



Date: 30 May 2019

Our Ref: P19048

Mr John Newman  
30 Mactier St,  
Narrabeen NSW 2101

Dear John,

**RE: 30 Mactier St, Narrabeen  
DESIGN COMPLIANCE ASSESSMENT**

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Please find enclosed our BCA Compliance Report prepared in respect of existing building situated at the above listed property.

We have been engaged by you to undertake a Fire Safety Audit of the subject existing building.

It is recognized that this older building will not comply in many ways with the current Building Code requirements and in this regard it is our aim to identify key compliance issues and provide recommendations in regard to improving the level of Fire Safety within the building.

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**

# DESIGN COMPLIANCE ASSESSMENT

**PREPARED FOR**

**MR JOHN NEWMAN**

**REGARDING**

**30 Mactier St, Narrabeen**

**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.

Our Reference	Issue No.	Remarks	Issue Date
P19048	1	Design Compliance Assessment	30 May 2019

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## CONTENTS PAGE

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<b>1.0</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>1.1</b>	<b>General.....</b>	<b>1</b>
<b>1.2</b>	<b>Report Basis.....</b>	<b>1</b>
<b>1.3</b>	<b>Exclusions .....</b>	<b>1</b>
<b>1.4</b>	<b>Report Purpose.....</b>	<b>1</b>
<b>2.0</b>	<b>BUILDING DESCRIPTION .....</b>	<b>3</b>
<b>2.1</b>	<b>General.....</b>	<b>3</b>
<b>2.2</b>	<b>Rise in Storeys (Clause C1.2) .....</b>	<b>3</b>
<b>2.2</b>	<b>Building Classification (Clause A3.2).....</b>	<b>3</b>
<b>2.3</b>	<b>Effective Height (Clause A1.1) .....</b>	<b>3</b>
<b>2.6</b>	<b>Type of Construction (Table C1.1).....</b>	<b>3</b>
<b>3.1.</b>	<b>General.....</b>	<b>4</b>
<b>3.2.</b>	<b>Section C – Fire resistance .....</b>	<b>4</b>
<b>3.3.</b>	<b>Section D – Access and Egress .....</b>	<b>5</b>
<b>3.4.</b>	<b>Section E – Services and Equipment.....</b>	<b>6</b>
<b>3.1.</b>	<b>Section F – Health and Amenity .....</b>	<b>7</b>
<b>4.0</b>	<b>BCA ASSESSMENT – DETAILED ANALYSIS.....</b>	<b>1</b>
<b>4.1</b>	<b>General.....</b>	<b>1</b>
<b>4.2</b>	<b>SECTION C – FIRE RESISTANCE.....</b>	<b>1</b>
<b>Author:</b>	<b>.....</b>	<b>3</b>

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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 Mr John Newman and relates to 30 Mactier St, Narrabeen.

The building is an existing Class 1a single dwelling and it is to be converted to a Class 2 Building containing 2 sole occupancy Units.

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, D1, D2 and E
- (b) A Site inspection of the premises on Monday the 29<sup>th</sup> of March 2019
- (c) Survey Plan 828detail prepared by Waterview Surveying Services and dated 04/06/18;
- (d) Undated and unnamed ground floor plan provided by the client;
- (e) Proposed Internal wall system CSR 2070 provided by the client
- (f) Proposed Fire Rated “Redbank” Downlight Cover provided by the client
- (g) Proposed CSR 6221 ceiling system in addition to the un named and undated sketch design provided by the client
- (h) Proposed CSR 588 external wall system provided by the client

### **1.3 EXCLUSIONS**

It is conveyed that this report should not 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, D1, D2 and 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 existing building (dwelling) has a rise of two (2) storeys that will be maintained with the proposal.

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

The existing building is Class 1a single dwelling and is to be converted to a Class 2 Building

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

The building has an effective height Not exceeding 12m.

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

Type C Construction - Clause C1.5 Concession applies

**Table 5 TYPE C CONSTRUCTION: FRL OF BUILDING Specification**

Building Element	Distance to Fire Source Feature	FRL Class 2
External Wall	Less than 1.5m	90/90/90
	1.5 to less than 3m	-/-/-
	3m or more	-/-/-
External Column	Less than 1.5m	90/-/-
	1.5m to 3m	-/-/-
Common Walls & Fire Walls	N/A	90/90/90
Fire Resisting Lift or Stair Shaft	N/A	60/60/60
Internal Wall Bounding Public Corridor	N/A	60/60/60
Internal Wall Bounding SOU	N/A	60/60/60
Roof	N/A	-/-/-

## 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	Capable of Complying	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 – 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				✓



### 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				✓

### 3.1. SECTION F – HEALTH AND AMENITY

BCA reference	Complies	Does not comply	Capable of Complying	Detail required	Not relevant
F1.1 – storm water drainage	✓				
F1.5 – roof coverings					✓*
F1.6 – sarking					✓
F1.7 – water proofing of wet areas					✓*
F1.9 – damp proofing					✓*
F1.10 – damp proofing of floors on ground					✓*
F1.11 – floor wastes	✓				
F1.12 – sub-floor ventilation					✓
F1.13 – glazed assemblies					✓*
F2.1 – facilities in residential buildings					✓*
F2.3 – facilities in Class 3 to 9 buildings					✓
F2.4 – facilities for people with disabilities					✓
F2.5 – construction of sanitary compartments	✓				
F2.8 – waste management					✓
F3.1 – height of rooms	✓**				
F4.1 – provision of natural light	✓				
F4.2 – methods and extent of natural lighting					✓
F4.3 – natural lighting borrowed from adjoining room					✓
F4.4 – artificial lighting	✓				
F4.5 – ventilation of rooms	✓				
F4.6 – natural ventilation	✓				
F4.7 – ventilation borrowed from an adjoining room					✓
F4.8 – restriction on position of water closets and urinals					✓
F4.9 – airlocks					✓
F4.11 – car parks					✓
F4.12 – kitchen local exhaust ventilation					✓
F5.2 – Determination – airborne sound insulation			✓		
F5.3 Determination – impact sound insulation			✓		
F5.4 – sound insulation of floors			✓		
F5.5 – sound insulation rating of walls					✓
F5.6 – sound insulation rating of services					✓
F5.7 – sound insulation of pumps					✓
✓* = Existing building element – cannot be inspected post construction					
✓** = Refer To Performance Report					

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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, D1, D2 and E 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. C3.12	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
Cl. C3.15	Openings for service installations Where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an <i>external wall</i> or roof) that is <i>required</i> to have an FRL with respect to <i>integrity</i> or <i>insulation</i> or a <i>resistance to the incipient spread of fire</i> , that installation must comply with any one of the following: (a) <b>Tested systems</b> (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	The Fire Rated downlight system proposed is capable of complying All other services (sanitary plumbing, electrical cable etc) are required to be protected with an AS 1530 tested and certified system to achieve a 60 minute Fire Resistance

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

(B) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and

(C) is in a *sanitary compartment* separated from other parts of the building by walls with the FRL *required* by Specification C1.1 for a stair *shaft* in the building and a *self-closing* –/60/30 fire door.

(iii) The service is a wire or cable, or a cluster of wires or cables 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*

	<i>incipient spread of fire; and</i> (B) connects not more than 2 <i>fire compartments</i> in addition to any <i>fire-resisting service shafts</i> . (iv) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification C3.15.	
<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

**Author:**



**Kieran Tobin, Senior Consultant.  
Grad Dip Building Surveying UWS.**