



BCA Assessment Report

4-10 Inman Road, Cromer



Project: 4-10 Inman Road, Cromer
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1 BASIS OF ASSESSMENT

1.1. Location and Description

The building development, the subject of this report, is located at 4-10 Inman Road, Cromer and comprises the strip out of the existing heritage buildings and change in use comprising retail café to the single storey heritage building and office use to the existing three (3) storey heritage office building.

1.2. Purpose

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy Provisions of BCA 2019, Amendment 1, and to clearly outline those areas (if any) where compliance is not achieved, where areas may warrant redesign to achieve strict BCA compliance or where areas may be able to be assessed against the relevant performance criteria of BCA 2019. Such assessment against relevant performance criteria will need to be addressed by means of a separate Performance Based Fire Safety Engineered Assessment Report to be prepared under separate cover.

1.3. Building Code of Australia

This report is based on the Deemed-to-Satisfy Provisions of the National Construction Code Series Volume 1 – Building Code of Australia, 2019, Amendment 1 (BCA) incorporating the State variations where applicable. Please note that the version of the BCA applicable to new building works is the version applicable at the time of the lodgement of the Construction Certificate application to the Accredited Certifying Authority.

1.4. Limitations

This report does not include nor imply any detailed assessment for design, compliance or upgrading for:

- (a) the structural adequacy or design of the building;
- (b) the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and
- (c) the design basis and/or operating capabilities of any proposed electrical, mechanical or hydraulic fire protection services.

This report does not include, or imply compliance with:

- (a) the National Construction Code – Plumbing Code of Australia Volume 3
- (b) the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to), (Note: The provision of disabled access to the subject development has been assessed against the deemed to satisfy provision of Part D3 and F2.4 of BCA2019 only);
- (c) Demolition Standards not referred to by the BCA;
- (d) Work Health and Safety Act 2011;
- (e) Requirements of Australian Standards unless specifically referred to;
- (f) Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Local Council, ARTC, Department of Planning and the like; and
- (g) Conditions of Development Consent issued by the Local Consent Authority.

1.5. Design Documentation

This report has been based on the Design plans and Specifications listed in Annexure A of this Report.

2 BUILDING DESCRIPTION

For the purposes of the Building Code of Australia (BCA) the development may be described as follows.

2.1. Rise in Storeys (Clause C1.2)

The office building has a rise in storeys of three (3)

The café building has a rise in storeys of one (1)

2.2. Classification (Clause A6.0)

The buildings have been classified as follows.

Table 1. Building Classification

Class	Level	Description
5	Lower ground, ground and first floor	Office
6	Ground floor	Retail cafe

2.3. Effective Height (Clause A1.0)

The buildings have an *effective height* of less than 12 metres.

2.4. Type of Construction Required (Table C1.1)

The office building is required to be of Type B Fire Resisting Construction.

The retail café building is required to be of Type C Fire Resisting Construction.

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

The office building is less than the maximum floor area and volume limits of:-

Class 2	The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specifications C1.1 and Clause C3.11 of the BCA regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.	
Class 7a	Maximum Floor Area	5 000m ²
	Maximum Volume	30 000m ³

2.6. Fire Compartments

The office building is considered to be a single fire compartment (3344m²)

The retail café building is considered to be a single fire compartment

2.7. Exits

The following points in the building have been considered as the exits:

- (a) External doorways – Both Buildings
- (b) First Floor – Top riser of non-fire isolated stairs – Office Building
- (c) Ground Floor – External stair – Office Building

2.8. Climate Zone (Clause A1.0)

The buildings are located within Climate Zone 5.

2.9. Location of Fire-source features

The fire source features for the subject development are:

North: The side allotment boundary (and the retail café is a fire source feature to the heritage office building)

South: The external wall of the new commercial development (Unit 10 Ground Floor & Basement level storage).

East: The side allotment boundary.

West: The far side of Inman Road.

In accordance with Clause 2.1 of Specification C1.1, a part of a building element is exposed to a *fire-source feature* if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that–

- (a) has an FRL of not less than 30/–/–; and
- (b) is neither transparent nor translucent.

3 BCA ASSESSMENT

3.1. Introduction

The assessment undertaken is in relation to the plans prepared for the development consent application. The technical details required for a development consent are far less than that required for a construction certificate and as such, this assessment is designed to address a higher level assessment of the building against the provisions of the BCA.

The main purpose of this report is to address any major design changes required to the building, services required to be installed, and the fundamentals of design required by sections C, D, E, F, G and H (where applicable) of the BCA. This report does not address the design requirements for the structure of the building (Section B), or for the detailed design of services (Section E).

The summary below is to be read in conjunction with the BCA specification contained in Annexure F of the report.

3.2. Fire Resistance and Stability – Part C1 & Specification C1.1

The required fire resistance levels for the building elements are outlined in **Annexure C** of this report.

Retail Café

This building is an existing single storey heritage building which is located more than 3 metres to the boundary therefore, no fire resisting construction is required.

Heritage Office

It is understood that the existing building is concrete slab and steel column construction. The proposed development will strip out all existing internal non-loadbearing partitions and provide a substantially open plan office configuration.

As a building of Type B Construction there is no requirement for fire resistance levels to the floor slabs. Therefore, no requirement to fire seal service penetrations.

There will be no modification to existing structural steel columns. All proposed building works will comprise non-loadbearing walls to bathrooms and to create foyer areas.

3.3. Compartmentation and Separation – Part C2

There is no requirement for fire compartmentation or separation to either the retail café building or heritage office building.

The heritage office building is Type B Construction and has a combined floor area of 3344m² which is below the maximum 5500m² permitted

The floor to the heritage office building does not require any fire resistance level however, in accordance with BCA Clause C2.10 is required to have the lift shafts have FRL120/120/120 and lift landing doors protected in accordance with BCA Clause C3.10. the existing lift shafts are proposed to remain unchanged, except that the lift cars (and potentially lift landing doors) will be upgraded.

Compliance with Part C2 of the BCA can be readily achieved by the proposal subject to further design development pertaining to the lift car and landing doors.

3.4. Protection of Openings – Part C3

The external walls are generally setback more than 3 metres to the side allotment boundaries and more than 6 metres to adjacent buildings. Except for the eastern side of the heritage office building which is located within 6 metres of the proposed new commercial development. In lieu of providing protection to openings of the heritage office building it is proposed within the site wide fire engineering report prepared by Affinity Fire Engineering to provide an FRL120/120/120 external fire rated wall to the adjacent proposed

new building. Due to the fire protection provided to the proposed new building, the fire engineering report indicates that no protection is needed to the heritage office building.

3.5. Occupant Egress – Section D

Retail Café

Exit travel distance is not more than 20m to a single exit. As an existing building doorways to be not less than 750mm clear width.

The building has an existing stair at the front of the building which will remain unchanged. And a new accessible entrance provided to the rear of the building.

The rear deck will have a stair leading up with handrails to both sides as per accessibility requirements of BCA Clause D3.3 and AS1428.1-2009. And the deck having a perimeter barrier complying with BCA Clause D2.16. Further details of compliance of the stair, stair treads and barrier to be provided at Construction Certificate stage.

Heritage Office

Exit travel distance is less than 20m to an exit or less than 40m to an alternative exit as required to all levels. The existing building is served by non-fire isolated stairs.

Lower Ground Floor – This level has two exits opening direct to open space. The exit to Inman Road side (western elevation) is required to have a pathway linking up with the disabled accessway located to the side of the vehicular driveway.

Ground Floor Level – This level has access to multiple exits. And egress via this level is direct to open space. The non-fire isolated stairs connecting this level are separate and are not deemed to be required to be fire separated in accordance with BCA Clause D1.3.

First Floor level – This level has access to two existing exit stairs. The egress path via the external stair has been limited to a doorway to the south western corner so that pedestrian access to the existing balcony is limited to the zone nearby the external stair. In this location it would be appropriate for gates to be provided to the balcony to limit access for maintenance personnel only.

3.5.1. Access for people with disabilities

Both the retail café building and heritage office building are accessed via proposed new ramps leading from Inman Road adjacent to the driveway. The path of travel complies with AS1428.1-2009. And provides access to the principle pedestrian entrance to both buildings.

Retail Café

Access to this building is via a low rise low speed constant pressure lift. The lift travels more than 4 metres and is required to be of the enclosed type. This lift will be required to comply with provisions of Clause E3.6 and AS1735 and shall include power operated swing doors to/from the lift car. Further details of the proposed lift shall be provided at Construction Certificate stage.

Internal access throughout is possible by the proposed open plan design.

Heritage Office

Access to the building is via the principle pedestrian entrance at ground floor level. At ground floor level there is a common lobby which enables access to tenancies and the existing internal lifts which are both proposed to be upgraded with a new lift car complying with Part E3 of the BCA2019 and comprising a lift car size at least 1100mm width x 1400mm length.

The upgrade of the lift cars is required to meet the “affected part” path of travel upgrade requirements of the Disability (Access to Premises – Buildings) Standard, 2010 due to new works being proposed at both basement level and first floor level.

3.6. Services and equipment – Section E

The building is required to be provided with the services and equipment set out in Annexure B of this report.

The annexure also outlines the standard of performance to be achieved by the services and equipment.

3.6.1. Fire Fighting Equipment – Part E1

Fire Hydrant

The retail café is less than 500m² and does not require a fire hydrant.

The heritage office building has a floor area of more than 500m² and is required to be served by a fire hydrant system complying with AS2419.1-2005. This building will be served by the fire hydrant system that will be installed as part of the new building development.

Fire Hose Reels

The retail café is less than 500m² and does not require fire hose reels.

The class 5 heritage office building is not required to be served by fire hose reels in accordance with BCA Clause E1.4.

Sprinklers

Neither the retail café or heritage office are required to be served by sprinklers.

Portable Fire Extinguishers

Portable fire extinguishers are required to be installed to serve both the retail café and heritage office building in accordance with AS2444-2001.

3.6.2. Smoke Hazard Management – Part E2

The retail café (Class 6) and heritage office building (Class 5) has a rise in storeys of three (3) and does not require a smoke hazard management system.

3.6.3. Visibility in an emergency, exit signs and warning systems – Part E4

Retail café building is less than 300m² and does not require exit or emergency lighting.

Heritage office building will require emergency lighting throughout and exit signs above all exits.

It is assumed that compliance can be readily achieved subject to design development at CC stage.

3.7. Lift Installations – Part E3

Retail Cafe

Access to this building is via a low rise low speed constant pressure lift. The lift travels more than 4 metres and is required to be of the enclosed type with internal car dimensions not less than 1100x1400mm.

This lift will be required to comply with provisions of Clause E3.6 and AS1735.12 and shall include power operated (or self closing) swing doors to/from the lift car. Further details of the proposed lift shall be provided at Construction Certificate stage.

Heritage Office Building

The heritage office building has an existing passenger lift. It is proposed to upgrade the lift within the existing shaft. The lift car will require internal car size of 1100mm x 1400mm length and in accordance with AS1735.12 is required to have controls on both sides of the lift car where the width is less than 1400mm.

3.8. Health and Amenity – Section F

Each of the buildings will have the required bathroom facilities.

The existing buildings have ceiling heights throughout in excess of 2400mm. As a result of the proposed works there is no reduction in ceiling height proposed.

This will need to be further assessed with design development once all services have been allowed to ceiling area.

Sanitary Facilities – Retail Cafe

It is proposed for the café to have not more than 20 persons catered at any one time. Therefore, sanitary facilities are not required to be provided to patrons. However, it is proposed to provide an onsite accessible sanitary facility which will be made available for patrons.

Staff are provided a unisex ambulant disabled facility which is suitable for up to 10x staff.

Sanitary Facilities – Heritage Office

The heritage office has sanitary facilities provided at each level and to serve each sub-tenancy.

- Basement Level 780m² tenancy - Proposed sanitary facilities will serve up to 100 staff.
- Ground Floor 540m² tenancy – Proposed sanitary facilities will serve up to 80 staff.
- Ground Floor 1100m² tenancy - Proposed sanitary facilities will serve up to 120 staff.
- First Floor 440m² tenancy - Proposed sanitary facilities will serve up to 90 staff.

Natural Ventilation – Both Buildings

Natural ventilation is required to all habitable rooms otherwise mechanical ventilation will need to be introduced in accordance with BCA Clause F4.5 and AS1668.2.

3.9. Minor Structures and Components – Section G

There are no specific requirements of section G that apply to the buildings.

4 STATEMENT OF COMPLIANCE

The plans assessed were developed to a standard suitable for submission as a development application and do not contain all the details necessary to allow a CC to be issued. As such, this assessment was limited to the major items of the BCA with the view of identifying any items that may result in a modified development consent being required, or additional key items that need to be included in the design.

The architectural design documentation as referred to in report has been assessed against the applicable provisions of the Building Code of Australia, (BCA) and it is considered that such documentation complies or is capable of complying with that Code.

There are specific areas throughout the development where strict Deemed-to-Satisfy BCA Compliance will not be achieved by the proposed design and site constraints. These matters will need to be addressed in a detailed Performance Solution Report to be prepared for this development under separate cover:

Table 2. Performance Solutions

Item	Description of Performance Solution	DTS Provision
Non-Fire Related Performance Solutions		
1.	The construction of the external walls is such that they will prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements.	No DtS Provisions – FP1.4 Performance Provisions Only

ANNEXURE A DESIGN DOCUMENTATION

Annexure A – Design Documentation

This report has been based on the following design documentation.

Table 3. Architectural Plans

Architectural Plans Prepared by SBA Architects		
Drawing Number	Revision	Title
DA_M200	B	Coversheet
DA_M201	C	Site Plan
DA_M210	B	Demolition Plan – Basement Heritage Building
DA_M211	B	Demolition Plan – Ground & Level 1 – Heritage Building
DA_M213	B	Demolition Plans & Elevations – Heritage Cottage
DA_M300	C	Heritage Building – Basement Plans
DA_M301	B	Heritage Building – Ground Floor and First Floor Plans
DA_M302	B	Roof Plan – Heritage Office
DA_M310	E	Café Floor & Roof Plan
DA_M311	E	Heritage Cottage Café – Elevations and Sections
DA_M401	B	Heritage Office Elevations
DA_M410	B	Heritage Building - Sections

ANNEXURE B ESSENTIAL SERVICES

Annexure B - Essential Services

The following fire safety measures are required to be installed in the building. The following table may be required to be updated as the design develops and options for compliance are confirmed.

Table 4. Essential Fire Safety Measures (Retail Café)

Item	Essential Fire and Other Safety Measures	Standard of Performance
1.	Portable fire extinguishers	BCA2019 E1.6 AS 2444–2001

Table 5. Essential Fire Safety Measures (Heritage Office Building)

Item	Essential Fire and Other Safety Measures	Standard of Performance
2.	Portable fire extinguishers	BCA2019 E1.6 AS 2444–2001
3.	Warning & operational signs	BCA2019 D3.6 (Braille Exit Signs) (Note: E4.5 (Exit Signs)) BCA2019 E3.3 (Lift Signs)
Electrical Services		
4.	Emergency lighting	BCA2019 E4.2, E4.4 AS/NZS 2293.1:2018
5.	Exit signs	BCA2019 E4.5 (Exit Signs) BCA2019 E4.6 (Direction Signs) BCA2019 E4.8 (Design and Operation - Exits) AS/NZS 2293.1:2018
Hydraulic Services		
6.	Fire hydrant systems	BCA2019 E1.3 AS 2419.1:2005 FRNSW Technical Sheet D15/45534.V9 issued 10.01.19, 'Compatible Hose Connections' Fire Engineering Report prepared by Affinity –Report 212018_FER_02 dated 24/5/2022

ANNEXURE C FIRE RESISTANCE LEVELS

Annexure C - Fire Resistance Levels

The following fire resistance levels (FRL's) are required for the various building elements, with a fire source feature being the far boundary of a road adjoining the allotment, a side or rear boundary or an external wall of another building on the allotment except a Class 10 structure.

Type B Construction (Heritage Office)

Table 6. Type B Construction (Heritage Office)

Item	Class 5
Loadbearing External Walls <ul style="list-style-type: none"> - Less than 1.5m to a <i>fire- source feature</i> - 1.5 – less 3m from <i>fire- source feature</i> - 3 – less 9m from a <i>fire- source feature</i> - 9 – less 18m from a <i>fire- source feature</i> - 18m or more from a <i>fire- source feature</i> 	120/120/120 120/90/60 120/30/30 120/30/- -/-/
Non-Loadbearing External Walls <ul style="list-style-type: none"> - Less than 1.5m to a <i>fire- source feature</i> - 1.5 – less 3m from <i>fire- source feature</i> - 3m or more from a <i>fire- source feature</i> 	-/120/120 -/90/60 -/-/
Loadbearing External Columns <ul style="list-style-type: none"> - Less than 18m - 18m or more 	120/-/ -/-/
Non-Loadbearing External Columns	-/-/
Common Walls & Fire Walls	120/120/120
Stair and Lift Shafts required to be fire-resisting <ul style="list-style-type: none"> - Loadbearing Stair & Lift shaft - Non-loadbearing Stair shaft only 	120/120/120 -/120/120
Internal walls bounding sole occupancy units <ul style="list-style-type: none"> - Loadbearing - Non-loadbearing 	120/-/ -/-/
Internal walls bounding public corridors, public lobbies and the like: <ul style="list-style-type: none"> - Loadbearing - Non-loadbearing 	120/-/ -/-/
Other loadbearing internal walls and columns	120/-/
Roofs	-/-/

Note: As an existing building there are no new structural works proposed therefore, the above FRLs are not applicable to any proposed building works which are all non-loadbearing strip out works and make good. Furthermore, there is no FRL to floor between storeys.

Type C Construction (Café)

Table 7. Type C Construction

Item	Class 6
External Walls	
- Less than 1.5m to a <i>fire-source feature</i>	90/90/90
- 1.5 – less 3m from <i>fire-source feature</i>	60/60/60
- 3m or more from a <i>fire-source feature</i>	-/-/-
External Column not incorporated in an external wall	
- Less than 1.5m to a fire source feature	90/-/-
- 1.5 – less 3m from fire source feature;	60/-/-
- 3m or more from a fire source feature	-/-/-
Common Walls and Fire Walls	90/90/90
Internal walls bounding sole occupancy units	-/-/-
Internal walls bounding public corridors, hallways and the like	-/-/-
Internal walls bounding a stair if required to be fire rated	60/60/60

Note: As an existing building there are no new structural works proposed therefore, the above FRLs are not applicable to any proposed building works which are all internal works located more than 3 metres to side boundary.

ANNEXURE E DEFINITIONS

Annexure E - Definitions

Effective height

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

Exit

Exit means –

- (a) Any, or any combination of the following if they provide egress to a road or open space—
 - (i) An internal or external stairway.
 - (ii) A ramp.
 - (iii) A fire-isolated passageway.
 - (iv) A doorway opening to a road or open space.
 - (v) A horizontal exit or a fire-isolated passageway leading to a horizontal exit.

Fire compartment

Fire compartment means –

- (a) the total space of a building; or
- (b) when referred to in—
 - (i) the Performance Requirements — any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or
 - (ii) the Deemed-to-Satisfy Provisions — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to Satisfy Provisions of the relevant Part.

Fire-resistance level (FRL)

Fire-resistance level (FRL) means the grading periods in minutes determined in accordance with Specification A2.3, for the following criteria—

- (a) structural adequacy; and
- (b) integrity; and
- (c) insulation,

and expressed in that order.

Note: A dash means that there is no requirement for that criterion. For example, 90/–/– means there is no requirement for an FRL for integrity and insulation, and –/–/– means there is no requirement for an FRL.

Fire-source feature

- (a) the far boundary of a road, river, lake or the like adjoining the allotment; or
- (b) a side or rear boundary of the allotment; or
- (c) an external wall of another building on the allotment which is not a Class 10 building

Fire wall

Fire wall means a wall with an appropriate resistance to the spread of fire that divides a storey or building into fire compartments.

Non-combustible

Non-combustible means—

- (a) applied to a material — not deemed combustible as determined by AS 1530.1:1994 — Combustibility Tests for Materials; and
- (b) applied to construction or part of a building — constructed wholly of materials that are not deemed combustible

Performance Requirement

Performance Requirement means a requirement which states the level of performance which a Performance Solution or Deemed-to-Satisfy Solution must meet.

Performance Solution

Performance Solution means a method of complying with the Performance Requirements other than by a Deemed-to-Satisfy Solution.

Sole-occupancy unit

Sole-occupancy unit means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes—

- (a) a dwelling; or
- (b) a room or suite of rooms in a Class 3 building which includes sleeping facilities; or
- (c) a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or
- (d) a room or suite of associated rooms in a Class 9c building, which includes sleeping facilities and any area for the exclusive use of a resident.

ANNEXURE F BCA COMPLIANCE SPECIFICATION

Annexure F – BCA Compliance Specification

The following BCA matters are to be addressed by specific BCA Design Certificate to be issued by the relevant architectural, services and engineering consultants at the Construction Certificate Stage. This schedule should be forwarded to all consultants to obtain verification that these items have and will be included in the design documentation / specifications:

Architectural Design Certification (Heritage Office)

1. The FRL's of building elements for the proposed works have been designed in accordance with Table 3 of Specification C1.1 of BCA2019 for a building of Type B Construction.
2. Lightweight construction used to achieve required fire resistance levels will comply with Specification C1.8 of BCA2019.
3. Building elements, including external walls and their components, must be non-combustible in accordance with C1.9 of BCA2019.
4. Materials, floor and wall linings/coverings, surface finishes and air-handling ductwork used in the works will comply with the fire hazard properties of Clause C1.10 and Specification C1.10 of BCA2019.
5. Any ancillary elements fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible will comply with Clause C1.14 of BCA2019.
6. The lift doors will be --/60/- fire doors complying with AS 1735.11:1986 in accordance Clause C3.10 of BCA2019.
7. Columns protected by light weight construction will achieve an FRL not less than the FRL for the element it is penetrating, in accordance with Clause C3.17 of BCA2019.
8. The top and bottom of the riser shafts will achieve an FRL not less than the FRL required for the walls of the shaft in accordance with Clause 2.7 of Specification C1.1 of BCA2019.
9. The dimensions of exits and paths of travel to exits will be provided in accordance with Clause D1.6 of BCA2019, except as modified by performance solution.
10. Discharge from exits will be in accordance with Clause D1.10 of BCA2019
11. Access to the lift pit will be in accordance with Clause D1.17 of BCA2019.
12. The construction of EDB's and telecommunications distribution boards will be in accordance with Clause D2.7 of BCA2019 with the enclosure bounded by non-combustible construction or fire protective covering and smoke seals provided around the perimeter of the non-combustible doors and any openings sealed with non-combustible mastic to prevent smoke spreading from the enclosure.
13. Landings and door thresholds throughout the development will be provided in accordance with Clause D2.14 and D2.15 of BCA2019. Landings to have either a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013 or a strip at the edge of the landing with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013 where the edge ledge to a flight below.
14. The handrails and balustrades to all stairs and throughout the building will be in accordance with Clause D2.16, and D2.17 of BCA2019.
15. The doorways and doors will be in accordance with Clause D2.19 and D2.20 of BCA2019.
16. Door latching mechanisms will be in accordance with Clause D2.21 of BCA2019
17. The openable portion of a window in an office over 4m height will be protected with a restricting device or secure screen that does not allow a 125mm sphere to pass through the opening or screen and resist an outward horizontal action of 250N in accordance with Clause D2.24 of BCA2019. In

addition to window protection, and for other openable windows 4 meters or more above the ground below, a barrier with a height not less than 865mm above the floor will be installed to the openable window.

18. Fire precautions whilst the building is under construction fire precautions will be in accordance with Clause E1.9 of BCA2019.
19. External above ground waterproofing membranes will comply with Clause F1.4 of BCA2019 and AS 4654 Parts 1 & 2:2012.
20. Any new coverings will be in accordance with Clause F1.5 of BCA2019.
21. Any new sarking proposed will be installed in accordance with Clause F1.6 of BCA2019.
22. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F1.7 of BCA2019 and AS 3740:2010.
23. All new glazing to be installed throughout the development will be in accordance with Clause F1.13 of BCA2019 and AS 1288:2006 / AS 2047:2014.
24. Sanitary facilities will be provided in the building in accordance with Clause F2.3 of BCA2019.
25. The construction of the sanitary facilities will be in accordance with Clause F2.5 of BCA2019.
26. Ceiling heights to the new areas will be in accordance with Clause F3.1 of BCA2019.
27. Natural ventilation will be provided in accordance with Clause F4.5, F4.6 and F4.7 of BCA2019.
28. The sanitary compartments will be either be provided with mechanical exhaust ventilation or an airlock in accordance with Clause F4.9 of BCA2019.
29. A safe manner for cleaning of windows located 3 or more storeys above ground level will be provided in accordance with the Work Health & Safety Act 2011 and regulations made under that Act in accordance with NSW G1.101 of BCA2019.
30. Essential fire or other safety measures must be maintained and certified on an ongoing basis, in accordance with the provisions of the Environmental Planning and Assessment Regulation, 2000.
31. Building Fabric and Thermal Construction will be in accordance with Part J1 of BCA2019.
32. Glazing will be in accordance with Part J1 of BCA2019.
33. Building sealing will be in accordance with Part J3 of BCA2019.
34. Facilities for Energy Monitoring will be provided in accordance with Clause J8.3 of BCA2019.

Electrical Services Design Certification:

35. A smoke detection and alarm system will be installed throughout the building in accordance with Table E2.2a, and Specification E2.2a of BCA2019.
36. Emergency lighting will be installed throughout the development in accordance with Clause E4.2, E4.4 of BCA2019 and AS/NZS 2293.1:2018.
37. Exit signage will be installed in accordance with Clause E4.5 and E4.8 of BCA2019 and AS/NZS 2293.1:2018.
38. Artificial lighting will be installed throughout the development in accordance Clause F4.4 of BCA2019 and AS/NZS 1680.0:2009.
39. Lighting power and controls will be installed in accordance with Part J6 of BCA2019.

Hydraulic Services Design Certification:

40. Storm water drainage will be provided in accordance with Clause F1.1 of BCA2019 and AS/NZS 3500.3:2018

41. Fire hydrant system will be installed in accordance with Clause E1.3 of BCA2019 and AS 2419.1:2005, except as modified by performance solution.
42. Portable fire extinguishers will be installed in accordance with Clause E1.6 of BCA2019 and AS 2444:2001.
43. The heated water supply systems will be designed and installed to NCC Volume 3 – Plumbing code and Clause J7.2 of BCA2019.

Mechanical Services Design Certification:

44. Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F4.5 of BCA2019 and AS 1668.2:2012.
45. The air-conditioning and ventilations systems will be designed and installed in accordance with Part J5 of BCA2019
46. Rigid and flexible ductwork will comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.

Structural Engineers Design Certification:

47. The material and forms of construction for the proposed works will be in accordance with Clause B1.2, B1.4 and B1.6 of BCA2019 as follows:
 - a. Dead and Live Loads – AS/NZS 1170.1:2002
 - b. Wind Loads – AS/NZS 1170.2:2011
 - c. Earthquake actions – AS 1170.4:2007
 - d. Masonry – AS 3700:2018
 - e. Concrete Construction – AS 3600:2018
 - f. Steel Construction AS 4100:1998
 - g. Aluminium Construction – AS/NZS 1664.1 or 2:1997
 - h. Timber Construction – AS 1720.1:2010
 - i. ABCB Standard for Construction of Buildings in Flood Hazard Areas.
48. Where modified, the lift shaft will have an FRL in accordance with Clause C2.10 and Specification C1.1 of BCA2019.

Lift Services Design Certification:

49. Warning signage in accordance with Clause E3.3 of BCA2019 will be provided to the lifts to advise not to use the lifts in a fire.
50. Access and egress to the lift well landings will comply with the Deemed-to-Satisfy Provisions of D3 of the BCA2019 and will be suitable to accommodate disabled persons.
51. The type of lifts will also be suitable to accommodate persons with a disability in accordance with Clause E3.6, Table E3.6a, and will have accessible features in accordance with Table E3.6b of BCA2019.
52. The lifts will comply with AS 1735.12:1999 in accordance with Clause E3.6 of BCA2019.
53. All electric passenger lifts and electrohydraulic passenger lifts shall comply with Specification E3.1 of BCA2019.

Architectural Design Certification (Retail Cafe)

54. The FRL's of building elements for the proposed works have been designed in accordance with Table 3 of Specification C1.1 of BCA2019 for a building of Type C Construction.
55. Materials, floor and wall linings/coverings, surface finishes and air-handling ductwork used in the works will comply with the fire hazard properties of Clause C1.10 and Specification C1.10 of BCA2019.
56. The dimensions of exits and paths of travel to exits will be provided in accordance with Clause D1.6 of BCA2019, except as modified by performance solution.
57. The construction of EDB's and telecommunications distribution boards will be in accordance with Clause D2.7 of BCA2019 with the enclosure bounded by non-combustible construction or fire protective covering and smoke seals provided around the perimeter of the non-combustible doors and any openings sealed with non-combustible mastic to prevent smoke spreading from the enclosure.
58. Landings and door thresholds throughout the development will be provided in accordance with Clause D2.14 and D2.15 of BCA2019. Landings to have either a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013 or a strip at the edge of the landing with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013 where the edge ledge to a flight below.
59. The handrails and balustrades to all stairs and throughout the building will be in accordance with Clause D2.16, and D2.17 of BCA2019.
60. The doorways and doors will be in accordance with Clause D2.19 and D2.20 of BCA2019.
61. Door latching mechanisms will be in accordance with Clause D2.21 of BCA2019
62. Fire precautions whilst the building is under construction fire precautions will be in accordance with Clause E1.9 of BCA2019.
63. External above ground waterproofing membranes will comply with Clause F1.4 of BCA2019 and AS 4654 Parts 1 & 2:2012.
64. Any new coverings will be in accordance with Clause F1.5 of BCA2019.
65. Any new sarking proposed will be installed in accordance with Clause F1.6 of BCA2019.
66. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F1.7 of BCA2019 and AS 3740:2010.
67. All new glazing to be installed throughout the development will be in accordance with Clause F1.13 of BCA2019 and AS 1288:2006 / AS 2047:2014.
68. Sanitary facilities will be provided in the building in accordance with Clause F2.3 of BCA2019.
69. The construction of the sanitary facilities will be in accordance with Clause F2.5 of BCA2019.
70. Ceiling heights to the new areas will be in accordance with Clause F3.1 of BCA2019.
71. Natural ventilation will be provided in accordance with Clause F4.5, F4.6 and F4.7 of BCA2019.
72. The sanitary compartments will be either be provided with mechanical exhaust ventilation or an airlock in accordance with Clause F4.9 of BCA2019.
73. Essential fire or other safety measures must be maintained and certified on an ongoing basis, in accordance with the provisions of the Environmental Planning and Assessment Regulation, 2000.
74. Building Fabric and Thermal Construction will be in accordance with Part J1 of BCA2019.
75. Glazing will be in accordance with Part J1 of BCA2019.
76. Building sealing will be in accordance with Part J3 of BCA2019.

77. Facilities for Energy Monitoring will be provided in accordance with Clause J8.3 of BCA2019.

Electrical Services Design Certification:

78. Artificial lighting will be installed throughout the development in accordance Clause F4.4 of BCA2019 and AS/NZS 1680.0:2009.
79. Lighting power and controls will be installed in accordance with Part J6 of BCA2019.

Hydraulic Services Design Certification:

80. Storm water drainage will be provided in accordance with Clause F1.1 of BCA2019 and AS/NZS 3500.3:2018
81. Portable fire extinguishers will be installed in accordance with Clause E1.6 of BCA2019 and AS 2444:2001.
82. The heated water supply systems will be designed and installed to NCC Volume 3 – Plumbing code and Clause J7.2 of BCA2019.

Mechanical Services Design Certification:

83. Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F4.5 of BCA2019 and AS 1668.2:2012.
84. The air-conditioning and ventilations systems will be designed and installed in accordance with Part J5 of BCA2019
85. Rigid and flexible ductwork will comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.

Structural Engineers Design Certification:

86. The material and forms of construction for the proposed works will be in accordance with Clause B1.2, B1.4 and B1.6 of BCA2019 as follows:
- a. Dead and Live Loads – AS/NZS 1170.1:2002
 - b. Wind Loads – AS/NZS 1170.2:2011
 - c. Earthquake actions – AS 1170.4:2007
 - d. Masonry – AS 3700:2018
 - e. Concrete Construction – AS 3600:2018
 - f. Steel Construction AS 4100:1998
 - g. Timber Construction – AS 1720.1:2010

Lift Services Design Certification:

87. Access and egress to the lift well landings will comply with the Deemed-to-Satisfy Provisions of D3 of the BCA2019 and will be suitable to accommodate disabled persons.
88. The type of lifts will also be suitable to accommodate persons with a disability in accordance with Clause E3.6, Table E3.6a, and will have accessible features in accordance with Table E3.6b of BCA2019.
89. The lift shall have power operated doors.
90. The lifts will comply with AS 1735.12:1999 in accordance with Clause E3.6 of BCA2019.

All electric passenger lifts and electrohydraulic passenger lifts shall comply with Specification E3.1 of BCA2019.