



Date: 18 June 2019  
Our Ref: P19092 (2)

Mrs Jones The Baker  
16a Laurence St  
Freshwater NSW 2096  
Att: Mr Barry Jones

Dear Barry,

**RE: 65 Princes Charles Road, Frenchs Forest  
BCA COMPLIANCE ASSESSMENT**

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Please find enclosed our BCA Design Compliance Report prepared in respect of the proposed occupation of the retail tenancy at 65 Princes Charles Road, Frenchs Forest.

In reviewing the content of this Report, particular attention is drawn to the content of Parts 3 and 4 as: –

- ☐ Part 3 summarizes the compliance status of the proposed design in terms of each prescriptive provision of the BCA.  
The inclusion of this summary enables an immediate understanding of the compliance status of the proposed design to be obtained.
- ☐ Part 4 contains a detailed analysis of the proposed design, and provides informative commentary & recommendation in respect of each instance of prescriptive non-compliance and area of insufficient (design) detail, as applicable.

This commentary enables the project team to readily identify and understand the nature and extent of information required within the Building Permit (or other) application to demonstrate the attainment of BCA compliance.

Should you require any further information, please do not hesitate to contact me on the number provided.

Yours faithfully

A handwritten signature in black ink, appearing to be 'Kieran Tobin', with a horizontal line extending to the right.

**Kieran Tobin**  
**Director**

# BUILDING CODE OF AUSTRALIA ASSESSMENT

**PREPARED FOR**  
**MRS JONES THE BAKER**

**REGARDING**  
**65 Princes Charles Road, Frenchs Forest**

**Prepared By**



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## **REPORT REGISTER**

The following report register documents the development and issue of this report and project as undertaken by this office, in accordance with the *Quality Assurance* policy of BCA Vision Pty Ltd.

| <b>Our Reference</b> | <b>Issue No.</b> | <b>Remarks</b>               | <b>Issue Date</b> |
|----------------------|------------------|------------------------------|-------------------|
| P19092               | 2                | Design Compliance Assessment | 18 June 2019      |

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## **1.0 INTRODUCTION**

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### **1.1 GENERAL**

This “BCA Compliance Assessment” report has been prepared at the request of Mrs Jones The Baker and relates to 65 Princes Charles Road, Frenchs Forest.

The project proposal is for occupation of a retail tenancy at the above listed premises. The site also contains 2 residential dwellings.

This report is based upon, and limited to, the information depicted in the documentation provided for assessment, and does not make assumptions regarding “design intention” or the like.

### **1.2 REPORT BASIS**

The content of this report reflects –

- (a) The principles and provisions of BCA 2019 Parts C, D & E;
- (b) A Site Inspection of the subject premises on Monday the 11<sup>th</sup> of May 2019;
- (c) Architectural plans DA01 dated 07/06/19 and CDC 02 dated 15/06/19

### **1.3 EXCLUSIONS**

It is conveyed that this report should not be construed to infer that an assessment for compliance with the following has been undertaken –

- (a) Structural and services design documentation;
- (b) General building services (i.e. passenger lifts);
- (c) The individual requirements of service providers (i.e. Telstra, Water Supply, Energy Australia);
- (d) The individual requirements of the Workcover Authority;
- (e) Disability Discrimination Act (DDA)

### **1.4 REPORT PURPOSE**

The purpose of this report is to identify the extent to which the architectural design documentation complies with the relevant prescriptive provisions of the BCA 2019, Parts C, D & E.

Assessment of the proposed design considers each prescriptive BCA provision, and identifies such as either: –

- (a) Being complied with; or
- (b) Not being complied with; or
- (c) Requiring the provision further detail with the future Building Permit or other application or
- (d) Not being relevant to the particular building works proposal.

The status of the design, in terms of these four (4) categories, is summarised within Part 3 of this report.

Where prescriptive non-compliance is identified, suitable recommendations to remedy the non-compliance shall be detailed in Part 4.

In instances where insufficient detail exists, summary of the information required from the project team for inclusion within future applications (i.e. Building Permit) shall also be outlined in Part 4.

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## 2.0 BUILDING DESCRIPTION

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### 2.1 GENERAL

In the context of the Building Code of Australia (BCA), the subject development is described within items 2.2 – 2.6 below.

### 2.2 RISE IN STOREYS (CLAUSE C1.2)

The building is proposed to have a rise in storeys of 2 (two)

### 2.3 BUILDING CLASSIFICATION (CLAUSE A3.2)

The entire building incorporates the following classifications:-

| CLASS   | DESCRIPTION  |
|---------|--|
| Class 2 | 2 or more residences attached to a building of another class   |
| Class 6 | a shop or other building for the sale of goods by retail or the supply of services direct to the public. |

### 2.4 EFFECTIVE HEIGHT (CLAUSE A1.1)

The building has an effective height Not exceeding 12m.

### 2.5 TYPE OF CONSTRUCTION (TABLE C1.1)

**Table 4 TYPE B CONSTRUCTION: FRL OF BUILDING ELEMENTS**

External walls, common walls flooring and floor framing of lift pits must be non-combustible.

Any internal wall having an FRL must extend to –

- (i) the underside of the floor above; or
- (ii) the underside of a complying roof; or
- (iii) if the roof is not required to comply, the underside of the non-combustible roof covering and must not be crossed by combustible building elements (except 75 x 50 mm roof battens); or
- (iv) a ceiling immediately below the roof having a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.

A loadbearing internal wall and fire wall (including part of a loadbearing shaft) must be of concrete or masonry.

Non-loadbearing fire-resisting internal walls, fire and non-fire rated lift, ventilating, pipe, garbage, or similar shaft not for the discharge of hot products of combustion, must be of non-combustible construction.

External column FRL's apply to any internal columns that face and are within 1.5 m of a window and are exposed through that window to a fire-source feature.

Attachments not to impair fire-resistance

- (a) A combustible material may be used as a finish or lining to a wall or roof, or in a sign, sunscreen or blind, awning, or other attachment to a building element which has the required FRL if—
  - (i) the material is exempted under C1.10 or complies with the fire hazard properties prescribed in Specification C1.10; and
  - (ii) it is not located near or directly above a required exit so as to make the exit unusable in a fire; and
  - (iii) it does not otherwise constitute an undue risk of fire spread via the facade of the building.
- (b) The attachment of a facing or finish, or the installation of ducting or any other service, to a part of a building required to have an FRL must not impair the required FRL of that part.

| Building element  | Class of building — FRL: (in minutes)           |             |             |             |
|---|---|-------------|-------------|-------------|
|   | <i>Structural Adequacy/Integrity/Insulation</i> |             |             |             |
|   | 2, 3 or 4 part                                  | 5, 7a or 9  | 6           | 7b or 8     |
| <b>EXTERNAL WALL</b> (including any column and other building element incorporated within it) or other external building element, where the distance from any <u>fire-source feature</u> to which it is exposed is— |   |             |             |             |
| For <u>loadbearing</u> parts—   |   |             |             |             |
| less than 1.5 m   | 90/ 90/ 90                                      | 120/120/120 | 180/180/180 | 240/240/240 |
| 1.5 to less than 3 m  | 90/ 60/ 30                                      | 120/ 90/ 60 | 180/120/ 90 | 240/180/120 |
| 3 to less than 9 m  | 90/ 30/ 30                                      | 120/ 30/ 30 | 180/ 90/ 60 | 240/ 90/ 60 |
| 9 to less than 18 m   | 90/ 30/–  | 120/ 30/–   | 180/ 60/–   | 240/ 60/–   |
| 18 m or more  | –/–/–   | –/–/–       | –/–/–       | –/–/–       |
| For non- <u>bearing</u> parts—  |   |             |             |             |
| less than 1.5 m   | –/ 90/ 90                                       | –/120/120   | –/180/180   | –/240/240   |
| 1.5 to less than 3 m  | –/ 60/ 30                                       | –/ 90/ 60   | –/120/ 90   | –/180/120   |
| 3 m or more   | –/–/–   | –/–/–       | –/–/–       | –/–/–       |
| <b>EXTERNAL COLUMN</b> not incorporated in an <u>external wall</u> , where the distance from any <u>fire-source feature</u> to which it is exposed is—  |   |             |             |             |
| For <u>loadbearing</u> columns—   |   |             |             |             |
| less than 18 m  | 90/–/–  | 120/–/–     | 180/–/–     | 240/–/–     |
| 18 m or more  | –/–/–   | –/–/–       | –/–/–       | –/–/–       |
| For non- <u>loadbearing</u> columns—  |   |             |             |             |
|   | –/–/–   | –/–/–       | –/–/–       | –/–/–       |
| <b>COMMON WALLS and FIRE WALLS—</b>   | 90/ 90/ 90                                      | 120/120/120 | 180/180/180 | 240/240/240 |
| <b>INTERNAL WALLS—</b>  |   |             |             |             |
| <u>Fire-resisting</u> lift and stair <u>shafts</u> —  |   |             |             |             |
| <u>Loadbearing</u>  | 90/ 90/ 90                                      | 120/120/120 | 180/120/120 | 240/120/120 |

|   |            |           |           |           |
|---|------------|-----------|-----------|-----------|
| <i>Fire-resisting stair shafts—</i>                             |            |           |           |           |
| Non- <i>loadbearing</i>   | –/ 90/ 90  | –/120/120 | –/120/120 | –/120/120 |
| Bounding <i>public corridors</i> , public lobbies and the like— |            |           |           |           |
| <i>Loadbearing</i>  | 60/ 60/ 60 | 120/–/–   | 180/–/–   | 240/–/–   |
| Non- <i>loadbearing</i>   | –/ 60/ 60  | –/–/–     | –/–/–     | –/–/–     |
| Between or bounding <i>sole-occupancy units</i> —               |            |           |           |           |
| <i>Loadbearing</i>  | 60/ 60/ 60 | 120/–/–   | 180/–/–   | 240/–/–   |
| Non- <i>loadbearing</i>   | –/ 60/ 60  | –/–/–     | –/–/–     | –/–/–     |
| <b>OTHER LOADBEARING INTERNAL WALLS</b>                         |            |           |           |           |
| <b>and COLUMNS—</b>   | 60/–/–     | 120/–/–   | 180/–/–   | 240/–/–   |
| <b>ROOFS</b>  | –/–/–      | –/–/–     | –/–/–     | –/–/–     |

## 2.6 General Floor Area Limitations (Table C2.2)

Type B Construction: –

| Table C2.2 – Maximum size of Fire Compartments |                |                       |                             |                       |
|--|----------------|-----------------------|-----------------------------|-----------------------|
| Building Class                                 |                | Type A                | Type B                      | Type C                |
| 6, 7, 8, 9a                                    | Max Floor area | 5000 m <sup>2</sup>   | <b>3500 m<sup>2</sup></b>   | 2000 m <sup>2</sup>   |
|  | Max Volume     | 30,000 m <sup>3</sup> | <b>21,000 m<sup>3</sup></b> | 12,000 m <sup>3</sup> |

## 2.7 ACCESS TO PREMISES STANDARD

### 1.1 Name of Standards

These Standards are the Disability (Access to Premises — Buildings) Standards 2010.

### 1.2 Commencement

These Standards commenced on 1 May 2011.

### 1.3 Objects

The objects of these Standards are:

- (a) to ensure that dignified, equitable, cost-effective and reasonably achievable access to buildings, and facilities and services within buildings, is provided for people with a disability; and
- (b) to give certainty to building certifiers, building developers and building managers that, if access to buildings is provided in accordance with these Standards, the provision of that access, to the extent covered by these Standards, will not be unlawful under the Act.

### Excerpt from Disability (Access to Premises Buildings) Standards 2010

Clause (4) A part of a building is a *new part* of the building if it is an extension to the building or a modified part of the building about which:

- (a) an application for approval for the building work is submitted, on or after 1 May 2011, to the competent authority in the State or Territory where the building is located; or
  - (b) all of the following apply:
    - (i) the building work is carried out for or on behalf of the Crown;
    - (ii) the building work commences on or after 1 May 2011;
    - (iii) no application for approval for the building work is submitted, before 1 May 2011, to the competent authority in the State or Territory where the building is located.
- (5) An affected part is:
- (a) the principal pedestrian entrance of an existing building that contains a new part; and
  - (b) any part of an existing building, that contains a new part, that is necessary to provide a continuous accessible path of travel from the entrance to the new part.

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**Subsection 2.1(5) - Affected part**

The Premises Standards introduce a new concept referred to as the ‘affected part’ of an existing building. The introduction of this defined area reflects the desire to improve general accessibility of existing buildings over time where full upgrades of a building are not taking place.

The requirement for upgrading of the ‘affected part’ of buildings recognises that there is little value in improving access in new parts of existing buildings if people with disability cannot get to those new parts.

Subsection 2.1(5) defines the term ‘affected part’ of a building.

Affected part means the path of travel between (and including) the principal pedestrian entrance of an existing building to the ‘new part’ or modified part of the building. This path of travel must provide a continuous accessible path of travel (see ‘Accessway’ as defined in A1.1 of the Access Code) from the principal pedestrian entrance to the new part or modified part of the building.

**Note on extent of ‘affected part’**

The definition of ‘affected part’ of a building is limited to the area between (and including) the principal pedestrian entrance and the new work, but does not extend from the entrance to the allotment boundary or any required carparking spaces. It also does not extend to any toilet facilities or other rooms adjacent to the pathway between the principal pedestrian entrance and the area of the new work.

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***accessway*** means a continuous *accessible* path of travel (as defined in AS 1428.1) to, into or within a building.

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## 2.7 FIRE SAFETY UPGRADES TO EXISTING BUILDINGS (EP & A REGS)

Subject to the following maximum fire compartment floor area and volume limits for Construction: –

### 93 FIRE SAFETY AND OTHER CONSIDERATIONS

| Sub clause | Requirement   | Comment/Advice   |
|------------|---|--|
| 1          | This <u>clause</u> applies to a <u>development application</u> for a change of building use for an existing building where the applicant does not seek the rebuilding, alteration, enlargement or extension of a building.  | <p>The previous use was a class 6 bicycle store</p> <p>The proposed use is a class 6 food premises</p> <p>In our opinion there is no change of building classification</p> |
| 2          | In determining the <u>development application</u> , the consent authority is to take into consideration whether the fire protection and structural capacity of the building will be appropriate to the building's proposed use.   | For Reference  |
| 3          | <p>Consent to the change of building use sought by a <u>development application</u> to which this <u>clause</u> applies must not be granted unless the consent authority is satisfied that the building complies (or will, when completed, comply) with such of the Category 1 fire safety provisions as are applicable to the building's proposed use.</p> <p><b>Note:</b> The obligation to comply with the Category 1 fire safety provisions may require building work to be carried out even though none is proposed or required in relation to the relevant development consent.</p> | For Reference  |

### 94 CONSENT AUTHORITY MAY REQUIRE BUILDINGS TO BE UPGRADED

| Sub clause | Requirement  | Comment/Advice   |
|------------|--|--|
| 1          | <p>This clause applies to a development application for development involving the rebuilding, alteration, enlargement or extension of an existing building where:</p> <p>(a) the proposed building work, together with any other building work completed or authorised within the previous 3 years, represents more than half the total volume of the building, as it was before any such work was commenced, measured over its roof and external walls, or does not apply</p> <p>(b) the measures contained in the building are inadequate:</p> <p>(i) to protect persons using the building,</p> | Fit out plans indicated that the works proposed represent less than 50% of the building floor area |

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and to facilitate their egress from the building, in the event of fire, or  
(ii) to restrict the spread of fire from the building to other buildings nearby.

In determining a development application to which this clause applies, a consent authority is to take into consideration whether it would be appropriate to require the existing building to be brought into total or partial conformity with the *Building Code of Australia*.

For Reference

### 3.0 BCA ASSESSMENT – SUMMARY

#### 3.1. GENERAL

The tables contained within items 3.2 – 3.5 below summarise the compliance status of the proposed architectural design in terms of each prescriptive provision of the Building Code of Australia.

For those instances of either “prescriptive non-compliance” or “insufficient detail”, a detailed analysis and commentary is provided within Part 4.

#### 3.2. SECTION C – FIRE RESISTANCE

| BCA reference  | Complies | Does not comply | Detail required | Not relevant |
|--|----------|-----------------|-----------------|--------------|
| Spec. C1.1 – fire resisting construction                     |          | ✓               |                 |              |
| C1.3 – buildings of multiple classification                  |          |                 |                 | ✓            |
| C1.4 – mixed types of construction                           |          |                 |                 | ✓            |
| C1.5 – two storey Class 2 or 3 buildings                     |          |                 |                 | ✓            |
| C1.6 – Class 4 parts of a building                           |          |                 |                 | ✓            |
| C1.7 – open spectator stands & indoor sports stadiums        |          |                 |                 | ✓            |
| C1.8 – lightweight construction                              |          |                 |                 | ✓            |
| C1.9 – Non Combustible materials                             | ✓        |                 |                 |              |
| C1.10 – fire hazard properties                               |          |                 |                 | ✓            |
| C1.11 – performance of external walls                        |          |                 |                 | ✓            |
| C1.12 – non-combustible materials                            |          |                 |                 | ✓            |
| C2.2 – general floor area & volume limits                    | ✓        |                 |                 |              |
| C2.3 – large isolated buildings                              |          |                 |                 | ✓            |
| C2.4 – requirements for open spaces & vehicular access       |          |                 |                 | ✓            |
| C2.5 – Class 9a and 9c buildings                             |          |                 |                 | ✓            |
| C2.6 – vertical separation of openings in external walls     |          |                 |                 | ✓            |
| C2.7 – separation of firewalls                               |          |                 |                 | ✓            |
| C2.8 – separation of classifications in same storey          |          | ✓               |                 |              |
| C2.9 – separation of classifications in different storeys    | ✓        |                 |                 |              |
| C2.10 – separation of lift shafts                            |          |                 |                 | ✓            |
| C2.11 – stairways and lifts in one shaft                     |          |                 |                 | ✓            |
| C2.12 – separation of equipment                              |          |                 |                 | ✓            |
| C2.13 – electricity supply system                            |          |                 |                 | ✓            |
| C2.14 – public corridors in Class 2 and 3 buildings          |          |                 |                 | ✓            |
| C3.2 – openings in external walls                            | ✓        |                 |                 |              |
| C3.3 – separation of external walls & associated openings    |          |                 |                 | ✓            |
| C3.4 – acceptable methods of protection                      |          |                 |                 | ✓            |
| C3.5 – doorways in firewalls                                 |          | ✓               |                 | ✓            |
| C3.6 – sliding fire doors                                    |          |                 |                 | ✓            |
| C3.7 – doorways in horizontal exits                          |          |                 |                 | ✓            |
| C3.8 – openings in fire-isolated exits                       |          |                 |                 | ✓            |
| C3.9 – service penetrations in fire-isolated exits           |          |                 |                 | ✓            |
| C3.10 – openings in fire-isolated lift shafts                |          |                 |                 | ✓            |
| C3.11 – bounding construction: Class 2, 3, 4 and 9 buildings |          |                 |                 | ✓            |
| C3.12 – openings in floors & ceilings for services           |          |                 |                 | ✓            |
| C3.13 – openings in shafts                                   |          |                 |                 | ✓            |
| C3.15 – openings for service installations                   |          |                 |                 | ✓            |
| C3.16 – construction joints                                  |          |                 |                 | ✓            |
| C3.17 – columns protected with f/r lightweight construction  |          |                 |                 | ✓            |

### 3.3. SECTION D – ACCESS AND EGRESS

| BCA reference   | Complies | Does not comply | Detail required | Not relevant |
|---|----------|-----------------|-----------------|--------------|
| D1.2 – number of exits required                                   | ✓        |                 |                 |              |
| D1.3 – when fire-isolated exits are required                      |          |                 |                 | ✓            |
| D1.4 – exit travel distances                                      | ✓        |                 |                 |              |
| D1.5 – distance between alternative exits                         |          |                 |                 | ✓            |
| D1.6 – dimensions of exits and paths of travel to exits           | ✓        |                 |                 |              |
| D1.7 – travel via fire-isolated exits                             |          |                 |                 | ✓            |
| D1.8 – external stairways or ramps in lieu of fire-isolated exits |          |                 |                 | ✓            |
| D1.9 – travel via non-fire isolated stairways or ramps            |          |                 |                 | ✓            |
| D1.10 – discharge from exits                                      | ✓        |                 |                 |              |
| D1.11 – horizontal exits  |          |                 |                 | ✓            |
| D1.12 – non-required stairways or ramps                           |          |                 |                 | ✓            |
| D1.13 – number of persons accommodated                            | ✓        |                 |                 |              |
| D1.16 – plant rooms and lift motor rooms: concession              |          |                 |                 | ✓            |
| D1.17 – access to lift pits                                       |          |                 |                 | ✓            |
| D2.2 – fire-isolated stairways and ramps                          |          |                 |                 | ✓            |
| D2.3 – non-fire isolated stairways and ramps                      |          |                 |                 | ✓            |
| D2.4 – separation of rising and descending stair flights          |          |                 |                 | ✓            |
| D2.5 – open access ramps and balconies                            |          |                 |                 | ✓            |
| D2.6 – smoke lobbies  |          |                 |                 | ✓            |
| D2.7 – installations in exits and paths of travel                 |          |                 |                 | ✓            |
| D2.8 – enclosure of space under stairs and ramps                  |          |                 |                 | ✓            |
| D2.9 – width of stairways   |          |                 |                 | ✓            |
| D2.10 – pedestrian ramps  |          |                 |                 | ✓            |
| D2.11 – fire-isolated passageways                                 |          |                 |                 | ✓            |
| D2.12 – roof as open space  |          |                 |                 | ✓            |
| D2.13 – goings and risers   | ✓        |                 |                 | ✓            |
| D2.14 – landings  | ✓        |                 |                 | ✓            |
| D2.15 – thresholds  |          |                 |                 | ✓            |
| D2.16 – balustrades   | ✓        |                 |                 |              |
| D2.17 – handrails   | ✓        |                 |                 |              |
| D2.18 – fixed platforms, walkways, stairways and ladders          |          |                 |                 | ✓            |
| D2.19 – doorways and doors  |          |                 |                 | ✓            |
| D2.20 – swinging doors  | ✓        |                 |                 |              |
| D2.21 – operation of latch  |          | ✓               |                 |              |
| D2.22 – re-entry from fire-isolated exits                         |          |                 |                 | ✓            |
| D2.23 – signs on doors  |          |                 |                 | ✓            |
| D2.24 – Openable windows  |          |                 |                 | ✓            |
| D3.1 – general building access requirements                       |          | ✓               |                 |              |
| D3.2 – Access to buildings  |          | ✓               |                 |              |
| D3.3 – parts of buildings to be accessible                        |          | ✓               |                 |              |
| D3.4 – exemptions   |          | ✓               |                 |              |
| D3.5 – accessible car parking                                     |          |                 |                 | ✓            |
| D3.6 – signage  |          |                 |                 | ✓            |
| D3.12 – glazing on an accessway                                   |          | ✓               |                 |              |

### 3.4. SECTION E – SERVICES AND EQUIPMENT

| BCA reference  | Complies | Does not comply | Detail required | Not relevant |
|--|----------|-----------------|-----------------|--------------|
| E1.3 – fire hydrants   |          |                 |                 | ✓            |
| E1.4 – fire hose reels                                       |          |                 |                 | ✓            |
| E1.5 – sprinklers  |          |                 |                 | ✓            |
| E1.6 – portable fire extinguishers                           |          | ✓               |                 |              |
| E1.8 – fire control centres                                  |          |                 |                 | ✓            |
| E1.9 – fire precautions during construction                  |          |                 |                 | ✓            |
| E1.10 – provision for special hazards                        |          |                 |                 | ✓            |
| E2.2a – general provisions                                   |          | ✓               |                 | ✓            |
| E2.2b – specific provisions                                  |          |                 |                 | ✓            |
| E2.3 – provision for special hazards                         |          |                 |                 | ✓            |
| E3.2 – stretcher facility in lifts                           |          |                 |                 | ✓            |
| E3.3 – warning against use of lifts in fire                  |          |                 |                 | ✓            |
| E3.4 – emergency lifts                                       |          |                 |                 | ✓            |
| E3.5 – landings  |          |                 |                 | ✓            |
| E3.6 – facilities for people with disabilities               |          |                 |                 | ✓            |
| E3.7 – fire service controls                                 |          |                 |                 | ✓            |
| E3.8 – aged care buildings                                   |          |                 |                 | ✓            |
| E3.9 – Fire Service Recall switch                            |          |                 |                 | ✓            |
| E3.10 – Lift Car Drive Control Switch                        |          |                 |                 | ✓            |
| E4.2 – emergency lighting                                    |          |                 |                 | ✓            |
| E4.4 – design and operation of emergency lighting            |          |                 |                 | ✓            |
| E4.5 – exit signs  |          |                 |                 | ✓            |
| E4.6 – direction signs                                       |          |                 |                 | ✓            |
| E4.7 – Class 2 and 3 buildings and Class 4 parts: exemptions |          |                 |                 | ✓            |
| E4.8 – design and operation of exit signs                    |          |                 |                 | ✓            |
| E4.9 – emergency warning and intercommunication systems      |          |                 |                 | ✓            |

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## 4.0 BCA ASSESSMENT – DETAILED ANALYSIS

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### 4.1 GENERAL

With reference to the “BCA Assessment Summary” contained within Part 3 above, the following detailed analysis and commentary is provided.

This commentary is formulated to enable the design documentation to be further progressed, for the purpose of evidencing the attainment of compliance with the relevant provisions of the BCA.

In our opinion compliance with the Building Code of Australia 2019 Volume 1 Parts C, D, E & F can be achieved subject to the implementation of the following details into the Construction documentation.

### 4.2 SECTION C – FIRE RESISTANCE

| CLAUSE   | CLAUSE REQUIREMENT   | ACTION/RECOMENDATION  |
|----------|--|---|
| Cl. C1.1 | Type of construction required<br>(a) The minimum Type of <i>fire-resisting construction</i> of a building must be that specified in Table C1.1 and Specification C1.1,<br>(b) Type A construction is the most fire-resistant and Type C the least fire-resistant of the Types of construction. | Generally the building construction must achieve the minimum FRL requirements specified within clause 2.3 (page 3, 4 & 5) of this report for Type B Construction.<br><br>It was identified during the inspection that<br>a) the rear wall of the sanitary compartment is a lightweight wall which does not provide the required 180/180/180 Fire Resistance Level (FRL)<br>b) The masonry walls to each side of the |

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|                  |   | <p>sanitary compartment do not extend to the underside of the roof covering</p> <p>c) the rear wall of the tenancy separating it from the rear dwelling is a lightweight wall which does not provide the required 180/180/180 FRL.</p> <p>d) A door that is not a fire rated door exists within the the rear wall of the tenancy separating it from the rear dwelling</p> <p>We recommend reconstructing the walls separating the rear wall of the tenancy and to the perimeter of the sanitary compartment.</p> <p>The walls system must achieve an RL of 180/180/180 and extend to the underside of the roof covering</p> <p>If a lightweight system is used it must be an AS 1530 tested and certified system installed in exact accordance with the product prototype.</p> <p>If a connecting door is to remain between the tenancy and the rear dwelling is must be a -/180/30 fire door</p> |
| <b>Cl. C1.10</b> | <p>Fire Hazard Properties</p> <p>(a) The <i>fire hazard properties</i> of the following linings, materials and assemblies in a Class 2 to 9 building must comply with Specification C1.10</p> | <p>Confirmation of the Fire Hazard properties will be required with the Construction Certificate Documentation.</p> <p>Floor linings and floor coverings</p> <p>A floor lining or floor covering must have—</p>   |

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|  |  | <p>(a) a <i>critical radiant flux</i> not less than a grouping of 2.2; and</p> <p>(b) in a building not protected by a sprinkler system complying with Specification E1.5, a maximum <i>smoke development rate</i> of 750 percent-minutes; and</p> <p>(c) a group number complying with Clause 6(a)(ii), for any portion of the floor covering that is continued more than 150 mm up a wall.</p> <p>Wall and ceiling linings – requires groupings as follows</p> <p>Fire Isolated Exit = Grouping of 1</p> <p>Public Corridors = a grouping of 1,2</p> <p>Other areas = a grouping of 1,2,3</p> <p>(a) For the purposes of this Clause, the <i>group number</i> of a material is determined by either—</p> <p>(i) physical testing in accordance with AS ISO 9705; or</p> <p>(ii) prediction in accordance with Clause 3 of Specification A2.4 using data obtained by testing the material at 50 kW/m<sup>2</sup> irradiance in the horizontal orientation with edge frame in accordance with AS/NZS 3837.</p> <p>(b) The <i>group number</i> of a material is as follows when tested or predicted in accordance with sub-clause (a):</p> |
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|  |  |  |
|--|--|--|
|  |  | <p>(i) A Group 1 material is one that does not reach <i>flashover</i> when exposed to 100 kW for 600 seconds followed by exposure to 300 kW for 600 seconds.</p> <p>(ii) A Group 2 material is one that reaches <i>flashover</i> following exposure to 300 kW within 600 seconds after not reaching <i>flashover</i> when exposed to 100 kW for 600 seconds.</p> <p>(iii) A Group 3 material is one that reaches <i>flashover</i> in more than 120 seconds but within 600 seconds when exposed to 100 kW.</p> <p>(iv) A Group 4 material is one that reaches <i>flashover</i> within 120 seconds when exposed to 100 kW.</p> <p>(c) A material used as a finish, surface, lining or attachment to a wall or ceiling must be a Group 1, Group 2 or Group 3 material used in accordance with Table 3 and for buildings not fitted with a sprinkler system complying with Specification E1.5, have—</p> <p>(i) a <i>smoke growth rate index</i> not more than 100; or</p> <p>(ii) an <i>average specific extinction area</i> less than 250 m<sup>2</sup>/kg.</p> <p>Lift cars</p> <p>(a) Materials used as—</p> <p>(i) floor linings and floor coverings must</p> |
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|                 |  | <p>have a <i>critical radiant flux</i> not less than 2.2; and</p> <p>(ii) wall and ceiling linings must be a Group 1 material or a Group 2 material in accordance with Clause 4(b).</p> <p>(a) Materials, other than those referenced in (a), used in the construction of a lift car in a Class 2 to 9 building must comply with the <i>fire hazard properties</i> required by AS 1735.2.</p> |
| <b>Cl. C2.8</b> | <p>Separation of classifications in the same storey</p> <p>If a building has parts of different classifications located alongside one another in the same <u>storey</u>—</p> <p>(a) each building element in that <u>storey</u> must have the higher FRL prescribed in <u>Specification C1.1</u> for that element for the classifications concerned; or</p> <p>(b) the parts must be separated in that <u>storey</u> by a <u>fire wall</u> having—</p> <p>(i) the higher FRL prescribed in <u>Table 3</u> or <u>4</u>; or</p> <p>(ii) the FRL prescribed in <u>Table 5</u>,<br/>of <u>Specification C1.1</u> as applicable, for that element for the Type of construction and the classifications concerned; or</p> <p>(c) where one part is a carpark complying with <u>Table 3.9, 4.2 or 5.2 of Specification C1.1</u>, the parts may be separated by a <u>fire wall</u> complying with the appropriate Table.</p> | <p>For Reference</p> <p>Refer to Clause C1.1 comment</p>  |
| <b>Cl. C3.5</b> | <p>Doorways in fire walls</p> <p>(a) The aggregate width of openings for doorways in a <i>fire wall</i>, which are not part of a</p>   | <p>For Reference</p> <p>Refer to Clause C1.1 comment</p>  |

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|                  | <p><i>horizontal exit</i>, must not exceed ½ of the length of the <i>fire wall</i>, and each doorway must be protected by—</p> <p>(i) 2 fire doors or fire shutters, one on each side of the doorway, each of which has an FRL of not less than ½ that <i>required</i> by Specification C1.1 for the <i>fire wall</i> except that each door or shutter must have an <i>insulation</i> level of at least 30; or</p> <p>(ii) a fire door on one side and a fire shutter on the other side of the doorway, each of which complies with (i); or</p> <p>(iii) a single fire door or fire shutter which has an FRL of not less than that <i>required</i> by Specification C1.1 for the <i>fire wall</i> except that each door or shutter must have an <i>insulation</i> level of at least 30.</p> <p>(b)</p> <p>(i) A fire door or fire shutter <i>required</i> by (a)(i), (a)(ii) or (a)(iii) must be <i>self-closing</i>, or <i>automatic</i> closing in accordance with (ii) and (iii).</p> <p>(ii) The <i>automatic</i> closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located on each side of the <i>fire wall</i> not more than 1.5 m horizontal distance from the opening.</p> <p>(iii) Where any other <i>required</i> suitable fire alarm system, including a sprinkler system complying with Specification E1.5, is installed in the building, activation of the system in either <i>fire compartment</i> separated by the <i>fire wall</i> must also initiate the <i>automatic</i> closing operation.</p> |   |
| <b>Cl. C3.12</b> | Service openings through any floors in the building must be either fire sealed or enclosed in a fire rated shaft, using materials having an FRL not less than the floor concerned.   | For Reference<br>Refer to Clause C1.1 comment |
| <b>Cl. C3.13</b> | Openings to shafts must be self-closing and 1-hour fire rated (i.e. access panels, doors, hoppers).  | For Reference                                 |
| <b>Cl. C3.15</b> | Openings for service installations   | Refer to Clause C1.1 comment                  |

Where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an *external wall* or roof) that is *required* to have an FRL with respect to *integrity* or *insulation* or a *resistance to the incipient spread of fire*, that installation must comply with any one of the following:

(a) **Tested systems**

- (i) The service, building element and any protection method at the penetration are identical with a prototype assembly of the service, building element and protection method which has been tested in accordance with AS 4072.1 and AS 1530.4 and has achieved the *required* FRL or *resistance to the incipient spread of fire*.
- (ii) It complies with (i) except for the *insulation* criteria relating to the service if—
  - (A) the service is a pipe system comprised entirely of metal (excluding pipe seals or the like); and
  - (B) any *combustible* building element is not located within 100 mm of the service for a distance of 2 m from the penetration; and
  - (C) *combustible* material is not able to be located within 100 mm of the service for a distance of 2 m from the penetration; and
  - (D) it is not located in a *required exit*.

(b) **Ventilation and air-conditioning** — In the case of ventilating or air-conditioning ducts or equipment, the installation is in accordance with AS/NZS 1668.1.

(c) **Compliance with Specification C3.15**

- (i) The service is a pipe system comprised entirely of metal (excluding pipe seals or the like) and is installed in accordance with Specification C3.15 and it—
  - (A) penetrates a wall, floor or ceiling, but not a ceiling *required* to have a *resistance to the incipient spread of fire*; and
  - (B) connects not more than 2 *fire compartments* in addition to any *fire-resisting* service *shafts*; and
  - (C) does not contain a flammable or *combustible* liquid or gas.
- (ii) The service is sanitary plumbing installed in accordance with Specification C3.15 and it—
  - (A) is of metal or UPVC pipe; and

|                  |  |   |
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|                  | <p>(B) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and</p> <p>(C) is in a <i>sanitary compartment</i> separated from other parts of the building by walls with the FRL <i>required</i> by Specification C1.1 for a stair <i>shaft</i> in the building and a <i>self-closing</i> –/60/30 fire door.</p> <p>(iii) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification C3.15 and it—</p> <p>(A) penetrates a wall, floor or ceiling, but not a ceiling <i>required</i> to have a <i>resistance to the incipient spread of fire</i>; and</p> <p>(B) connects not more than 2 <i>fire compartments</i> in addition to any <i>fire-resisting</i> service <i>shafts</i>.</p> <p>(iv) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification C3.15.</p> |   |
| <b>Cl. C3.16</b> | Construction joints between fire resistant elements must be fire sealed with a material having a fire resistance level not less than the elements being joined.  | For Reference<br>Refer to Clause C1.1 comment |

#### 4.4 SECTION D – ACCESS AND EGRESS

| CLAUSE    | CLAUSE REQUIREMENT   | ACTION/RECOMENDATION   |
|-----------|--|--|
| Cl. D1.6  | <p>Dimensions of exits and paths of travel to exits</p> <p>In a <i>required exit</i> or path of travel to an <i>exit</i>—</p> <p>(a) the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and</p> <p>(b) the unobstructed width of each <i>exit</i> or path of travel to an <i>exit</i>, except for doorways, must be not less than</p>  | For Reference  |
| Cl. D2.21 | <p>Operation of latch</p> <p>(a) A door in a <i>required exit</i>, forming part of a <i>required exit</i> or in the path of travel to a <i>required exit</i> must be readily openable without a key from the side that faces a person seeking egress, by—</p> <p>(i) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area <i>required</i> to be <i>accessible</i> by Part D3—</p> <p>(A) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and</p> <p>(B) have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35 mm and not more than 45 mm; or</p> <p>(ii) a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor.</p> | <p>The door handle to the tenancy exit door to Prince Charles Rd must be replaced with door hardware that provides a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor</p> <p>No locking device should obstruct egress such that the door handle must be readily openable without a key from the side that faces a person seeking egress</p> |
| Cl. D3.1  | <p>General building access requirements</p> <p>Buildings and parts of buildings must be <i>accessible</i> as <i>required</i> by Table D3.1, unless exempted by D3.4.</p>   | <p>It will be necessary that the “New Part: and Affected Part” comply.</p> <p>The following key compliance issues are as follows:-</p>   |

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|                 |  | <ol style="list-style-type: none"> <li>1) The ramp and stairs at entry to the building do not comply wit Clauses 10 and 11 of AS 1428.1</li> <li>2) The door width does not achieve an unobstructed width of 850mm as required by Clause 10 of AS 1428.1</li> </ol> <p>Generally Compliance with the AS 1428.1<br/> Clauses following must be demonstrated within the construction documentation:-<br/> Clause 7 - FLOOR OR GROUND SURFACES ON CONTINUOUS ACCESSIBLE PATHS OF TRAVEL AND CIRCULATION SPACES<br/> Clause 9 - TACTILE GROUND SURFACE INDICATORS<br/> Clause 10 - WALKWAYS, RAMPS AND LANDINGS<br/> Clause 11 - STAIRWAYS<br/> Clause 12 - HANDRAILS<br/> Clause 13 - DOORWAYS, DOORS AND CIRCULATION SPACE AT DOORWAYS</p> <p>Note where it is not proposed to alter or upgrade the sanitary facility there is no legislative requirement to modify it to comply with AS 1428.1</p> |
| <b>Cl. D3.2</b> | Access to Buildings <ul style="list-style-type: none"> <li>▪ Must be provided by an AS 1428.1 complying path of travel from –</li> </ul> | For reference   |

|                 |   |               |
|-----------------|---|---------------|
|                 | <ul style="list-style-type: none"> <li>(i) a entry point from the road at the allotment boundary to the entrance doorway.</li> <li>(ii) any disabled car parking space on the allotment.</li> <li>(iii) any other accessible building on the allotment.</li> <li>(iv) through the principal public entrance.</li> </ul> <p>▪ Parts of buildings required to be accessible must comply with AS 1428.1</p>  |               |
| <b>Cl. D3.3</b> | <p>Parts of buildings to be accessible</p> <p>In a building <i>required</i> to be <i>accessible</i>:</p> <p>(a) every ramp and stairway, except for ramps and stairways in areas exempted by clause D3.4, must comply with:</p> <ul style="list-style-type: none"> <li>(i) for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and</li> <li>(ii) for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1;</li> <li>(iii) for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1;</li> </ul> <p>(b) every passenger lift must comply with clause E3.6;</p> <p>(c) <i>access ways</i> must have:</p> <ul style="list-style-type: none"> <li>(i) passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an <i>access way</i> where a direct line of sight is not available; and</li> <li>(ii) turning spaces complying with AS 1428.1: <ul style="list-style-type: none"> <li>(A) within 2 m of the end of <i>access ways</i> where it is not possible to continue travelling along the <i>access way</i>; and</li> <li>(B) at maximum 20 m intervals along the <i>access way</i>;</li> </ul> </li> <li>(d) an intersection of <i>access ways</i> satisfies the spatial requirements for a passing and turning space;</li> <li>(e) a passing space may serve as a turning space;</li> </ul> | For reference |

|          |   |               |
|----------|---|---------------|
|          | <p>(f) a ramp complying with AS 1428.1 or a passenger lift need not be provided to serve a <i>storey</i> or level other than the entrance <i>storey</i> in a Class 5, 6, 7b or 8 building-</p> <p>(i) containing not more than 3 <i>storeys</i>; and</p> <p>(ii) with a <i>floor area</i> for each <i>storey</i>, excluding the entrance <i>storey</i>, of not more than 200 m<sup>2</sup>.</p>   |               |
| Cl. D3.8 | <p>Tactile indicators</p> <p>(a) For a building <i>required</i> to be <i>accessible</i>, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching—</p> <p>(i) a stairway, other than a <i>fire-isolated stairway</i>; and</p> <p>(ii) an escalator; and</p> <p>(iii) a passenger conveyor or moving walk; and</p> <p>(iv) a ramp other than a <i>fire-isolated ramp</i>, step ramp, kerb ramp or <i>swimming pool</i> ramp; and</p> <p>(v) in the absence of a suitable barrier—</p> <p>(A) an overhead obstruction less than 2 m above floor level, other than a doorway; and</p> <p>(B) an <i>accessway</i> meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D3.4, if there is no kerb or kerb ramp at that point, except for areas exempted by D3.4.</p> <p>(b) Tactile ground surface indicators <i>required</i> by (a) must comply with sections 1 and 2 of AS/NZS 1428.4.1.</p> <p>(c) A hostel for the aged, nursing home for the aged, a <i>residential aged care building</i> Class 3 accommodation for the aged, Class 9a <i>health-care building</i> or a Class 9c building need not comply with (a)(i) and (iv) if handrails incorporating a raised dome button in accordance with the requirements for stairway handrails in AS 1428.1 are provided to warn people who are blind or have a vision impairment that they are approaching a stairway or ramp.</p> | For reference |

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| <b>Cl. D3.12</b> | <p>Glazing on an accessway</p> <p>On an <i>accessway</i>, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.</p> | <p>Verification will be required with the Construction Documentation</p> |
|------------------|---|--|

#### 4.5 SECTION E – SERVICES AND EQUIPMENT

| CLAUSE   | CLAUSE REQUIREMENT  | ACTION/RECOMENDATION  |
|----------|---|---|
| Cl. E1.6 | Portable fire extinguishers<br>(a) Portable fire extinguishers must be—<br>(i) provided as listed in Table E1.6   | Portable Fire Extinguishers are required within the tenancy   |
| Cl. E2.2 | General requirements<br>(a) A building must comply with (b), (c), (d) and—<br>(i) Table E2.2a as applicable to Class 2 to 9 buildings such that each separate part complies with the relevant provisions for the classification; and<br>(ii) Table E2.2b as applicable to Class 6 and 9b buildings such that each separate part complies with the relevant provisions for the classification. | AS 3786 hard wired smoke alarms with battery bac up are required in the hallway adjacent to bedrooms and on any other level<br>Where more than 1 smoke alm is required within a dwelling the smoke alarms must be interconnected. |

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