with an FRL of 120/120/120 and doorways with a FRL of -/120/30, self-closing fire doors. All penetrations in enclosures are to be appropriately fire stopped as prescribed above.</i></p>	
C2.14	Public corridors in Class 2 & 3 buildings	Public corridors in Class 2 parts do not exceed 40m in length.	N/A
C3.2	Protection of openings in external walls	<p>Openings located on the eastern and western elevations are within 3m of the allotment boundaries. Openings on the western elevation are protected with wall – wetting sprinklers.</p> <p><i>There are numerous openings on the eastern elevation of the building which are not protected. A performance based, fire engineered solution will be provided to ensure compliance.</i></p>	Upgrade required
C3.3	Separation of external walls and associated openings in different fire compartments	The building does not contain separate fire compartments which are applicable to this clause.	N/A
C3.4	Acceptable method of protection	<p>Windows requiring protection must be protected by one of the means:</p> <ul style="list-style-type: none"> ▪ External wall-wetting sprinklers with windows that are automatically or permanently fixed in the closed position. 	Note

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> ▪ -/60/- fire windows (Automatic or permanently fixed in the closed position) ▪ -/60/- automatic fire shutters ▪ Doorways which require protection can be protected externally with wall wetting sprinklers with doors that are self-closing or automatic closing, or ▪ -/60/30 fire doors which are self-closing or automatic closing. <p>Fire doors, fire windows and fire shutters are required to comply with Specification C3.4.</p>	
C3.5	Doorways in fire walls	<p>Doorways in fire walls are to have the FRL's and features required by this clause.</p> <p><i>It is recommended that the doorway at the rear of the retail tenancy leading to the public corridor is to be fitted with a self -closing, - /180/30 fire door or, subject to a performance base, fire engineered solution should reduced FRLs to the structure be identified by a structural engineer.</i></p>	Upgrade required
C3.6	Sliding fire doors	The building does not contain any sliding doors.	N/A
C3.7	Protection of doorways in horizontal exits	<p><i>It is recommended that the doorway at the rear of the retail tenancy leading to the public corridor is to be fitted with a self -closing, - /180/30 fire door or, subject to a performance base, fire engineered solution should reduced FRLs to the structure be identified by a structural engineer.</i></p>	Upgrade required
C3.8	Openings in fire isolated exits	Not applicable	N/A
C3.9	Service penetrations in fire isolated exits	Not applicable	N/A
C3.10	Fire isolated lift shafts	Not applicable	N/A
NSW C3.11	Bounding construction	<p>Doors from sole occupancy units opening into enclosed public corridors are required to be protected by self-closing, -/60/30 fire doors.</p> <p>A doorway from any other room not within a SOU, must be protected by self-closing, - /60/30 fire doors.</p> <p><i>Doorways to residential units are fitted with self-closing, -/60/30 fire doors</i></p>	Upgrade required

BCA Clause	Title	Assessment and Comment	Status
		<p><i>Some doorways to rooms opening to the public corridor on the Ground Floor are not fitted with complying fire doors.</i></p> <p><i>It is recommended that all doorways to rooms opening to the public corridor be fitted with self-closing, -/60/30 fire doors.</i></p>	
C3.12	Openings in floors and ceilings for services.	<p>Fire separation between floors is required to be maintained where services penetrate through floors.</p> <p><i>Visual inspection did not reveal any non – compliances. Sprinkler protection will mitigate any unseen non – compliances.</i></p>	<p>Upgrade not required.</p> <p>Sprinkler protection will mitigate any unseen non – compliances.</p>
C3.15	Openings for service installations	<p>Services that penetrate a building element that is required to have an FRL must be protected utilising one of the options listed under this clause.</p> <p><i>Visual inspection did not reveal any non – compliances. Sprinkler protection will mitigate any unseen non – compliances.</i></p>	Sprinkler protection will mitigate any unseen non – compliances.
C3.16	Construction joints	<p>Construction joints in building elements required to be fire resistant are required to be protected in accordance with this clause.</p> <p><i>Visual inspection did not reveal any non – compliances. Sprinkler protection will mitigate any unseen non – compliances.</i></p>	Sprinkler protection will mitigate any unseen non – compliances.
C3.17	Columns protected with lightweight construction to achieve an FRL	<p>Any columns protected with fire resisting lightweight construction to achieve an FRL must be installed in a manner that's identical to the tested prototype.</p> <p><i>The FRL of columns and beams within the retail area are to be determined by a structural engineer.</i></p>	Note

4.2. Fire-Resisting Construction (Specification C1.1)

BCA Clause	Title	Assessment and Comment	Status
2.1	Exposure to fire source features	Exposure to fire source features is to be determined in accordance with this clause.	Note
2.2	Fire protection for support of another part	When determining FRL's applicable to a particular building element, the requirements of this clause are required to be complied with.	Note

BCA Clause	Title	Assessment and Comment	Status
2.3	Lintels	Lintels are to be protected as required by the requirements of this clause. <i>Upgrade not considered necessary</i>	Upgrade not considered necessary
2.4	Method of attachment not to reduce the fire resistance of building elements	The method of attaching or installing a finish, lining, ancillary element or service installation to the building element must not reduce the fire-resistance of that element to below that required. <i>Upgrade not considered necessary</i>	Upgrade not considered necessary
2.5	General concessions	Roof top plant rooms need not have an FRL if they are non-combustible and they only contain equipment specified in this clause.	N/A
2.6	Mezzanine floors: concession	The building does not contain mezzanines that are subject to this provision.	N/A
2.7	Enclosure of shafts	The building does not contain any fire rated shafts.	N/A
2.9	Residential care building: Concession	The requirements of this provision do not apply to the subject building.	N/A
3.1	Fire resistance of building elements	Generally building elements are required to achieve the following FRL's; Residential: 1½ hrs Retail: 3 hrs <i>It is recommended that a structural engineer determine the FRLs of existing elements.</i> <i>Apart from the concrete slab on the ground floor, the floors throughout the building are of timber construction which do not achieve the required FRL.</i> <i>The walls bounding the residential units on the top storey do not extend to the underside of the non-combustible roof cladding. It is recommended that ceilings with a resistance to the incipient spread of fire to the roof space between the ceiling and the roof of not less than 60 minutes be provided on the top storey.</i> <i>A performance based, fire engineered solution is to be provided for the timber floors and any reduced FRLs found within the existing structure.</i>	Upgrade required
3.5	Roof: Concession	The roof is not required to achieve an FRL as the building:	Note

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> ▪ has a sprinkler system complying with Specification E1.5 installed throughout; or ▪ has a rise in storeys of 3 or less; or ▪ is of Class 2 or 3; or ▪ has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes. <p><i>The concession applies.</i></p>	
3.6	Roof lights	There are no rooflights in the building.	N/A
3.7	Internal wall and column: concession	The building does not contain any Internal columns to which this concession applies.	N/A

4.3. Access and Egress (BCA Section D)

BCA Clause	Title	Assessment and Comment	Status
D1.2	Number of exits required	Each storey has access to at least 1 exit as required.	Complies
D1.3	When fire isolated exits are required	<p>Class 2 buildings Every stairway or ramp serving as a <i>required exit</i> must be fire-isolated unless it connects, passes through or passes by not more than 3 consecutive <i>storeys</i> in a Class 2 building. One extra <i>storey</i> of any classification may be included if the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout.</p> <p><i>The main, central stair connects 4 storeys. A sprinkler system in accordance with Specification E1.5 is to be installed throughout the building. Therefore, the main stair is not required to be fire – isolated.</i></p>	Will comply
D1.4	Exit travel distances	<p>Class 2 part - The entrance doorway of any sole-occupancy unit must be not be more than 6m from an exit.</p> <p><i>Travel distances in this part of the building comply</i></p> <p>Class 6 parts – The distance to a single <i>exit</i> serving a <i>storey</i> at the level of access to a road or <i>open space</i> may be increased to 30 m.</p> <p><i>Travel distances in this part of the building comply.</i></p>	Complies

BCA Clause	Title	Assessment and Comment	Status
D1.5	Distance between alternative exits	Not applicable	N/A
NSW D1.6	Dimensions of exits and paths of travel to exits	<p>A required exit or path of travel to an exit are required to be a minimum unobstructed height of not less than 2m and minimum width of 1m.</p> <p><i>The main stairs are less than 1m in width (750mm). Upgrade is not considered to be necessary</i></p>	Upgrade not required.
D1.7	Travel via fire isolated exits	Not applicable	N/A
D1.8	External Stairs or ramps in lieu of Fire-isolated exits	External stairs are not provided in lieu of fire isolated exits.	N/A
D1.9	Travel via non-fire-isolated stairways or ramps	<p>(a) A non-fire-isolated stairway or non-fire-isolated ramp serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided.</p> <p>(b) In a Class 2 building, the distance between the doorway of a room or sole-occupancy unit and the point of egress to a road or open space by way of a stairway or ramp that is not fire-isolated and is required to serve that room or sole-occupancy unit must not exceed 60 m..</p> <p>(c) In a Class 2 building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than—</p> <p>(i) 15 m from a doorway providing egress to a road or open space or from a fire-isolated passageway leading to a road or open space; or</p> <p>(ii) 30 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions.</p> <p><i>The non – fire isolated stairs in the building comply with these requirements.</i></p>	Complies
D1.10	Discharge from exits	<p>(a) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it.</p> <p>(b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than—</p>	Complies

BCA Clause	Title	Assessment and Comment	Status
		<p>(i) the minimum width of the required exit; or (ii) 1 m, whichever is the greater.</p> <p>(c) 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—</p> <p>(i) 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.</p> <p><i>All exits discharge directly to the road as required.</i></p>	
D1.11	Horizontal exits	The building does not contain any horizontal exits.	N/A
D1.12	Non-required stairways, ramps or escalators	<p>Non-required stairways must not connect more than 3 storeys if each of those storeys is provided with a sprinkler system complying with Specification E1.5 throughout provided that those storeys must be consecutive, and one of those storeys is situated at a level at which there is direct egress to a road or open space</p> <p><i>The building contains 2 non – required stairs which connect all 4 storeys. These stairs are not fire isolated as required. It is recommended that these stairs be subject to a performance based, fire engineered solution to ensure compliance is achieved.</i></p>	Upgrade required
D1.13	Number of persons accommodated	Populations have been assessed in accordance with Table D1.13.	Note
D1.16	Plant rooms and lift rooms: concession	<p>A ladder may be used in lieu of a stairway to provide egress from a plant room with a floor area less than 100m² or plant or lift machine rooms with a floor area of less than 200 m², for all but one point of egress.</p> <p>Ladders are required to comply with AS1657 and the requirement of this clause.</p>	N/A
D1.17	Access to lift pits	The building does not contain any lifts	N/A
D2.2	Fire-isolated stairways and ramps	Not applicable	N/A
D2.3	Non-fire isolated stairs and ramps	In a building having a <i>rise in storeys</i> of more than 2, <i>required</i> stairs and ramps (including landings and any supporting building elements) which are not <i>required</i> to be within a <i>fire-</i>	Upgrade not required

BCA Clause	Title	Assessment and Comment	Status
		<p><i>resisting shaft</i>, must be constructed according to D2.2, or only of—</p> <p>(a) reinforced or prestressed concrete; or</p> <p>(b) steel in no part less than 6 mm thick; or</p> <p>(c) timber that—</p> <p>(i) has a finished thickness of not less than 44 mm; and</p> <p>(ii) has an average density of not less than 800 kg/m³ at a moisture content of 12%; and</p> <p>(iv) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue.</p> <p><i>The existing timber stairs are considered to be acceptable.</i></p>	
D2.4	Separation of rising and descending stair flights	Not applicable	N/A
D2.7	Installation in exits and paths of travel	Gas or other fuel services must not be installed in a required exit.	Complies
D2.8	Enclosure of space under stairs and ramps	The spaces below the required non fire-isolated stairway are not be enclosed.	N/A
D2.9	Width of stairways	A required stairway or ramp that exceeds 2m in width is counted as having a width of only 2m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2m	Note
D2.10	Pedestrian ramps	Not applicable	N/A
D2.11	Fire-isolated passageways	Not applicable	N/A
D2.12	Roof as open space	Not applicable	N/A
NSW D2.13	Goings & risers	<p>(a) A stairway must have—</p> <p>(i) not more than 18 and not less than 2 risers in each <i>flight</i>; and</p> <p>(ii) going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13, except as permitted by (b) and (c); and</p>	Upgrade required. Compliant slip resistant strips to be provided on all nosings.

BCA Clause	Title	Assessment and Comment	Status
		<p>(iii) constant goings and risers throughout each <i>flight</i>, except as permitted by (b) and (c), and the dimensions of goings (G) and risers (R).</p> <p>(v) treads which have—</p> <p>(A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or</p> <p>(B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and</p> <p>(vi) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 <i>storeys</i>; and</p> <p><i>The dimensions of goings and risers on the main central stairs comply. Nosing strips have not been applied to the nosings of these treads. It is recommended that nosing strips be provided on these treads</i></p> <p><i>The dimensions of goings and risers on the 2 non – required stairs do not comply. Nosing strips have not been applied to the nosings of these treads. It is recommended that nosing strips be provided on these treads.</i></p>	
D2.14	Landings	<p>In a stairway—</p> <p>(a) landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must—</p> <p>(i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and</p> <p>(ii) have—</p> <p>(A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or</p> <p>(B) a strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586, where the edge leads to a flight below.</p> <p><i>The dimensions of landings on the main stair comply. Nosing strips have not been applied to the nosings of these landings. It is recommended that nosing strips be provided on these landings.</i></p> <p><i>The dimensions of landings on the 2 non – required stairs do not comply. Nosing strips have</i></p>	Upgrade required. Compliant slip resistant strips to be provided on all nosings.

BCA Clause	Title	Assessment and Comment	Status
		<p><i>not been applied to the nosings of these landings. It is recommended that nosing strips be provided on these treads. It is recommended that nosing strips be provided on these treads.</i></p>	
NSW D2.15	Thresholds	<p>The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—</p> <p>(a) in a building <i>required to be accessible</i> by Part D3, the doorway—</p> <p>(i) opens to a road or <i>open space</i>; and</p> <p>(ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or</p> <p>(b) in other cases—</p> <p>(i) the doorway opens to a road or <i>open space</i>, external stair landing or external balcony; and</p> <p>(ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.</p> <p><i>A door has been installed at the bottom of the main stair such that the door is within the distance of the door leaf from the step resulting in a non – compliance with this clause. It is recommended that this door be removed.</i></p>	Upgrade required.
NSW D2.16	Barriers to prevent falls	<p>(a) A continuous barrier must be provided along the side of—</p> <p>(i) a stairway or ramp; and</p> <p>(ii) a floor, corridor, hallway, balcony, deck, verandah, <i>mezzanine</i>, access bridge or the like; if the trafficable surface is 1 m or more above the surface beneath.</p> <p>Barrier heights</p> <p>(i) 865mm above the nosings of treads and landings which are not more than 500mm in length; and</p> <p>(ii) 1,000 mm in all other locations</p> <p>Barrier openings</p> <p>A 125 mm sphere must not be able to pass through any opening.</p> <p>Barrier Climability</p> <p>For floors more than 4 m above the surface beneath, the barrier must not incorporate any horizontal or near horizontal elements between 150 mm and 760 mm above the floor must not facilitate climbing.</p>	Upgrade required.

BCA Clause	Title	Assessment and Comment	Status
		<p><i>Barriers on balconies and the parapet at roof level do not achieve the minimum 1m in height. It is recommended that complying barriers be provided on all balconies and that the height of the parapet be increased to not less than 1m.</i></p> <p><i>The barrier on the main stair complies.</i></p>	
D2.17	Handrails	<p>Handrails are required along at least one side of all stairways or ramps.</p> <p><i>A handrail is provided on the main stairs as required.</i></p> <p><i>Handrails are not provided on the 2 non – required stairs. It is recommended that handrails be provided on both of these stairs.</i></p>	Upgrade required.
D2.18	Fixed platforms, walkways, stairways & ladders	Fixed platforms, walkways, stairways & ladders are to be designed in accordance with this clause.	N/A
NSW D2.19	Doorways and doors	<p>A doorway serving as a <i>required exit</i> or forming part of a <i>required exit</i>,—</p> <p>(i) must not be fitted with a revolving door; and</p> <p>(ii) must not be fitted with a roller shutter or tilt-up door unless—</p> <p>(A) it serves a Class 6, 7 or 8 building or part with a <i>floor area</i> not more than 200 m²; and</p> <p>(B) the doorway is the only <i>required exit</i> from the building or part; and</p> <p>(C) it is held in the open position while the building or part is lawfully occupied; and</p> <p>(iii) must not be fitted with a sliding door unless—</p> <p>(A) it leads directly to a road or <i>open space</i>; and</p> <p>(B) the door is able to be opened manually under a force of not more than 110 N; and</p> <p>(iv) if fitted with a door which is power-operated—</p> <p>(A) it must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and</p> <p>(B) if it leads directly to a road or <i>open space</i> it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the <i>fire compartment</i> served by the door. Power-operated doorway required to be opened manually under a force of not more than 110 N and open automatically if it leads directly to a road or open space.</p>	Complies

BCA Clause	Title	Assessment and Comment	Status
D2.20	Swinging doors	<p>A swinging door must not encroach and impede the path of travel/exit width by more than 500mm at any part of its swing. When in the fully open position, it must not encroach into the path of travel/exit width by more than 100mm.</p> <p>Doors in or serving as a required exit must swing in the direction of egress unless they are subject to the concession in this clause.</p> <p><i>Doors at exits on the Ground Floor swing against the direction of egress. Doors which swing in the direction of egress will encroach on the road reserve and upgrade is not recommended.</i></p>	Upgrade not required.
NSW D2.21	Operation of latch	<p>Doors in required exits or forming part of a required exit must be readily openable without a key from the egress side, by a single hand downward action on a single device which is located between 900mm and 1.1m from the floor and comply with the requirements of this clause.</p> <p><i>There are numerous doors throughout the building which do not have compliant hardware. Upgrade required</i></p>	Upgrade required
D2.22	Re-entry from fire-isolated exits	Not applicable	N/A
D2.23	Signs on doors	<p>A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to a fire door forming part of a horizontal exit.</p> <p>Signs must be in capital letters not less than 20 mm high in a colour contrasting with the background and state, for a <i>self-closing</i> door -</p> <p style="text-align: center;">“FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN”</p> <p><i>It is recommended that the above signs be provided to both sides of the fire doors leading to the public corridor on the Ground Floor.</i></p>	N/A
D2.24	Protection of openable windows	<p>A window opening must be provided with protection, in accordance with this clause, if the floor below the window is 2 m or more above the surface beneath in a bedroom in a Class 2 building.</p> <p><i>It is recommended all bedroom windows be provided with compliant protection.</i></p> <p><i>It should be noted that the Strata Schemes Management Act requires all windows more than</i></p>	Upgrade required

BCA Clause	Title	Assessment and Comment	Status
		<i>2m above the surface beneath to be provide with protection.</i>	
D2.25	Timber stairways: Concession	Not applicable	N/A
4.4. Services and Equipment (BCA Section E)			
E1.3	Fire hydrants	<p>A fire hydrant system must be provided in accordance with this clause to serve the whole building and must also be installed in accordance with AS 2419.1.</p> <p><i>The building is currently served by external hydrants which currently do not provide the required coverage. It is recommended that hydrants be provided to ensure coverage is achieved. It is noted that the external hydrants are located at the rear of the building in Market Place. A hydrant booster located at the rear of the building will require a performance based, fire engineered solution.</i></p>	Upgrade required
E1.4	Fire hose reels	<p>Hose reels must be provided to serve the Class 5 – Office and Class 6 - Retail parts of the building on the Ground Floor.</p> <p><i>It is recommended that hose reels be provided to each individual compartment as hoses cannot traverse through fire doors. Hose reels are not required in the Class 2 – residential part of the building.</i></p> <p><i>Portable fire extinguishers may be used in lieu of hose reels subject to the provision of a performance based, fire engineered solution.</i></p>	Upgrade required.
E1.5	Sprinklers	<p>A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.</p> <p><i>It is recommended that a sprinkler system be installed throughout the whole building Direct access to the sprinkler valve enclosure is to be provided from the outside of the building.</i></p>	Upgrade required
E1.6	Portable fire extinguishers	<p>Portable fire extinguishers are to comply with this provision and sections 1, 2, 3 and 4 of AS 2444.</p> <p>In Class 2 parts, portable fire extinguishers must be provided to serve the whole Class 2, 5</p>	Upgrade required

BCA Clause	Title	Assessment and Comment	Status
		<p>or 6 building where one or more internal fire hydrants are installed and, subject to (b), selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444.</p> <p>(b) Portable fire extinguishers provided in a Class 2 building part of a building must be—</p> <p>(i) an ABE type fire extinguisher; and</p> <p>(ii) a minimum size of 2.5 kg; and</p> <p>(iii) distributed outside a <i>sole-occupancy unit</i>—</p> <p>(A) to serve only the <i>storey</i> at which they are located; and</p> <p>(B) so that the travel distance from the entrance doorway of any <i>sole-occupancy unit</i> to the nearest fire extinguisher is not more than 10 m.</p> <p><i>It is recommended that extinguishers are to be provided as prescribed by current requirements.</i></p>	
E1.8	Fire control centres	A fire control centre is not required.	N/A
E1.9	Fire precautions during construction	Not applicable	N/A
E1.10	Provision for special hazards	No special hazards have been identified.	N/A
E2.2	General requirements	<p>A Class 2 building must be provided with a smoke alarm system complying with Clause 3 within <i>sole-occupancy units</i>.</p> <p>(i) Alarms must be installed within each <i>sole-occupancy unit</i>, and located on or near the ceiling in any <i>storey</i>—</p> <p>(A) containing bedrooms—</p> <p>(aa) between each part of the <i>sole-occupancy unit</i> containing bedrooms and the remainder of the <i>sole-occupancy unit</i>; and</p> <p>(bb) where bedrooms are served by a hallway, in that hallway; and</p> <p>(B) not containing any bedrooms, in egress paths.</p> <p>(ii) Where there is more than one alarm installed within a <i>sole-occupancy unit</i>, alarms must be interconnected within that <i>sole-occupancy unit</i>.</p> <p>(i) A smoke alarm system must—</p>	Upgrade required.

BCA Clause	Title	Assessment and Comment	Status
		<p>(A) consist of smoke alarms complying with AS 3786; and</p> <p>(B) be powered from the consumer mains source.</p> <p>In a Class 2 building protected with a sprinkler system complying with Specification E1.5 smoke detectors are not <i>required</i> in <i>public corridors</i> and other internal public spaces.</p> <p>Class 5 and 6 buildings — a smoke detection system complying with Clause 4.</p> <p><i>It is recommended that the existing detection and alarm system be upgraded to comply with current requirements.</i></p>	
E2.3	Provision for special hazards	Not applicable	N/A
E3.1	Lift installations	The building does not contain any lifts.	N/A
E4.2 to E4.4	Emergency lighting requirements	<p>Emergency lighting must be provided in accordance with AS2293.1-2005.</p> <p><i>It is recommended that the emergency lighting system be upgraded to current requirements</i></p>	Upgrade required
E4.5 to E4.8	Exit signs	<p>Exit signage must be provided in accordance with this clause. Exit signage is required to comply with AS 2293.1-2005 and be clearly visible at all times.</p> <p>In Class 2 buildings exits signs in accordance with the above are not required, provided that every door referred to is clearly and legibly labelled on the side remote from the <i>exit</i> or balcony—</p> <p>(i) with the word “EXIT” in capital letters 25 mm high in a colour contrasting with that of the background; or</p> <p>(ii) by some other suitable method.</p> <p><i>It is recommended that exit signs be upgraded to current requirements.</i></p>	Upgrade required
E4.9	Emergency warning and intercom systems	EWIS is not required.	N/A

4.1. Health and Amenity (BCA Section F)

BCA Clause	Title	Assessment and Comment	Status
F1.0	Deem to satisfy provisions	Performance requirement FP1.4, for the prevention of the penetration of water through external walls, is required to be complied with.	Note
F1.1	Stormwater drainage	Stormwater drainage is required to be designed to comply with AS/NZS 3500.3-2015.	Upgrade not required
F1.4	External above ground membranes	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 & AS 4654.2-2012	Upgrade not required
F1.5	Roof coverings	Lightweight metal roof sheeting is to comply with AS1562.1.	Upgrade not required
F1.6	Sarking	Sarking-type materials used for weatherproofing of roofs and walls are required to comply with AS/NZS 4200 Parts 1 and 2.	Upgrade not required
F1.7	Waterproofing of wet areas in buildings	Waterproofing of wet areas are required to comply with this clause 76 AS 3740.	Upgrade not required
F1.9	Damp-proofing	Damp proofing is required to be provided in accordance with this clause.	Upgrade not required
F1.10	Damp-proofing of floor on ground	Damp proofing is required to be provided in accordance with this clause.	Upgrade not required
F1.11	Provision of floor wastes	The floor of each bathroom and laundry in the residential sole occupancy units are to be provided with a floor waste.	Complies
F1.12	Sub-floor ventilation	The sub-floor space between the suspended floor of a building and the ground must be provided with cross ventilation, be cleared of all debris and graded to prevent ponding and evenly spaced ventilation openings in accordance with this clause.	Complies
F1.13	Glazed assemblies	Glazed assemblies to comply with AS 2047 as applicable.	Upgrade not required
F2.1	Facilities in residential buildings	The residential portion of the building is to be provided with appropriate facilities in accordance with Table F2.1. Generally, provision of the following facilities within each unit will comply: <ul style="list-style-type: none"> ▪ A bath or shower; and ▪ A closet pan & wash basin; and 	Complies

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> ▪ Kitchen; and ▪ Wash tub and space for washing machine and drier <p><i>Sanitary facilities are provided as required.</i></p>	
F2.3	Facilities in Class 5 and 6 buildings	Sanitary facilities must be provided in accordance with this clause and Table F2.3.	Complies
F2.5	Construction of sanitary compartments	The construction of sanitary compartments is required to comply with this requirement.	Upgrade not required
F2.6	Interpretation: Urinals and washbasins	<p>A urinal may be - an individual stall or wall-hung urinal; or each 600mm length of a continuous urinal trough, or a closet pan used in place of a urinal.</p> <p>A washbasin may be an individual basin or a part of a hand washing trough served by a single water tap.</p>	Note
F2.8	Waste management	Not applicable	N/A
F2.9	Accessible adult change facilities	Accessible adult change facilities are required in accordance with this clause.	N/A
F3.1	Height of rooms and other spaces	The minimum ceiling height requirements are to comply with the requirements of this provision.	Complies
F4.1-4.3	Provision of natural light	Natural lighting must be provided in all habitable rooms of the residential units.	Complies
F4.4	Artificial lighting	Artificial lighting is to be provided in accordance with AS/NZS1680.0 to spaces required by this clause.	Upgrade not required
F4.5-4.7	Ventilation of rooms	Ventilation is to be provided by natural or mechanical means in accordance with this provision and Clause F4.6.	Complies
F4.8	Restriction on the position of water closets and urinals	A room containing a closet pan or urinal must not open directly into a room used for public assembly or a workplace normally occupied by more than one person.	Complies
F4.9	Airlocks	If the room containing a closet pan or urinal must not open directly into rooms identified in F4.8 above then an airlock of not less than 1.1 m ² and fitted with self-closing doors at all access doorways or the room containing the closet pan or urinal must be provided with	N/A

BCA Clause	Title	Assessment and Comment	Status
		mechanical ventilation and the doorway to the room adequately screened from view. Mechanical ventilation of the bathrooms is to be provided.	
F4.11	Car park exhaust	Each storey of the carpark must have a system of ventilation complying with AS1668.2 or permanent natural ventilation in accordance with Section 4 of AS1668.4.	N/A
F4.12	Kitchen local exhaust	No commercial kitchens are provided.	N/A
F5.1	Application of part	The sound insulation requirements of F5.2, F5.3, F5.4, F5.5, F5.6 & F5.7 only apply to the Class 2, 3 and 9c component of the building.	Note
F5.2	Determination of airborne sound insulation ratings	A form of construction required to have an airborne sound insulation rating must: <ul style="list-style-type: none"> ▪ have the required value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements; or ▪ an acceptable form of construction under Spec F5.2. 	Upgrade not required
F5.3	Determination of impact sound insulation ratings	Determination of impact sound insulation ratings is to be in accordance with this clause. Particular attention is required to the requirements for discontinuous construction	Note
F5.4	Sound insulation rating of floor	1. A floor in a Class 2 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w}$ (impact) not more than 62 if it separates— <ul style="list-style-type: none"> (c) sole-occupancy units; or (d) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification. 	Upgrade not required
F5.5	Sound insulation of walls	Sound insulation of walls and doors is required to be in accordance with this clause.	Upgrade not required
F5.6	Sound insulation rating of internal services	Services that serves or pass through more than one SOU must achieve the required ratings specified by this clause.	Upgrade not required
F5.7	Sound isolation of pumps	A flexible coupling must be installed at the point of connection between service pipes in a building and any circulating or other pump.	N/A

BCA Clause	Title	Assessment and Comment	Status
F6.1	Application of part	The <i>Deemed-to-Satisfy Provisions</i> of this Part only apply to a <i>sole-occupancy unit</i> of a Class 2 building and a Class 4 part of a building	Note
F6.2	Pliable building membrane	(a) Where a <i>pliable building membrane</i> is installed in an <i>external wall</i> , it must— (i) comply with AS/NZS 4200.1; and (ii) be installed in accordance with AS 4200.2; and (iii) be a vapour permeable membrane for <i>climate zones</i> 6, 7 and 8; and (iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. (b) Except for single skin masonry and single skin concrete, where a <i>pliable building membrane</i> is not installed in an <i>external wall</i> , the primary <i>water control layer</i> must be separated from <i>water sensitive materials</i> by a drained cavity	Upgrade not required
F6.3	Flow rate and discharge of exhaust systems	(a) An exhaust system installed in a kitchen, bathroom, <i>sanitary compartment</i> or laundry must have a minimum flow rate of— (i) 25 L/s for a bathroom or <i>sanitary compartment</i> ; and (ii) 40 L/s for a kitchen or laundry. (b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to <i>outdoor air</i> . (c) Exhaust from a bathroom, <i>sanitary compartment</i> , or laundry must be discharged— (i) directly or via a shaft or duct to <i>outdoor air</i> , or (ii) to a roof space that is ventilated in accordance with F6.4.	Upgrade not required
F6.4	Ventilation of roof spaces	Not applicable	N/A

5. FIRE SAFETY SCHEDULE

The following table is a list of the required fire safety measures for this development.

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE
1.	Automatic smoke alarm system (Within residential SOUs) <i>Upgraded</i>	BCA 2019 E2.2, Spec E2.2a (Clause 3) (smoke alarm system) & AS 3786-2014 <small>Amdt 1</small>

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE
2.	Automatic fire suppression system <i>Upgraded</i>	BCA 2019 E1.5, Spec E1.5 & AS 2118.1-2017 <small>Amdt 1</small>
3.	Emergency lighting <i>Upgraded</i>	BCA 2019 Clause E4.2, E4.3, E4.4, E1.8 & AS 2293.1 – 2018
4.	Exit signs <i>Upgraded</i>	BCA 2019 E4.5, E4.6, E4.8 Spec E4.8, AS 2293.1- 2018 Exit signs (non-illuminated) BCA 2019 E4.7
5.	Fire doors <i>Upgraded & Existing</i>	BCA C3.11 & AS 1905.1 – 2015 <small>Amdt 1</small> AS1905.1 - 1990
6.	Fire Hose reel systems <i>Upgraded</i>	BCA 2019 E1.4 & AS 2441-2005 <small>Amdt 1</small>
7.	Fire hydrant systems <i>Upgraded</i>	BCA 2019 E1.3 & AS 2419.1-2005
8.	Fire seals protecting openings in fire resisting components of the building <i>Existing</i>	BCA C3.15 & Spec C3.15 and AS 1530.4.
9.	Lightweight construction To underside of timber floors. <i>Upgraded</i>	BCA 2019 C1.8 & Spec C1.8
10.	Portable fire extinguishers <i>Upgraded</i>	BCA 2019 E1.6 & AS 2444-2001
11.	Warning and operational signs <i>Upgraded</i>	BCA 2019 D2.23 (signs on exit doors)
12.	Fire engineering requirements to be added to the above	

6. CONCLUSION

This report has identified the non – compliances with the dts provisions of Section C, Parts D1 and D2, Sections E and F of the BCA and made recommendations for the building to be upgraded. A summary of the recommended upgrades is provided in the Executive Summary of this report. The recommended upgrades will provide an acceptable level safety for the occupants of the building.