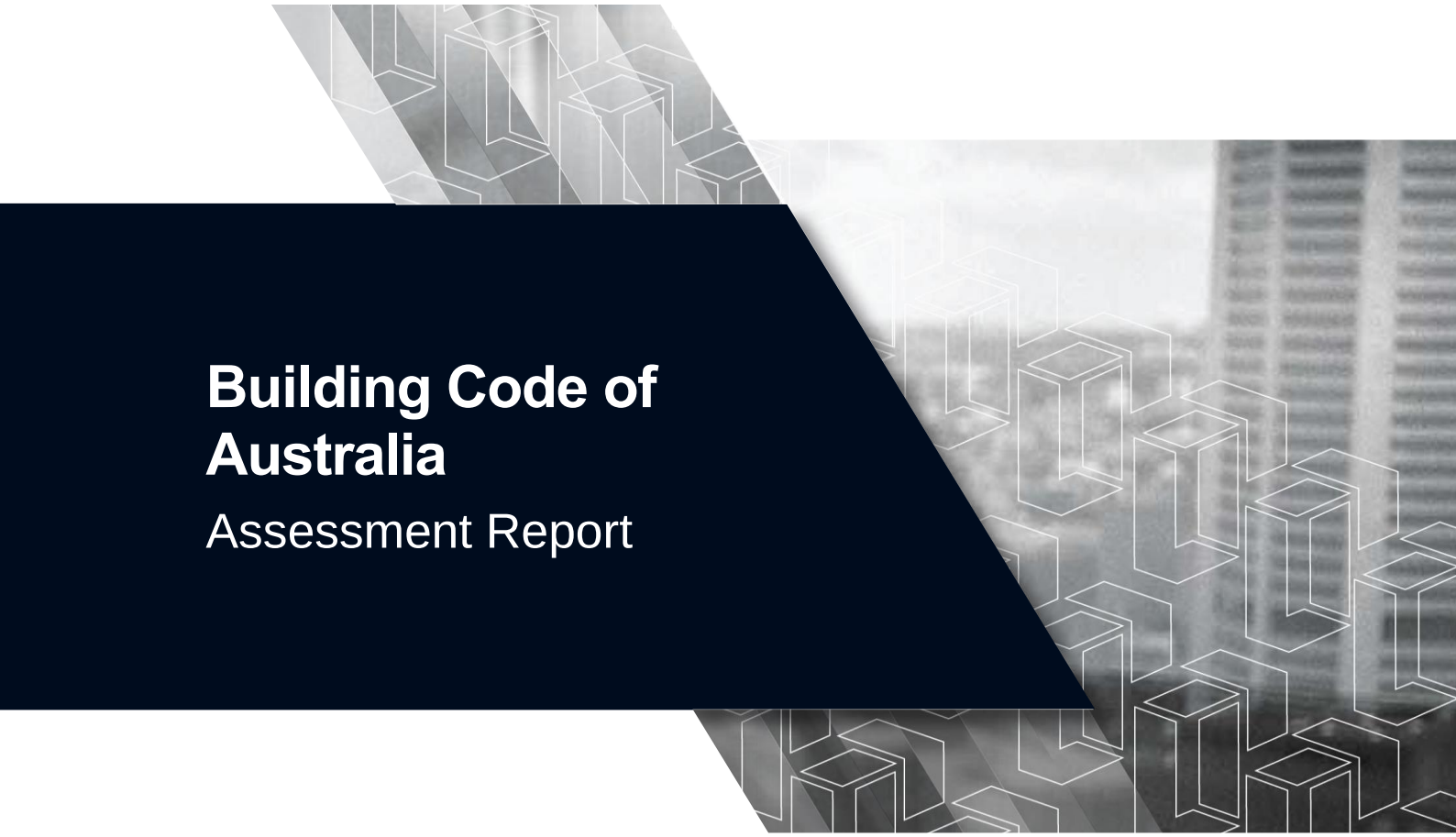

Building Code of Australia

Assessment Report

Project Address: 19 – 21 The Corso Manly

Client: Hilrock Properties Pty Ltd
Report Number: 200173A
Revision: 02

17 DECEMBER 2020

REPORT REVISION HISTORY

Revision	Date Issued	Revision Description	
01	14.12.2020	Draft for client comment	
		Prepared by	**Verified by**
		Scott Reid *Senior Building Regulations Consultant*	 Name Surname *Position title*
02	17.12.2020	Updated following client comment	
		Prepared by	**Verified by**
		 Scott Reid *Senior Building Regulations Consultant*	 Brendan Bennett *Managing Director*

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1. EXECUTIVE SUMMARY

The development, the subject of this report, is for alterations to and the refurbishment of an existing mixed - use building located at 19 - 21 The Corso, Manly. The building has frontages to The Corso and Market Lane to the east and west respectively. A retail and office tenancy are located on the Ground Floor and residential apartments occupy Levels 1 to 3.

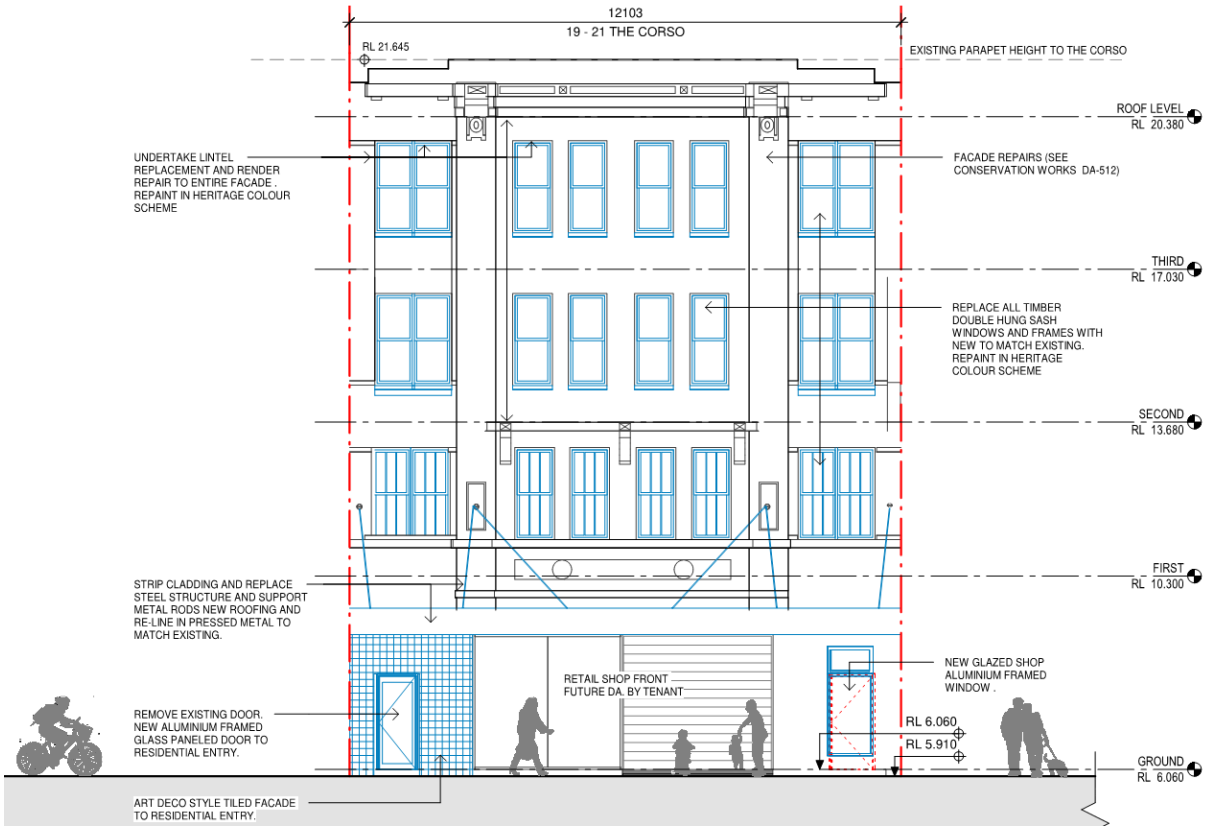
The building is constructed of internal and external loadbearing masonry walls, timber floors and a timber framed, metal clad roof.

The building is located within the Local Government area of Northern Beaches Council.

This report has been prepared, on behalf of Hilrock Properties Pty Ltd to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the planning development application documentation. Unless specifically noted this assessment and report deals with the proposed building works.

The building is also subject to a Fire Safety Order (Ref No EPA 2020/0234) issued by Northern Beaches Council, dated 26 November 2020. The Fire Safety Order requires works to be undertaken in accordance with the recommendations detailed in the Fire Safety Upgrade Report (Ref No 200173, Revision 3) prepared by City Plan Services, dated 8 September 2020. The recommendations of the Fire Safety Upgrade Report have been incorporated into this report and a summary of the recommendations in provided in Section 6. These recommendations are categorized as either Stage 1, Stage 2 or Stage 3 with works to be completed within 6, 18 and 24 months respectively and are identified within this report as Fire Safety Upgrade Works – Stage 1 etc.

Proposed alterations and fitout of the retail tenancy on the Ground Floor will be subject to a separate development application and have not been assessed as part of this report.



NBRS Architecture

2. INTRODUCTION

2.1. General

The development, the subject of this report, is for alterations to and the refurbishment of an existing mixed - use building located at 19 - 21 The Corso, Manly. The building has frontages to The Corso and Market Lane to the east and west respectively. A retail and office tenancy are located on the Ground Floor and residential apartments occupy Levels 1 to 3.

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2.2. Purpose of Report

This report has been prepared, on behalf of Hilrock Properties Pty Ltd to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the planning development application documentation. Unless specifically noted this assessment and report deals with the proposed building works.

The building is also subject to a Fire Safety Order (Ref No EPA 2020/0234) issued by Northern Beaches Council, dated 26 November 2020. The Fire Safety Order requires works to be undertaken in accordance with the recommendations detailed in the Fire Safety Upgrade Report (Ref No 200173, Revision 3) prepared by City Plan Services, dated 8 September 2020. The recommendations of the Fire Safety Upgrade Report have been incorporated into this report and a summary of the recommendations in provided in Section 6. These recommendations are categorized as either Stage 1, Stage 2 or Stage 3 with works to be completed within 6, 18 and 24 months respectively and are identified within this report as Fire Safety Upgrade Works – Stage 1 etc.

Proposed alterations and fitout of the retail tenancy on the Ground Floor will be subject to a separate development application and have not been assessed as part of this report.

2.3. Report Basis

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

- Architectural plans prepared by NBRS Architecture as identified in the attached Appendix 1.
- 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 application 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.

2.4. Exclusions and Limitations

1. This report has been prepared by City Plan for Hilrock Properties Pty Ltd and may only be used and relied on by Hilrock Properties Pty Ltd for the purpose agreed between City Plan and Hilrock Properties 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 Hilrock Properties 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.
9. 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.
10. Where the report relied on a site inspection, the inspection was based on a visual, non-invasive check of representative samples of the building to which the report and scope applied, and to which safe and reasonable access was available/permitted on the date and time of the inspection. The inspection should not be considered as a testing, commissioning or maintenance procedure nor act as a guarantee or warranty of any kind.

3. BUILDING CODE OF AUSTRALIA DESCRIPTION

3.1. Classification (Part A6)

The building consists of:

Ground Floor	Class 2 – Residential (Lobby)
	Class 5 – Office
	Class 6 - Retail
Levels 1 to 3	Class 2 Residential

3.2. Effective Height (Schedule 3)

The building has an effective height of less than 12m (10.97m).

3.3. Rise in Storeys (C1.2)

The building has a rise in storeys of four (4).

3.4. Type of Construction (C1.1)

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

4. BUILDING CODE OF AUSTRALIA ASSESSMENT

4.1. Structure (BCA Section B)

BCA Clause	Title	Assessment and Comment	Status
Section B	Structure	The proposed works do include any structural alterations with the exception of some minor rectification works to some lintels.	Note

4.2. Fire Resistance (BCA Section C)

BCA Clause	Title	Assessment and Comment	Status
C1.1	Type of construction required	The type of fire resisting construction applicable is Type A construction.	Note
C1.2	Calculation in rise in storeys	The building contains a RIS of four (4).	Note
C1.8	Lightweight construction	Not applicable	N/A
C1.9	Non-combustible building elements	1. In a building required to be Type A construction, the following building elements	Complies

BCA Clause	Title	Assessment and Comment	Status
		and their components must be non-combustible: (a) External walls and common walls, including all components incorporated in them including the façade covering, framing and insulation. (b) The flooring and floor framing of lift pits. (c) Non-loadbearing internal walls where they are required to be fire-resisting. 2. A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in – (a) A building required to be Type A construction; and (b) N/A 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: (c) Plasterboard. (d) Perforated gypsum lath with a normal paper finish. (e) Fibrous-plaster sheet. (f) Fire-reinforced cement sheeting. (g) 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. (h) Sarking that does not exceed 1 mm thickness and have a flammability index of not greater than 5. (i) 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	

BCA Clause	Title	Assessment and Comment	Status
		(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.	Capable of complying
C1.11	Performance of external wall in fire	Not applicable	N/A
C1.12	Clause deleted	Clause deleted	Clause deleted
C1.13	Fire protected timber: Concession	Not applicable	N/A
C1.14	Ancillary Elements	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: 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 $2m^2$ 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- (j) Achieves a ground number of 1 or 2; and (k) Does not extend beyond one storey; and (l) Does not extend beyond one fire compartment; and (m) 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 – (n) Meets the requirements of Table 4 of Specification C1.10 as for an internal element; and (o) Serves a storey – (i) At ground level; or	Complies

BCA Clause	Title	Assessment and Comment	Status
		(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).	
C2.2	General floor area and volume limitations	The following maximum fire compartmentation floor area and volume limitations apply to the compartments in buildings of Type A construction: **Class 5** Floor area – 8,000 m^2 Volume – 48,000 m^3 **Class 6** Floor area – 5,000 m^2 Volume – 30,000 m^3 *Floor area and volume limits for the above compartments are not exceeded.* *Floor area and volume limits do not apply to the Class 2 – accommodation part of the building.*	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	Not applicable. *The building will be protected with a sprinkler system throughout*	N/A
C2.7	Separation by fire walls	Fire walls are required to separate the Residential Lobby and retail tenancy and the Residential Lobby and office tenancy on the Ground Floor. See comments in C2.8 below.	Capable of complying
C2.8	Separation of classifications in the same storey	If a building has parts of different classifications located alongside one another in the same storey,	Fire Safety Upgrade Works – Stage 3.

BCA Clause	Title	Assessment and Comment	Status
		▪ 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. *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.* *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.* *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.*	
C2.9	Separation of classifications in different stories	In buildings required to be of Type A construction — The floor separating the Ground Floor retail and the residential units above is required to have FRL of 180/180/180. The floors separating residential units are required to have a FRL of 90/90/90 *The building has timber floors throughout which do not comply with the required fire resistance levels.* *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.*	Fire Safety Upgrade Works – Stage 3.
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	The following equipment are required to be fire separated from the remainder of the building by 120/120/120 FRL construction: ▪ Lift motor rooms and lift control panels. ▪ Emergency Generators. ▪ Central smoke control plant. ▪ Boilers.	N/A

BCA Clause	Title	Assessment and Comment	Status
		▪ Battery systems. The building does not contain any of the above rooms and the requirements of this provision do not apply.	
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 separated from the remainder of the building by 2 hr fire resisting construction. 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. 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. Electrical conductors and switchboards are required to comply with this clause. *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.*	Fire Safety Upgrade Works – Stage 3.
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	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. *A performance based, fire engineered solution will be provided to ensure compliance.*	Fire Safety Upgrade Works – Stage 3.
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

BCA Clause	Title	Assessment and Comment	Status
C3.4	Acceptable method of protection	Windows requiring protection must be protected by one of the means: ▪ External wall-wetting sprinklers with windows that are automatically or permanently fixed in the closed position. ▪ -/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. Fire doors, fire windows and fire shutters are required to comply with Specification C3.4.	Note
C3.5	Doorways in fire walls	Doorways in fire walls are to have the FRL's and features required by this clause. *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 and the doorway at the rear of the office tenancy leading to the public corridor is to be fitted with a self -closing, -/120/30 fire door. Alternatively, a performance base, fire engineered solution can be formulated should reduced FRLs to the structure be identified by a structural engineer.*	Fire Safety Upgrade Works – Stage 3.
C3.6	Sliding fire doors	The building does not contain any sliding doors.	N/A
C3.7	Protection of doorways in horizontal exits	The building does not contain any horizontal exits.	N/A
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	Doors from sole occupancy units opening into enclosed public corridors are required to be protected by self-closing, -/60/30 fire doors.	Fire Safety Upgrade Works – Stage 2.

BCA Clause	Title	Assessment and Comment	Status
		A doorway from any other room not within a SOU, must be protected by self-closing, - /60/30 fire doors. *Doorways to residential units are fitted with self-closing, -/60/30 fire doors* *Some doorways to rooms opening to the public corridor on the Ground Floor are not fitted with complying fire doors.* *It is recommended that all doorways to rooms opening to the public corridor be fitted with self-closing, -/60/30 fire doors.*	
C3.12	Openings in floors and ceilings for services.	Fire separation between floors is required to be maintained where services penetrate though floors. *Visual inspection did not reveal any non – compliances. Sprinkler protection will mitigate any unseen non – compliances.*	New works capable of complying Upgrade not required. Sprinkler protection will mitigate any unseen non – compliances.
C3.15	Openings for service installations	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. *Visual inspection did not reveal any non – compliances. Sprinkler protection will mitigate any unseen non – compliances.*	New works capable of complying Sprinkler protection will mitigate any unseen non – compliances.
C3.16	Construction joints	Construction joints in building elements required to be fire resistant are required to be protected in accordance with this clause. *Visual inspection did not reveal any non – compliances. Sprinkler protection will mitigate any unseen non – compliances.*	Sprinkler protection will mitigate any unseen non – compliances.
C3.17	Columns protected with lightweight construction to achieve an FRL	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. *The FRL of columns and beams within the retail area are to be determined by a structural engineer.*	Fire Safety Upgrade Works – Stage 3.

4.3. 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 determine in accordance with this cause.	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
2.3	Lintels	Lintels are to be protected as required by the requirements of this clause. *Upgrade not considered necessary*	New works capable of complying 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. *Upgrade not considered necessary*	New works capable of complying 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 Office: 2 hrs Retail: 3 hrs *It is recommended that a structural engineer determine the FRLs of existing elements.* *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.* *The walls bounding the residential units on the top storey do not extend to the underside of*	Fire Safety Upgrade Works – Stage 3.

BCA Clause	Title	Assessment and Comment	Status
		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. *A performance based, fire engineered solution is to be provided for the timber floors and any reduced FRLs found within the existing structure.*	
3.5	Roof: Concession	The roof is not required to achieve an FRL as the building: ▪ 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. *The concession applies.*	Note
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

4.4. 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	**Class 2 buildings** Every stairway or ramp serving as a *required exit* must be fire-isolated unless it connects, passes through or passes by not more than 3 consecutive *storeys* in a Class 2 building. One extra *storey* 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. *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 stairs are not required to be fire – isolated.*	Will comply

BCA Clause	Title	Assessment and Comment	Status
D1.4	Exit travel distances	**Class 2 part** - The entrance doorway of any sole-occupancy unit must be not be more than 6m from an exit. *Travel distances in this part of the building comply* **Class 6 parts** – The distance to a single *exit* serving a *storey* at the level of access to a road or *open space* may be increased to 30 m. *Travel distances in this part of the building comply.*	Complies
D1.5	Distance between alternative exits	Not applicable	N/A
NSW D1.6	Dimensions of exits and paths of travel to exits	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. *The main stairs are less than 1m in width (750mm). Upgrade is not considered to be necessary*	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	Not applicable	N/A
D1.9	Travel via non-fire-isolated stairways or ramps	(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. (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.. (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— (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 (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*	Complies

BCA Clause	Title	Assessment and Comment	Status
		ramp is in opposite or approximately opposite directions. *The non – fire isolated stairs in the building comply with these requirements.*	
D1.10	Discharge from exits	(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. (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— (i) the minimum width of the required exit; or (ii) 1 m, whichever is the greater. (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— (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. *All exits discharge directly to the road as required.*	Complies
D1.11	Horizontal exits	The building does not contain any horizontal exits.	N/A
D1.12	Non-required stairways, ramps or escalators	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 *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.*	Fire Safety Upgrade Works – Stage 3.
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	A ladder may be used in lieu of a stairway to provide egress from a plant room with a floor area less than 100m^2 or plant or lift machine rooms with a floor area of less than 200 m^2, for all but one point of egress.	N/A

BCA Clause	Title	Assessment and Comment	Status
		Ladders are required to comply with AS1657 and the requirement of this clause.	
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 *rise in storeys* of more than 2, *required* stairs and ramps (including landings and any supporting building elements) which are not *required* to be within a *fire-resisting shaft*, must be constructed according to D2.2, or only of— (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that— (i) has a finished thickness of not less than 44 mm; and (ii) has an average density of not less than 800 kg/m^3 at a moisture content of 12%; and (iv) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue. *The existing timber stairs are considered to be acceptable.*	Upgrade not required
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

BCA Clause	Title	Assessment and Comment	Status
D2.12	Roof as open space	Not applicable	N/A
NSW D2.13	Goings & risers	(a) A stairway must have— (i) not more than 18 and not less than 2 risers in each *flight*; and (ii) going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13, except as permitted by (b) and (c); and (iii) constant goings and risers throughout each *flight*, except as permitted by (b) and (c), and the dimensions of goings (G) and risers (R). (v) treads which have— (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 (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 (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 *storeys*; and *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* *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.*	Fire Safety Upgrade Works – Stage 1. Compliant slip resistant strips to be provided on all nosings.
D2.14	Landings	In a stairway— (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— (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 (ii) have— (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 (B) a strip at the edge of the landing with a slip-resistance classification not less than that listed	Fire Safety Upgrade Works – Stage 1. Compliant slip resistant strips to be provided on all nosings.

BCA Clause	Title	Assessment and Comment	Status
		in Table D2.14 when tested in accordance with AS 4586, where the edge leads to a flight below. *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.* *The dimensions of landings on the 2 non – required stairs do not comply. Nosing strips have 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.*	
NSW D2.15	Thresholds	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— (a) in a building *required* to be *accessible* by Part D3, the doorway— (i) opens to a road or *open space*; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or (b) in other cases— (i) the doorway opens to a road or *open space*, external stair landing or external balcony; and (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. *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.*	Fire Safety Upgrade Works – Stage 1.
NSW D2.16	Barriers to prevent falls	(a) A continuous barrier must be provided along the side of— (i)a stairway or ramp; and (ii) a floor, corridor, hallway, balcony, deck, verandah, *mezzanine*, access bridge or the like; if the trafficable surface is 1 m or more above the surface beneath. **Barrier heights** (i) 865mm above the nosings of treads and landings which are not more than 500mm in length; and (ii) 1,000 mm in all other locations **Barrier openings** A 125 mm sphere must not be able to pass through any opening.	Fire Safety Upgrade Works – Stage 2.

BCA Clause	Title	Assessment and Comment	Status
		Barrier Climbability 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. *Barriers on balconies and the parapet at roof level do not achieve the minimum1m 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.* *The barrier on the main stair complies.*	
D2.17	Handrails	Handrails are required along at least one side of all stairways or ramps. *A handrail is provided on the main stairs as required.* *Handrails are not provided on the 2 non – required stairs. It is recommended that handrails be provided on both of these stairs.*	Fire Safety Upgrade Works – Stage 2.
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	A doorway serving as a *required exit* or forming part of a *required exit*,— (i) must not be fitted with a revolving door; and (ii) must not be fitted with a roller shutter or tilt-up door unless— (A) it serves a Class 6, 7 or 8 building or part with a *floor area* not more than 200 m2; and (B) the doorway is the only *required exit* from the building or part; and (C) it is held in the open position while the building or part is lawfully occupied; and (iii) must not be fitted with a sliding door unless— (A) it leads directly to a road or *open space*; and (B) the door is able to be opened manually under a force of not more than 110 N; and (iv) if fitted with a door which is power-operated— (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 (B) if it leads directly to a road or *open space* it must open automatically if there is a power	Complies

BCA Clause	Title	Assessment and Comment	Status
		failure to the door or on the activation of a fire or smoke alarm anywhere in the *fire compartment* 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.	
D2.20	Swinging doors	A swinging door must not encroach and impede the path of travel/exit width by more than 500mm at any part of it swing. When in the fully open position, it must not encroach into the path of travel/exit width by more than or 100mm. 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. *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.*	Upgrade not required.
NSW D2.21	Operation of latch	Doors in required exits or forming part of a required exits 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. *There are numerous doors throughout the building which do not have compliant hardware. Upgrade required*	Fire Safety Upgrade Works – Stage 1.
D2.22	Re-entry from fire-isolated exits	Not applicable	N/A
D2.23	Signs on doors	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. Signs must be in capital letters not less than 20 mm high in a colour contrasting with the background and state, for a *self-closing* door - "**FIRE SAFETY DOOR** **DO NOT OBSTRUCT** **DO NOT KEEP OPEN**" *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.*	N/A
D2.24	Protection of openable windows	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	Fire Safety Upgrade Works – Stage 2.

BCA Clause	Title	Assessment and Comment	Status
		surface beneath in a bedroom in a Class 2 building. *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.*	
D2.25	Timber stairways: Concession	Not applicable	N/A
4.5. Services and Equipment (BCA Section E)			
E1.3	Fire hydrants	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. *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.*	Fire Safety Upgrade Works – Stage 3.
E1.4	Fire hose reels	Hose reels must be provided to serve the Class 5 – Office and Class 6 - Retail parts of the building on the Ground Floor. *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.* *Portable fire extinguishers may be used in lieu of hose reels subject to the provision of a performance based, fire engineered solution*.	Fire Safety Upgrade Works – Stage 3.
E1.5	Sprinklers	A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5. *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*.	Fire Safety Upgrade Works – Stage 3.

BCA Clause	Title	Assessment and Comment	Status
E1.6	Portable fire extinguishers	Portable fire extinguishers are to comply with this provision and sections 1, 2, 3 and 4 of AS 2444. In Class 2 parts, portable fire extinguishers must be provided to serve the whole Class 2, 5 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. (b) Portable fire extinguishers provided in a Class 2 building part of a building must be— (i) an ABE type fire extinguisher; and (ii) a minimum size of 2.5 kg; and (iii) distributed outside a *sole-occupancy unit*— (A) to serve only the *storey* at which they are located; and (B) so that the travel distance from the entrance doorway of any *sole-occupancy unit* to the nearest fire extinguisher is not more than 10 m. *It is recommended that extinguishers are to be provided as prescribed by current requirements.*	Fire Safety Upgrade Works – Stage 1.
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	**A Class 2 building** must be provided with a smoke alarm system complying with Clause 3 within *sole-occupancy units.* (i) Alarms must be installed within each *sole-occupancy unit*, and located on or near the ceiling in any *storey*— (A) containing bedrooms— (aa) between each part of the *sole-occupancy unit* containing bedrooms and the remainder of the *sole-occupancy unit*; and (bb) where bedrooms are served by a hallway, in that hallway; and (B) not containing any bedrooms, in egress paths. (ii) Where there is more than one alarm installed within a *sole-occupancy unit*, alarms	Fire Safety Upgrade Works – Stage 2.

BCA Clause	Title	Assessment and Comment	Status
		must be interconnected within that *sole-occupancy unit*. (i) A smoke alarm system must— (A) consist of smoke alarms complying with AS 3786; and (B) be powered from the consumer mains source. In a Class 2 building protected with a sprinkler system complying with Specification E1.5 smoke detectors are not *required* in *public corridors* and other internal public spaces. **Class 5 and 6 buildings —** a smoke detection system complying with Clause 4. *It is recommended that the existing detection and alarm system be upgraded to comply with current requirements.*	
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	Emergency lighting must be provided in accordance with AS2293.1-2005. *It is recommended that the emergency lighting system be upgraded to current requirements*	Fire Safety Upgrade Works – Stage 2.
E4.5 to E4.8	Exit signs	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. 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 *exit* or balcony— (i) with the word “EXIT” in capital letters 25 mm high in a colour contrasting with that of the background; or (ii) by some other suitable method. *It is recommended that exit signs be upgraded to current requirements.*	Fire Safety Upgrade Works – Stage 2.
E4.9	Emergency warning and intercom systems	EWIS is not required.	N/A

4.6. Health and Amenity (BCA Section F)

BCA Clause	Title	Assessment and Comment	Status
F1.0	Deemed to satisfy provisions	Performance requirement FP1.4, for the prevention of the penetration of water through external walls, is required to be complied with.	Capable of complying
F1.1	Stormwater drainage	Stormwater drainage is required to be designed to comply with AS/NZS 3500.3-2015.	Capable of complying
F1.4	External above ground membranes	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 & AS 4654.2-2012	Capable of complying
F1.5	Roof coverings	Lightweight metal roof sheeting is to comply with AS1562.1.	Capable of complying
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.	Capable of complying
F1.7	Waterproofing of wet areas in buildings	Waterproofing of wet areas are required to comply with this clause & AS 3740-2010 Amdt 1.	Capable of complying
F1.9	Damp-proofing	Damp proofing is required to be provided in accordance with this clause.	N/A
F1.10	Damp-proofing of floor on ground	Damp proofing is required to be provided in accordance with this clause.	N/A
F1.11	Provision of floor wastes	In a Class 2 or 3 building or Class 4 part of a building, a bathroom or laundry located at any level above a sole occupancy unit or public space must have: ▪ a floor waste. ▪ The floor graded to the floor waste to permit drainage of water	Capable of complying
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.	N/A
F1.13	Glazed assemblies	Glazed assemblies to comply with AS 2047 as applicable.	N/A
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,	Complies

BCA Clause	Title	Assessment and Comment	Status
		provision of the following facilities within each unit will comply: ▪ A bath or shower; and ▪ A closet pan & wash basin; and ▪ Kitchen; and ▪ Wash tub and space for washing machine and drier Sanitary facilities are provided as required.	
F2.3	Facilities in Class 3 to 9 buildings	Sanitary facilities must be provided in accordance with this clause and Table F2.3. Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by females.	Capable of complying
F2.4	Facilities for people with disabilities	Accessible unisex and ambulant sanitary facilities are required in accordance with clause. The design of accessible sanitary facilities is to comply with AS1428.1-2009.	Capable of complying
F2.5	Construction of sanitary compartments	The construction of sanitary compartments is required to comply with this requirement.	Capable of complying
F2.6	Interpretation: Urinals and washbasins	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. A washbasin may be an individual basin, or a part of a hand washing trough served by a single water tap.	Note
F2.8	Waste management	Not applicable	N/A
F2.9	Accessible adult change facilities	Not applicable	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.	Capable of complying

BCA Clause	Title	Assessment and Comment	Status
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.	Capable of complying
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 mechanical ventilation and the doorway to the room adequately screened from view. Mechanical ventilation of the bathrooms is to be provided.	Note
F4.11	Car park exhaust	Not applicable	N/A
F4.12	Kitchen local exhaust	Not applicable	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 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: ▪ 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.	Note
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. *Discontinuous construction is not required.*	Note
F5.4	Sound insulation rating of floor	14. A floor in a Class 2 or 3 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— (p) sole-occupancy units; or	Capable of complying

BCA Clause	Title	Assessment and Comment	Status
		(q) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification. A floor in a Class 9c building separating sole occupancy units must have an R_w not less than 45.	
F5.5	Sound insulation of walls	Sound insulation of walls and doors is required to be in accordance with this clause.	May not comply
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.	May not comply
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.	May not comply
F6.1	Application of part	The deemed-to-satisfy provisions of this Part only apply to a sole-occupancy unit of a Class 2 building and a Class 4 part of a building	Note
F6.2	Pliable building membrane	Where a pliable building membrane is installed in an external wall, it must comply with the provisions of this clause. Except for single skin masonry and single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity.	N/A
F6.3	Flow rate and discharge of exhaust systems	1. An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of: (a) 25 L/s for a bathroom or sanitary compartment; and (b) 40 L/s for a kitchen or laundry. 2. Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air. 3. Exhaust from a bathroom, sanitary compartment, or laundry must be discharged: (a) Directly or via a shaft or duct to outdoor air; or (b) To a roof space that is ventilated in accordance with F6.4.	Capable of complying
F6.4	Ventilation of roof spaces	Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to	N/A

BCA Clause	Title	Assessment and Comment	Status
		outdoor air through evenly distributed openings in accordance with this clause.	

4.7. Ancillary Provisions (BCA Section G)

BCA Clause	Title	Assessment and comment	Status
NSW G1.101	Provision for the cleaning of windows	The method of provision for the cleaning of windows is required to be in accordance with this clause (windows 3 or more storeys above the ground).	Capable of complying

4.8. Energy Efficiency (BCA Section J – Class 3 and 5 to 9 Buildings)

4.8.1. External Fabric (Part J1)

BCA Clause	Title	Assessment and Comment	Status
J1.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope of a Class 3 and 5 to 9 building in accordance with this clause.	Note
J1.2	Thermal Construction - General	Required insulation, reflective insulation and bulk insulation is to be installed in accordance with this clause and AS/NZS 4859.1.	New works capable of complying
J1.3	Roof and Ceiling Construction	A roof or ceiling that is part of the envelope must achieve the Total R-Value in accordance with this clause.	New works capable of complying
J1.4	Roof Lights	The rooflights are required to comply with the requirements of this provision.	N/A
J1.5	Walls & Glazing	External wall-glazing that are part of the envelope are required to comply with the requirements of this provision.	New works capable of complying
J1.6	Floors	Floors that are part of the envelope are required to comply with the requirements of this provision.	New works capable of complying

4.8.2. Building Sealing (Part J3)

BCA Clause	Status	Assessment and Comment	Status
NSW J3.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope of a Class 3 & 5 to 9 building in accordance with this clause.	Note
J3.2	Chimneys and flues	Solid fuel burning appliances are not proposed and the requirements of this provision do not apply.	N/A
J3.3	Roof Light	The rooflights are required to comply with the requirements of this provision.	N/A
J3.4	Windows and doors	Windows and doors forming part of the envelope are required to be sealed to restrict air infiltration in accordance with this clause.	New works capable of complying
J3.5	Exhaust Fans	An exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a: ▪ conditioned space; or ▪ a habitable room in climate zone 4, 6, 7 & 8.	New works capable of complying
J3.6	Construction of roofs, walls and floors	Roofs, ceilings, walls, floors and any openings are required to be designed and constructed to minimise air leakage in accordance with this clause.	New works capable of complying
J3.7	Evaporative Coolers	Evaporative coolers are not proposed.	N/A

4.8.3. Air Conditioning and Ventilation Systems (Part J5)

BCA Clause	Status	Assessment and Comment	Status
J5.2	Air Conditioning System control	Any proposed air-conditioning systems must be designed in accordance with this clause.	Note
J5.3	Mechanical ventilation system control	Any proposed mechanical ventilation systems must be designed in accordance with this clause.	New works capable of complying
J5.4	Fan systems	Any proposed fan systems must be designed in accordance with this clause.	New works capable of complying

BCA Clause	Status	Assessment and Comment	Status
J5.5	Ductwork insulation	Ductwork and fittings in an air-conditioning system must be provided with insulation in accordance with this clause.	New works capable of complying
J5.6	Ductwork sealing	Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.	New works capable of complying
J5.7	Pump systems	Pumps and pipework that form part of an air-conditioning system are to be designed in accordance with this clause.	New works capable of complying
J5.8	Pipework insulation	Piping, vessels, heat exchangers and tanks containing heating or cooling fluid, where the fluid is held at a heated or cooled temperature, that are part of an air-conditioning system, other than in appliances covered by MEPS, must be provided with insulation in accordance with this clause.	New works capable of complying
J5.9	Space heating	A heater used for air-conditioning or as part of an air-conditioning system must be provided with insulation in accordance with this clause	New works capable of complying
J5.10	Refrigerant chillers	An air-conditioning system refrigerant chiller must comply with MEPS and the full load operation energy efficiency ratio and integrated part load energy efficiency ratio in Table J5.10a or Table J5.10b when determined in accordance with AHRI 551/591.	New works capable of complying
J5.11	Unitary air conditioning equipment	Unitary air-conditioning equipment including packaged air-conditioners, split systems, and variable refrigerant flow systems must comply with MEPS and for a capacity greater than or equal to 65 kWr where required by this clause.	New works capable of complying
J5.12	Heat rejection equipment	The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J5.12. The fan in an air-cooled condenser must have a motor rated power in accordance with this clause.	New works capable of complying

4.8.4. Artificial Lighting and Power (Part J6)

BCA Clause	Status	Assessment and Comment	Status
J6.2	Artificial lighting	Artificial lighting is to be designed in accordance with this provision.	Note
J6.3	Interior artificial lighting and power control	Artificial lighting and power control are to be designed and provided in accordance with this provision.	New works capable of complying
J6.4	Interior decorative and display lighting	Interior decorative and display lighting, such as for foyer mural or art display, must be controlled in accordance with this clause.	N/A
J6.5	Exterior artificial lighting	Artificial lighting around the perimeter of a building must be designed to comply with this clause.	New works capable of complying
J6.6	Boiling water and chilled water storage units	Power supply to a boiling water or chilled water storage unit is required to be controlled by a time switch in accordance with Spec J6.	New works capable of complying
J6.7	Lifts	Lifts must be designed to comply with this clause.	N/A
J6.8	Escalators and moving walkways	Escalators and moving walkways must have the ability to slow to between 0.2 m/s and 0.05 m/s when unused for more than 15 minutes.	N/A

4.8.5. Heated Water Supply and Swimming Pool and Spa Pool Plant (Part J7)

BCA Clause	Status	Assessment and Comment	Status
J7.2	Hot Water Supply	A heated water supply system for food preparation and sanitary purposes must be designed and installed in accordance with Part B2 of NCC Volume Three — Plumbing Code of Australia.	New works capable of complying
J7.3	Swimming pool heating and pumping	Not applicable	N/A
J7.4	Spa pool heating and pumping	Not applicable	N/A

4.8.6. Facilities for Energy Monitoring (Part J8)

BCA Clause	Status	Assessment and Comment	Status
J8.3	Facilities for energy monitoring	Facilities for energy monitoring are required to be provided in accordance with this clause.	New works capable of complying

4.9. Energy Efficiency (BCA Section J – Class 2 and 4 Buildings)

The provisions of this Section J(A) are designed to complement the requirements of BASIX which are implemented via a Development Consent or Complying Development as applicable. BASIX is a web-based planning tool design to assess the potential performance of certain residential buildings against a range of sustainability indices.

4.9.1. Building Fabric (NSW Part J(A)1)

BCA Clause	Status	Assessment and Comment	Status
NSW J(A)1.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to thermal insulation in a Class 2 building where a development consent specifies that insulation is to be provided. The DTS provisions for thermal breaks apply to all Class 2 buildings and Class 4 parts.	Note
NSW J(A)1.2	Compliance with BCA	The sole occupancy units of a Class 2 building must comply with the national BCA provisions of J02(b) to (d). Refer to J1.2, J1.3, J1.5 & J1.6 below.	New works capable of complying
J1.2	Thermal construction — general	Thermal insulation is required to be installed in accordance with AS/NZS 4859.1 and the general requirements of this clause. Reflective & bulk insulation is to be installed in accordance with this clause.	New works capable of complying
J0.4	Roof thermal breaks	Roof thermal breaks are required in accordance with this clause.	New works capable of complying
J0.5	Wall thermal breaks	Wall thermal breaks are required in accordance with this clause.	New works capable of complying
J1.6 (c) & (d)	Floors – floor edge insulation	Floor edge insulation is to comply with this clause	New works capable of complying

4.9.2. Building Sealing (NSW Part J(A)2)

BCA Clause	Status	Assessment and Comment	Status
NSW J(A)2.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to a Class 2 building, but exclude the following: ▪ a building in climate zones 2 and 5 where the only means of air-conditioning is by using an evaporative cooler; or ▪ a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or. ▪ parts of those buildings that cannot be fully enclosed	Note
NSW J(A)2.2	Compliance with BCA provisions	The following national provisions apply to the requirements of this clause: ▪ J3.2 Chimneys and flues ▪ J3.3 Roof Lights ▪ J3.4 External Doors and windows ▪ J3.5 Exhaust fans ▪ J3.6 Construction of roofs, walls and floors ▪ J3.7 Evaporative coolers	Note
J3.2	Chimneys and Flues	Open solid fuel burning appliances are not proposed.	N/A
J3.3	Roof lights	Roof lights are to be designed to comply with this clause.	N/A
J3.4 (a) to (d)	Windows and doors	External windows and doors are required to be designed to comply with this clause.	New works capable of complying
J3.5	Exhaust fans	An exhaust fan must be fitted with a sealing device to prevent air infiltration in a conditioned space or in climate zones 4, 6, 7 and 8.	New works capable of complying
J3.6	Construction of roofs, walls and floors	Roofs, external walls, external floors and any openings are required to be designed and constructed to minimise air leakage.	New works capable of complying
J3.7	Evaporative Coolers	Not applicable	N/A

4.9.3. Air-Conditioning and Ventilating System (NSW Part J(A)3)

BCA Clause	Status	Assessment and Comment	Status
NSW J(A)3.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to a Class 2 building.	Note
NSW J(A)3.2	Compliance with BCA provisions	Class 2 buildings must comply with national BCA provisions as identified below.	New works capable of complying
J5.2	Air Conditioning System control	Any proposed air-conditioning systems must be designed in accordance with this clause.	New works capable of complying
J5.3	Mechanical ventilation system control	Any proposed mechanical ventilation systems must be designed in accordance with this clause.	New works capable of complying
J5.4	Fan systems	Any proposed fan systems must be designed in accordance with this clause.	New works capable of complying
J5.5	Ductwork insulation	Ductwork and fittings in an air-conditioning system must be provided with insulation in accordance with this clause.	New works capable of complying
J5.6	Ductwork sealing	Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.	New works capable of complying
J5.7	Pump systems	Pumps and pipework that form part of an air-conditioning system are to be designed in accordance with this clause.	New works capable of complying
J5.8	Pipework insulation	Piping, vessels, heat exchangers and tanks containing heating or cooling fluid, where the fluid is held at a heated or cooled temperature, that are part of an air-conditioning system, other than in appliances covered by MEPS, must be provided with insulation in accordance with this clause.	New works capable of complying
J5.10	Refrigerant chillers	An air-conditioning system refrigerant chiller must comply with MEPS and the full load operation energy efficiency ratio and integrated part load energy efficiency ratio in Table J5.10a or Table J5.10b when determined in accordance with AHRI 551/591.	New works capable of complying

BCA Clause	Status	Assessment and Comment	Status
J5.11	Unitary air conditioning equipment	Unitary air-conditioning equipment including packaged air-conditioners, split systems, and variable refrigerant flow systems must comply with MEPS and for a capacity greater than or equal to 65 kWr where required by this clause.	New works capable of complying
J5.12	Heat rejection equipment	The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J5.12. The fan in an air-cooled condenser must have a motor rated power in accordance with this clause.	New works capable of complying

4.9.4. Heated Water Supply (NSW Part J(A)4)

BCA Clause	Status	Assessment and Comment	
NSW J(A)4.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to a Class 2 building.	Note
NSW J(A)4.2	Compliance with the BCA provisions	Class 2 buildings must comply with the national BCA provisions of J7.2.	New works capable of complying
J7.2	Hot Water Supply	A heated water supply system for food preparation and sanitary purposes must be designed and installed in accordance with Part B2 of NCC Volume Three — Plumbing Code of Australia.	New works capable of complying

4.9.5. Facilities for Energy Monitoring (NSW Part J(A)5)

BCA Clause	Status	Assessment and Comment	Status
NSW J(A)5.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to a Class 2 building except within a sole occupancy unit.	Note
NSW J(A)5.3	Compliance with BCA provisions	Class 2 buildings must comply with the national provision of J8.3.	New works capable of complying
J8.3	Facilities for energy monitoring	Facilities for energy monitoring are required to be provided in accordance with this clause.	New works capable of complying

5. FIRE SAFETY SCHEDULE

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	EXISTING	PROPOSED
1.	Automatic fire detection and alarm system	BCA 2019 Amdt 1 E2.2, Spec E2.2a Clause 5 (combination smoke alarm and smoke detection); AS 1670.1-2018, AS 3786-2014 Amdt 1.	YES	YES
2.	Automatic fire suppression system (Residential)	BCA 2019 Amdt 1 E1.5, Spec E1.5, Spec E1.5a & AS 2118.1-2017 Amdt 1; or AS 2118.4-2012; or FPAA101D-2018	NO	YES
3.	Building occupant warning system	BCA 2019 Amdt 1 Spec E2.2a (Clause 7) & AS1670.1-2018 (Clause 3.22).	NO	YES
4.	Emergency lighting	BCA 2019 Amdt 1 E4.2, E4.4, & AS 2293.1–2018	YES	YES
5.	Exit signs	BCA 2019 Amdt 1 E4.5, E4.6, E4.8 Spec E4.8 & AS 2293.1-2018.	YES	YES
6.	Fire doors	BCA 2019 Amdt 1 C2.13 (electricity supply systems), C3.4, Spec C3.4; C3.5 (doorways & fire walls), C3.11 (bounding construction) & AS 1905.1–2015Amdt 1	YES	YES
7.	Fire Hose reel systems	BCA 2019 Amdt 1 E1.4 & AS 2441-2005 Amdt 1	YES	YES
8.	Fire hydrant systems	BCA 2019 Amdt 1 C2.12 (separation of fire pumps), E1.3, Spec E1.5a, & AS 2419.1-2005 Amdt 1	NO	YES
9.	Fire seals protecting openings in fire resisting components of the building	BCA 2019 Amdt 1 C3.12, C3.15, Spec C3.15, C3.16, D1.12, AS 1530.4.-2014 & AS 4072.1-2005 Amdt 1	NO	YES
10.	Lightweight construction	BCA 2019 Amdt 1 C1.8 & Spec C1.8	NO	YES
11.	Portable fire extinguishers	BCA 2019 Amdt 1 E1.6 & AS 2444-2001.	YES	YES
12.	Warning and operational signs	BCA 2019 Amdt 1 D2.23 Signs on exit doors,	NO	YES

6. SUMMARY OF FIRE SAFETY UPGRADE RECOMMENDATION

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 minimum1m 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	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. 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. 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.
C2.9	Separation of classifications in different storeys	The building has timber floors throughout which do not comply with the required fire resistance levels. 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.
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	Doorways in fire walls are to have the FRL's and features required by this clause. 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. 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.
3.1	Fire resistance of building elements	It is recommended that a structural engineer determine the FRLs of existing elements, including the columns and beams within the retail area. 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. 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. A performance based, fire engineered solution is to be provided for the timber floors and any reduced FRLs found within the existing structure.
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	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. Portable fire extinguishers may be used in lieu of hose reels subject to the provision of a performance based, fire engineered solution.
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.

7. CONCLUSION

The design as proposed is capable of complying with the Building Code of Australia and will be subject to construction documentation that will provide appropriate details to demonstrate compliance.

ATTACHMENT 1

Assessed plans prepared by NBRS Architecture

Plan Title	Drawing No	Revision	Date
COVER PAGE	DA-000	A	11.12.2020
EXISTING & DEMOLITION GROUND PLAN	DA-100	A	11.12.2020
EXISTING & DEMOLITION FIRST PLAN	DA-110	A	11.12.2020
EXISTING & DEMOLITION SECOND PLAN	DA-120	A	11.12.2020
EXISTING & DEMOLITION THIRD PLAN	DA-130	A	11.12.2020
PROPOSED GROUND FLOOR PLAN	DA-200	A	11.12.2020
PROPOSED FIRST FLOOR PLAN	DA-210	A	11.12.2020
PROPOSED SECOND FLOOR PLAN	DA-220	A	11.12.2020
PROPOSED THIRD FLOOR PLAN	DA-230	A	11.12.2020
THE CORSO ELEVATION	DA-300	A	11.12.2020
MARKET LANE ELEVATION	DA-310	A	11.12.2020
EAST ELEVATION	DA-320	A	11.12.2020
WEST ELEVATION	DA-330	A	11.12.2020
LONG SECTION LIGHTWELL A	DA-400	A	11.12.2020
LONG SECTION LIGHTWELL B	DA-410	A	11.12.2020
CROSS SECTION LIGHTWELL A	DA-420	A	11.12.2020
CROSS SECTION LIGHTWELL B	DA-430	A	11.12.2020
SCHEDULE OF COLOURS & MATERIAL	DA-500	A	11.12.2020