BUILDING CODE OF AUSTRALIA COMPLIANCE ASSESSMENT REPORT

A PROPOSED OFFICE FIT OUT IN AN EXISTING BUILDING

1 KALINYA STREET, NEWPORT

DATE ►23/11/2022

REPORT NO. ►12197 – Rev 1

PREPARED FOR ►Merivale

PREPARED BY ► AE&D

AEDGROUP

Innovation & expertise in building regulations

CONTENTS

REVISION STATUS				
REPORT NO/REV	DATE	STATUS	WRITTEN	CHECKED
12197	12/10/2022	DRAFT FOR COMMENT	DV	JC
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1.0 EXECUTIVE SUMMARY AND RECOMMENDATIONS

This report provides a Building Code of Australia (BCA) 2019 Amendment 1 assessment and an overview Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 (EP&A Reg 2021) requirements of a proposed office fit out in an existing building, located at 1 Kalinya Street, Newport. The portion of the building where the change of use is proposed is currently classified as a Class 3 hotel accommodation and the proposed fit out must comply with the fire protection, namely Clause 14 of the EP&A Reg 2021.

The primary purpose of this report is to identify the non-compliance matters contained in the proposed design against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

Matters arising from the proposed alteration to the building is to be considered:

Item 1: Fire Protection and Structural Capacity:

Clause 14 of the EP&A Regulation 2021 - Fire protection and structural capacity

(1) A certifier must not issue a construction certificate for building work under a development consent that authorises a change of building use unless—

(a) the fire protection and structural capacity of the building will be appropriate to its new use, and

(b) the building will comply with such of the Category 1 fire safety provisions as are applicable to the new use.

(3) A certifier must not issue a construction certificate for alteration building work unless, on completion of the building work, the fire protection and structural capacity of the building will not be reduced.

(4) For the purposes of subsections (1) and (3), the certifier may assume that the building work is carried out in accordance with—

(a) the relevant building work plans and specifications, and

(b) the conditions of the construction certificate.

The existing plans provided to AED identify the existing area where the new tenancy is proposed to be constructed is located on the first floor and currently serving as a Class 3 accommodation. The new use of the area is proposed to be converted to a Class 5 office.

The fire rating levels required under Part C of the BCA for a (Class 3) are less than that of the proposed office (Class 5), as such verification is required that the existing external walls will be able to achieve compliance for the new use.

The below table details the required fire rating levels (FRLs) for each classification:

Building part	Required FRL for proposed Class 5 use	Required FRL for existing Class 3 use
Load Bearing External Walls (3m – 9m to fire source feature)	120/30/30	90/ 30/ 30
Load Bearing External Walls (9m – 18m to fire source feature)	120/ 30/–	90/ 30/–
Load Bearing External Walls (18 m or more to fire source feature)	-/-/-	–/–/–
Non-load bearing External Walls (3m or more to fire source feature)	-/-/-	–/–/–

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Roofs	-/-/-	–/–/–

Item 2: Category 1 Fire Safety Measures:

In accordance with the EP&A Regs Category 1 fire safety measures include the following:

Performance Requirement	Fire Safety Measure	Comments (Based on the AFSS 2021 issued 21/12/2022)
EP1.3	Fire Hydrants	The existing fire safety schedule does not reference a hydrant system, however it is noted that a hydrant has been installed on site. The hydrant system is required to be assessed by a hydraulic engineer to determine compliance with BCA Clause E1.3 and AS219.1 – 2005. The hydrant system is required to be upgraded and commissioned to AS 2419.1 – 2005. It is recommended that an accredited fire services contractor is engaged to inspect and test the existing system to ensure compliance. This will assist the fire engineer to determine if the hydrant system complies with EP1.3. Where compliance cannot be achieved it is recommended that the fire service is to be upgraded to comply with the current code, with any non-compliances addressed by a fire engineer (certifier – fire safety).
EP1.4	Automatic Fire Suppression Systems	The existing sprinkler system has been installed and commissioned to AS 2118.4 – 1995. Automatic fire suppression system is not required for the proposed office use, as such may be decommissioned, if it is not a requirement of any proposed Performance Solutions.
EP1.6	Fire Control Centres	The building has an effective height of less than 25m when calculated under the BCA Clause C1.2, as such a fire control centre is not required to serve the building.
EP2.1	Automatic warning for sleeping occupants	This performance requirement is not applicable to the portion of the building that is proposed to be altered.
EP2.2	Smoke Hazard Management & Safe Evacuation Routes	The existing smoke detection system is installed to AS 1670.1 – 2015. It is recommended that an accredited fire services contractor is engaged to inspect and test the existing system to ensure compliance. This will assist the fire engineer to determine if the smoke hazard management complies with EP2.2. Where compliance cannot be achieved it is recommended that the fire service is upgraded to comply with the current code, with any non-compliances addressed by a fire engineer (certifier – fire safety).
EP3.2	Emergency Lifts	This performance requirement is not applicable to the portion of the building that is proposed to be altered and the effective height of the building is less than 25m.

Above requirements are in addition to the BCA assessment detailed below due to the new building use of the part proposed to be altered.

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1.1 Recommendations

The following is a list of Deemed-to-Satisfy Provisions that should be addressed either by design amendments, additional information **OR** by way of an Alternative Solution:

BCA Clause	Deemed-to-Satisfy Provision to be addressed
C1.1 **Type of Construction Required**	Refer to Spec C1.1 and Attachment B for Schedule of FRLs for Type B Construction. These are to be certified by the architect and/or structural engineer as having been met, based on the proposed design. Please note that specification C1.1 also requires design compliance with the following: • a loadbearing internal wall and a loadbearing fire wall must be constructed from— (i) concrete; or (ii) masonry • in a Class 5 building, in the storey immediately below the roof, internal columns and internal walls other than fire walls and shaft walls, need not comply with Table 4 of Specification C1.1. The FRL levels of the existing walls are required to meet the requirements of Table 4 of Specification C1.1.
C3.12 **Openings in floors and ceilings for services** **&** **C3.15** **Openings for Service Installations**	Existing penetrations going through the floor or walls required to be fire rated are to be protected in accordance with Clause C3.12 and Clause C3.15 in any plant rooms that contain any of the following equipment: • A main switchboard located within the building (and which sustains emergency equipment operating in the emergency mode) and any associated electrical conductors; or • Emergency generators used to sustain emergency equipment operating in the emergency mode; • Central smoke control plant; • Boilers; • A battery system installed in that building that has a total voltage of 12 volts or more and a storage capacity of 200kWh or more. A review of the penetrations will be required within the proposed tenancy. Should the plant rooms need to be separated via fire rated construction, the penetrations going through any elements that are required to be fire rated are required to be fire stopped as per Clause C3.12, Clause C3.15 and Specification C3.15.
D1.4 **Exit Travel Distances**	(c) **Class 5 buildings** — Subject to (d), (e) and (f)— (i) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m At no point on the proposed tenancy must be more than 20m from an exit or a point from which travel in different directions to 2 exits is available in which case the maximum distance to one of those exits must not exceed 40m.The maximum distance to the closest exit from the furthest point of the floor is approximately 50m in lieu of 40m permitted by

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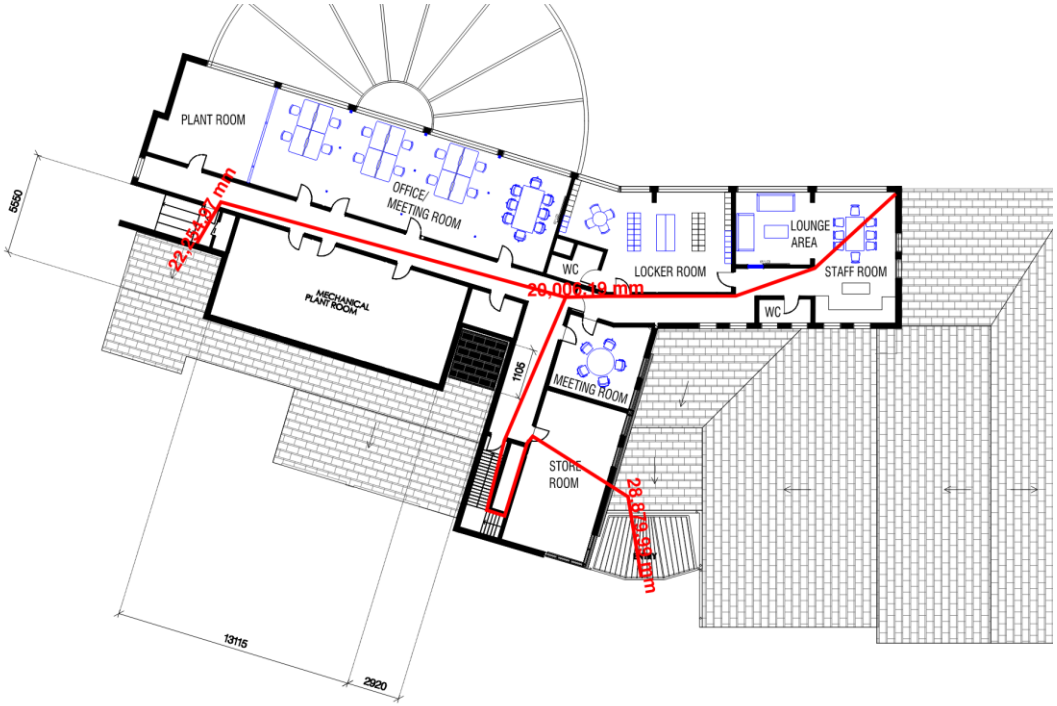
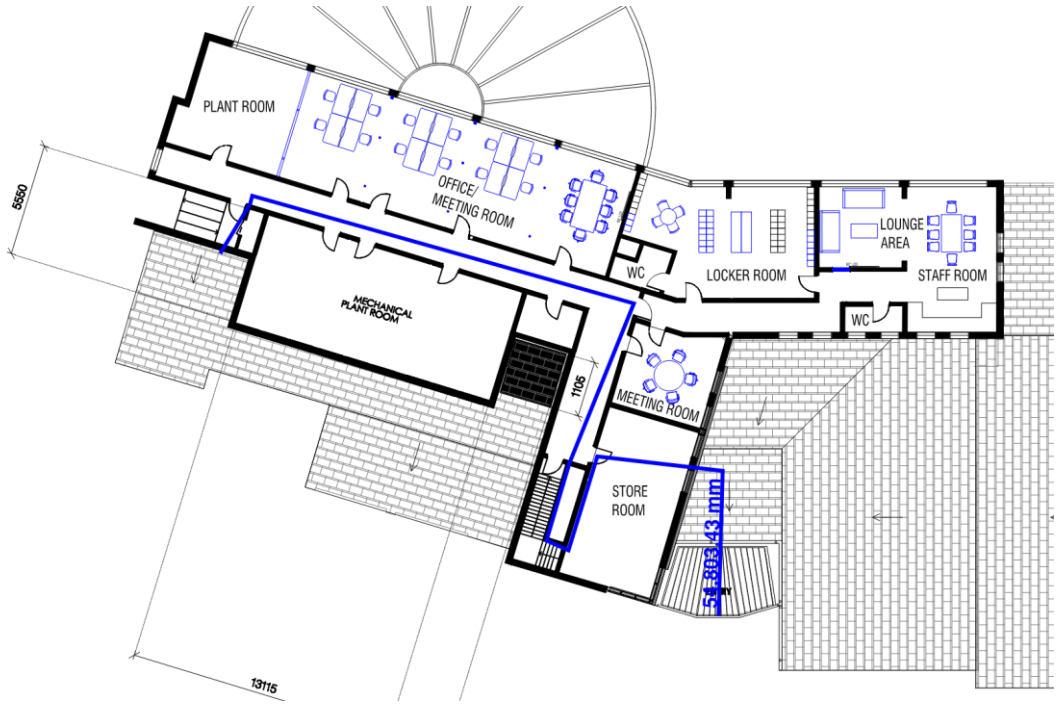
BCA Clause	Deemed-to-Satisfy Provision to be addressed
	Clause D1.4. A Performance Solution is to be sought for this non-compliance from an accredited fire engineer (certifier – fire safety). 
D1.5 Distance Between Alternative Exits	The alternative exits serving the proposed office area subject of this report appear to be located over 60m apart. Detailed assessment of this Clause cannot be undertaken, as base building drawings have not been provided. A measurement of the distance between the alternative exits is to be provided by other consultants. A Performance Solution is to be sought for this non-compliance from an accredited fire engineer (certifier – fire safety). 

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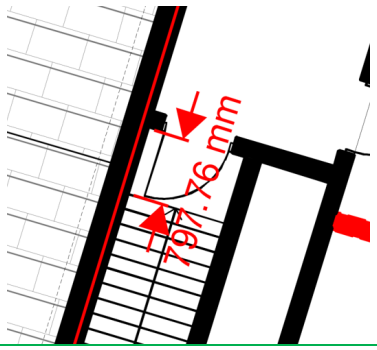
BCA Clause	Deemed-to-Satisfy Provision to be addressed
D1.6 **Dimensions of Exits and paths of Travel to Exits**	Please note the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than— (i) 1 m clear width (including between stairway handrails, permanent furniture and fixtures)
D2.13 **Goings & Risers**	Full drawings of the stairway are required to be provided including drawings showing the configuration of the stairway on the ground floor, the going and riser dimensions, handrail locations, dimensions of the clear width and confirmation whether the space underneath the stairway on the ground floor will be enclosed.
D2.20 **Swinging Doors**	The exit doorway that swings into the stairway adjacent to the Storeroom encroaches on the required landing by more than 500mm of the required width. Additionally, the door circulation would not be complaint when assessed under accessibility provisions, as insufficient landing space in front of the door has been provided. Refer to a separate report prepared by an access consultant. 
E1.3 **Fire Hydrants**	It is recommended that an accredited fire services contractor is engaged to inspect and test the existing system to ensure compliance to AS2410.1-2005, including confirmation of the existing hydrant coverage to the modified area. This will assist the fire engineer to determine if the hydrant system complies with EP1.3. Where compliance cannot be achieved it is recommended that the fire service is to be upgraded to comply with the current code, with any non-compliances addressed by a fire engineer.
E1.6 **Portable Fire Extinguishers**	Portable fire extinguishers are to be provided within the proposed office tenancy and comply with the requirements under AS 2444-2001.
E2.2 **General Requirements**	An FPAS accredited designer is to review the proposed smoke detection system and the mechanical air handling system within the modified parts of the building and confirm the design complies with AS 1670.1 – 2018. It should be noted the existing smoke detection system has been designed and maintained to AS 1670.1 – 2015, as per the Fire Safety Schedule supplied.
Part E4 **Emergency Lighting and Exit Sign Requirements**	An emergency lighting system must be installed throughout the modified portions of the ground floor. The emergency lighting system and exit signs must comply with AS/NZS 2293.1-2018.
F2.3 **Facilities for Class 3 to 9 Buildings**	The occupant numbers are required to be provided to ascertain compliance with this Clause. Base building sanitary facilities may be used to achieve compliance with this Clause. The calculations of the existing sanitary are to be provided, alternatively occupant numbers and drawings showing existing sanitary facilities are to be provided to AED, so that detailed assessment can be undertaken. Please Note: It is up to the Registered Certifier issuing the approval for CDC/CC to consider the potential for upgrade to the existing sanitary facilities and if this is required. The type of approval and conditions of consent can influence these requirements.

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2.0 INTRODUCTION

This report provides a Building Code of Australia (BCA) 2019 Amendment 1 assessment of a proposed office fit out in an existing building, to be located at 1 Kalinya Street, Newport.

This report provides a BCA assessment table in Section 3.0 that summarises the identified non-compliance matters and offers specific recommendations.

2.1 Basis of Report

The key basis of this report is to address compliance with the Building Code of Australia (BCA) 2019 Amendment 1. The scope of services is limited to Sections C – "Fire Resistance", Section D – "Access & Egress", Section E – "Services & Equipment", Section F "Health and Amenity" and Section J "Energy Efficiency"

This report is based on a desktop assessment of the proposed plans, with specific reference to the following:

- Architectural plans prepared by Merivale, Drawing Numbers:

Drawing Title	Drawing No.	Revision	Dated
Proposed Plan – Level 1	10622-SK-01	G	07.11.2022

- The Building Code of Australia 2019 Amendment 1 prepared by the Australian Building Codes Board.
- The Guide to the BCA 2019 Amendment 1, prepared by the Australian Building Codes Board.

2.2 Purpose of the Report

The purpose of this report is to assess the following:

- Assessment under the current Building Code of Australia 2019 Amendment 1 and list any departures from the BCA 2019 Amendment 1.
- Provide recommendations to address identified non-compliances, and/or identify potential alternative solutions.

2.3 Limitations of the Report

This report does not assess the following:

- Access and facilities for people with disabilities is addressed however compliance with Disability Discrimination Act 1992 (DDA) is outside the scope of this report. It should be noted that BCA compliance does not necessarily meet the requirements of the Disability Discrimination Act (DDA).
- Reporting on hazardous materials, OH&S matters or site contamination
- Assessment of any structural elements or geotechnical matters relating to the building, including any structural or other assessment of the existing fire resistant levels of the building
- Consideration of any fire services operations (including hydraulic, electrical or other systems)
- Assessment of plumbing and drainage installations, including stormwater
- Assessment of mechanical plant operations, electrical systems or security systems
- Heritage significance
- Consideration of energy or water authority requirements
- Consideration of Council's local planning policies
- Environmental or planning issues
- Requirements of statutory authorities
- Pest inspection or assessment building damage caused by pests (general/visual pest invasion or damage will be reported, however invasive or intrusive inspections have not be carried out)

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- Sections G, H, J or I of the BCA are not considered.
- Provision of any construction approvals or certification under Part 4A or Part 5 of the Environmental Planning & Assessment Act 1979.
- Glazing, shading, lighting calculations and the like required by Section J of the BCA not been carried out
- This assessment excludes BCA clauses D3.0-3.12 (Inclusive), E3.6 and F2.4. Refer to separate access consultant's report.
- BCA 2019 Amendment 1 does not directly specify slip-resistance classification(s) for all *accessible paths of travel*; however, we highlight the need under AS 1428.1-2009 for all *accessible paths of travel* to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant.

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3.0 BCA ASSESSMENT DATA

The following data is provided in respect to review of the building under the Building Code of Australia 2019 Amendment 1 in respect to the compliance assessment of the proposed office fit out of Level 1 of the existing building, to be located at 1 Kalinya Street, Newport.

BCA Building Classifications:	Class 5 – Applicable to the portion of the building assessed in this report Class 5 – Office – Base Building Class 6 – Restaurants, shops and commercial premises Class 7a – Carparking – Base Building Class 10b – Structures Associated with the Base Building
Building rise in storeys:	3 storeys (determined in accordance with C1.2 of the BCA).
Type of Construction:	Type B (determined in accordance with C1.1 of the BCA)
General Floor area limitations:	Max floor area – 3,000m² Max Volume – 18,000m³
Effective Height (m):	Under 12m

3.1 Location of Fire Source features

The potential *fire source features* to be considered for this building are the external wall of another building on the allotment which is not a Class 10 building, the side or rear of the allotment boundary or the far side of the road.

In this instance the following setbacks are determined in respect to the fire source features applicable to the building

- North – Far boundary of Queens Parade
- South – Side Boundary and waterfront
- East – Far boundary of Kalinya Street and side boundary
- West – Side Boundary and waterfront

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4.0 BCA ASSESSMENT SUMMARY

The following table details the BCA compliance of the assessed design.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
SECTION B STRUCTURE					
Part B1: Structural Provisions				X	❖ Structural engineer to provide structural drawings/details and accompanying structural design certificate to demonstrate that all building elements will comply with Section B of the BCA. ❖ Glazing must comply with AS1288-2006 and AS2047-2014. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)***
SECTION C FIRE RESISTANCE					
Part C1 - Fire Resistance & Stability					
C1.1 Type of Construction Required				X	Refer to Spec C1.1 and Attachment B for Schedule of FRLs for Type B Construction. These are to be certified by the architect and/or structural engineer as having been met, based on the proposed design. Please note that specification C1.1 also requires design compliance with the following: • a loadbearing internal wall and a loadbearing fire wall must be constructed from— (iii) concrete; or (iv) masonry • in a Class 5 building, in the storey immediately below the roof, internal columns and internal walls other than fire walls and shaft walls, need not comply with Table 4 of Specification C1.1. • The following FRL levels are required as per Table 4 of Specification C1.1.

Building part	Required FRL
Load Bearing External Walls (3m – 9m to fire source feature)	120/30/30
Load Bearing External Walls (9m – 18m to fire source feature)	120/ 30/–
Load Bearing External Walls (18 m or more to fire source feature)	-/-/-
Non-load bearing External Walls (3m or more to fire source feature)	-/-/-
Roofs	-/-/-

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)
C1.2 Calculation of Rise In Storeys			X		Refer to Section 2.0 of this report for further details
C1.3 Buildings of Multiple Classifications			X		In a building of multiple classifications, the type of construction required for the building is the most fire resisting Type resulting from the application of Table C1.1 on the basis that the classification applying to the top storey applies to all storeys.
C1.4 Mixed Types of Construction			X		A building may be of mixed Types of construction where it is separated in accordance with C2.7 and the type of construction is determined in accordance with C1.1 or C1.3.
C1.5 Two Storey Class 2, 3 or 9c buildings			X		Not Applicable.
C1.6 Class 4 Parts			X		Not Applicable.
C1.7 Open Spectator Stands			X		Not Applicable.
C1.8 Lightweight Construction			X		(a) Where it is proposed to use *lightweight construction* (within the meaning of the BCA) this must comply with Specification C1.8 if it is used in a wall system— (i) that is required to have an FRL; or (ii) for a service shaft or an external wall bounding a public corridor including a non-fire-isolated passageway or non-fire-isolated ramp. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C1.9 Non - combustible building elements				X	(a) In a building *required* to be of Type B construction, the following building elements and their components must be *non-combustible*: (i) External walls and *common walls*, including all components incorporated in them including the facade covering, framing and insulation. (b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in— (ii) a building required to be Type B construction, subject C2.10, in- (B) a Class 5 building if the shaft connects more than 2 storeys.

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(c) A *loadbearing internal wall* and a *loadbearing fire wall*, including those that are part of a *loadbearing shaft*, must comply with **Specification C1.1**. (d) The requirements of **(a)** and **(b)** do not apply to gaskets, caulking, sealants, termite management systems, glass including laminated glass, thermal breaks associated with glazing systems, damp-proof courses. (e) The following materials may be used wherever a *non-combustible* material is *required*: (i) Plasterboard. (ii) Perforated gypsum lath with a normal paper finish. (iii) Fibrous-plaster sheet. (iv) Fibre-reinforced cement sheeting. (v) Pre-finished metal sheeting having a *combustible* surface finish not exceeding 1 mm thickness and where the *Spread-of-Flame Index* of the product is not greater than 0. (vi) Sarking type materials that do not exceed 1mm in thickness and have a Flammability Index not greater than 5. (vii) Bonded laminated materials where— (A) each lamina, including any core, is *non-combustible*; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2mm; and (C) the *Spread-of-Flame Index* and the *Smoke-Developed Index* of the bonded laminated material as a whole do not exceed 0 and 3 respectively. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C1.10 Fire Hazard Properties				X	(a) The fire hazard properties of the following internal linings, materials and assemblies must comply with Specification C1.10 by way of test reports / certificates provided from a *registered testing authority* (within the meaning of the BCA): (i) Floor linings and floor coverings. (ii) Wall linings and ceiling linings. (iii) Air-handling ductwork. (vii) Sarking type materials. (viii) Attachments to floors, ceilings, internal walls and the internal linings of external walls. (ix) Other materials including insulation materials other than sarking type materials.

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(b) NSW: Paint or fire -retardant coatings must not be used in order to make a material comply with the required fire hazard property, except in respect to a material referred to in NSW Specifications C1.10, NSW Table 4 and to which Notes 4 and 5 are applicable. (c) The requirement s of (a) do not apply to a material or assembly if it is – (i) plaster, cement render, concrete, terrazzo, ceramic tile or the like; or (ii) a fire protective covering; or (iii) a timber framed window; or (iv) a solid timber handrail or skirting; or (v) a timber-faced door; or (vi) an electrical switch, socket-outlet, cover plate or the like; or (vii) a material used – (A) a roof insulating material applied in continuous contact with a substrate; or (B) an adhesive; or (C) a damp-proof course, flashing, caulking, sealing, ground moisture barrier or the like; or (viii) a paint, varnish, lacquer or similar finish, other than nitro-cellulose lacquer; or (x) a face plate or neck adaptor of supply and return air outlets of an air handling system; or (xi) a face plate or diffuser plate of light fitting and emergency exit signs and associated electrical wiring and electrical components; or (xii) a joinery unit, cupboard, shelving or the like; or (xiii) NSW: an attached non-building fixture and fitting such as – (A) A curtain, blind, or similar décor, (A) A whiteboard, window treatment or the like; or (xiv) Timber treads, risers, landings and associated supporting framework installed in accordance with D2.25 where the Spread-of-Flame Index and the Smoke-Developed Index of the timber does not exceed 9 and respectively; or (xv) Any other material that does not significantly increase the hazards of the fire. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C1.11			X		Not Applicable.

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Performance of External Walls in Fire					
C1.12 Combustible materials			X		Deleted.
C1.13 Fire protected timber: concession			X		Not Applicable.
C1.14 Ancillary elements				X	An *ancillary element* must not be fixed, installed or attached to the internal parts or external face of an *external wall* that is *required* to be *non-combustible* unless it is one of the following: (a) An ancillary element that is non-combustible. (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate or grill not more than 2m² in an area associated with a building service. (e) An electrical switch, socket outlet, cover plate or the like. (f) A light fitting. (g) A *required* sign. (h) A sign other than one provided under (a) or (g) that – (i) Achieves a group number 1 or 2; and (ii) Does not extend beyond one storey; and (iii) Does not extend beyond one fire compartment; and (iv) Is separated vertically from other signs permitted under (h) by at least 2 storeys. (i) An awning, sunshade, canopy , blind or shading hood other than one provided under (a) that – (i) Meets the requirements of Table 4 of Specification C1.10 as an internal element; and (ii) Serves a storey - (A) At ground level; or (B) Immediately above a storey at ground level ; and (iii) Does not serve an exit, where it would render the exit unusable in a fire. (j) A part of a security, intercom or announcement system. (k) Wiring. (l) A paint, lacquer or similar finish, (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Part C2 - Compartmentation & Separation					
C2.1 Application of Part			X		Informational.
C2.2 General Floor Area & Volume Limitations	X				The size of any fire compartment or atrium in a Class 5 building must not exceed the relevant maximum floor area and maximum volume set out in Table C2.2 & C2.5, except as permitted in C2.3. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C2.3 Large Isolated Buildings			X		Not Applicable.
C2.4 Requirements for Open Space			X		Not Applicable.
C2.5 Class 9a & 9c Buildings			X		Not Applicable.
C2.6 Vertical Separation of openings in external walls			X		Not Applicable.
C2.7 Separation by Fire Walls			X		Not Applicable.
C2.8 Separation of Classifications in the same storey			X		Not Applicable.
C2.9 Separation of Classifications in different storeys			X		Not Applicable.
C2.10 Separation of lifts shafts			X		Not Applicable.
C2.11 Stairways and lifts in one shaft			X		Not Applicable.
C2.12 Separation of Equipment				X	(a) Equipment other than that described in (b) and (c) must be separated from the remainder of the building with construction complying with (d), if that equipment comprises – (ii) Emergency generators used to sustain emergency equipment operating in the emergency mode; or (iii) Central smoke control plant; or

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					(iv) Boilers; or (v) A battery system installed in that building that has a total voltage of 12 volts or more and a storage capacity of 200kWh or more. (b) Equipment need not be separated in accordance with (a) if the equipment comprises- (iv) Equipment otherwise adequately separated from the remainder of the building. (c) Separation of onsite fire pumps must comply with the requirements of AS2419.1. (d) Separating construction must have – (i) Except as provided by (ii) – (A) An FRL is required by Specification C1.1, but not less than 120/120/120; and (B) Any doorway protected with a -/120/30 self-closing fire door; ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.***
C2.13 Electrical Supply				X	(b) A main switchboard located within the building (and which sustains emergency equipment operating in the emergency mode) must – (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (ii) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than – /120/30. (c) Electrical conductors located within the building that supply – (i) a substation located within the building which supplies a main switchboard covered by (b); or (ii) a main switchboard covered by (b), must— (iii) have a classification in accordance with AS/NZS 3013-2005 of not less than— (A) if located in a position that could be subject to damage by motor vehicles — WS53W; or (B) otherwise — WS52W; or (iv) be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120 (d) where emergency equipment is required in a building, all switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment, must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by

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					metal partitions designed to minimise the spread of a fault from the non-emergency equipment switchgear. (e) For the purposes of (d), emergency equipment includes but it is not limited to – (i) Fire hydrant booster pumps (ii) Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like. (iii) Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building. (iv) Air handling systems designed to exhaust and control the spread of fire and smoke. (vi) Control and indicating equipment. (vii) Emergency warning and intercom systems (EWIS). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C2.14 Public corridors in Class 2 & 3 Buildings			X		Not Applicable.
Part C3 - Protection of Openings					
C3.1 Application of Part			X		(b) For the purposes of DTS provisions of this Part, openings in building elements required to be fire resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL. (c) For the purposes of the DTS provisions of this part, openings other than those covered under (a)(iii), between building elements such as columns, beams and the like, in the plane formed at the construction edge of the perimeter of the building, are deemed to openings in the external wall.
C3.2 Protection of openings in external walls			X		Not Applicable.
C3.3 Separation of external walls and associated openings in different fire compartments			X		Not Applicable.
C3.4 Acceptable Methods of Protection			X		Not Applicable.
C3.5 Doorways in Fire Walls			X		Not Applicable.

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C3.6 Sliding Fire Doors			X		Not Applicable.
C3.7 Protection of Doorways in horizontal exits			X		Not Applicable.
C3.8 Openings in fire isolated exits			X		Not Applicable.
C3.9 Service Penetrations in fire-isolated exits			X		Not Applicable.
C3.10 Openings in Fire isolated lift shafts			X		Not Applicable.
C3.11 Bounding Construction			X		Not Applicable.
C3.12 Openings in floors and ceilings for services				X	Where services pass through a floor which is required to achieve a FRL or a ceiling required to have a RISF, the service must be enclosed within a fire resisting shaft or fire protected in accordance with Clause C3.15. **<u>Compliance Commentary</u>** **Existing penetrations going through the floor above or walls required to be fire rated are to be protected in accordance with Clause C3.12 and Clause C3.15 in any plant rooms that contain any of the following equipment:** • **A main switchboard located within the building (and which sustains emergency equipment operating in the emergency mode) and any associated electrical conductors; or** • **Emergency generators used to sustain emergency equipment operating in the emergency mode;** • **Central smoke control plant;** • **Boilers;** • **A battery system installed in that building that has a total voltage of 12 volts or more and a storage capacity of 200kWh or more.** **A review of the penetrations will be required within the proposed tenancy. Should the plant rooms need to be separated via fire rated construction, the penetrations going through any elements that are required to be fire rated are required to be fire stopped as per Clause C3.12, Clause C3.15 and Specification C3.15.**

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					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C3.13 Openings in Shafts			X		Not Applicable.
C3.15 Openings for Service Installations				X	Where services pass through an element which is required to achieve a FRL (other than an external wall or roof), the service must be fire stopped by a tested system or Specification C3.15. **Compliance Commentary** **Existing penetrations going through the floor above or walls required to be fire rated are to be protected in accordance with Clause C3.12 and Clause C2.15 in any plant rooms that contain any of the following equipment:** • **A main switchboard located within the building (and which sustains emergency equipment operating in the emergency mode) and any associated electrical conductors; or** • **Emergency generators used to sustain emergency equipment operating in the emergency mode;** • **Central smoke control plant;** • **Boilers;** • **A battery system installed in that building that has a total voltage of 12 volts or more and a storage capacity of 200kWh or more.** **A review of the penetrations will be required within the proposed tenancy. Should the plant rooms need to be separated via fire rated construction, the penetrations going through any elements that are required to be fire rated are required to be fire stopped as per Clause C3.12, Clause C3.15 and Specification C3.15.** ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3.16 Construction Joints				X	Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL. The requirements above do not apply where joints, spaces and the like between fire protected timber elements are provided with cavity barriers in accordance with Specification C1.13. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3.17 Columns protected in lightweight construction to achieve an FRL			X		Not Applicable.

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SECTION D ACCESS & EGRESS					
Part D1 - Provision for Escape					
D1.1 Application of Part			X		Informational.
D1.2 Number of Exits required	X				(a) **All buildings** — Every building must have at least one exit from each storey. (g) **Access to exits** — Without passing through another sole-occupancy unit every occupant of a storey or part of a storey must have access to— (i) an exit; or (ii) at least 2 exits, if 2 or more exits are required. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D1.3 When Fire Isolated exits are required			X		Not Applicable.
D1.4 Exit Travel Distances		X			(c) **Class 5 buildings** — Subject to (d), (e) and (f)— (i) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m; and (ii) in a Class 5 building, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30 m. **Compliance Commentary** **At no point on the proposed tenancy must be more than 20m from an exit or a point from which travel in different directions to 2 exits is available in which case the maximum distance to one of those exits must not exceed 40m.** **The maximum distance to the closest exit from the furthest point of the floor is approximately 50m in lieu of 40m permitted by Clause D1.4. A Performance Solution is to be sought for this non-compliance from an accredited fire engineer (certifier – fire safety).**

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					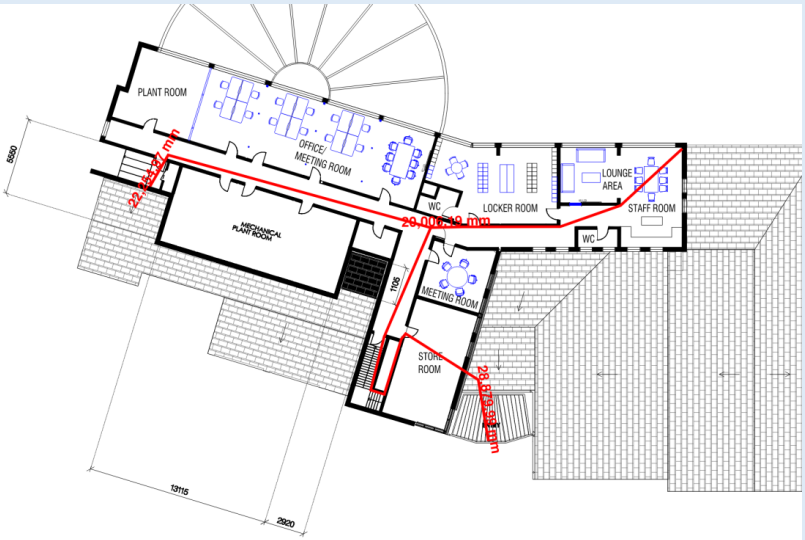 ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D1.5 Distance Between Alternative Exits		X			Exits that are required as alternative means of egress must be— (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— (iii) in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart. **Compliance Commentary** **The alternative exits serving the proposed office area subject of this report appear to be located over 60m apart.** **Detailed assessment of this Clause cannot be undertaken, as base building drawings have not been provided. A measurement of the distance between the alternative exits is to be provided by other consultants. A Performance Solution is to be sought for this non-compliance from an accredited fire engineer (certifier – fire safety).**

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					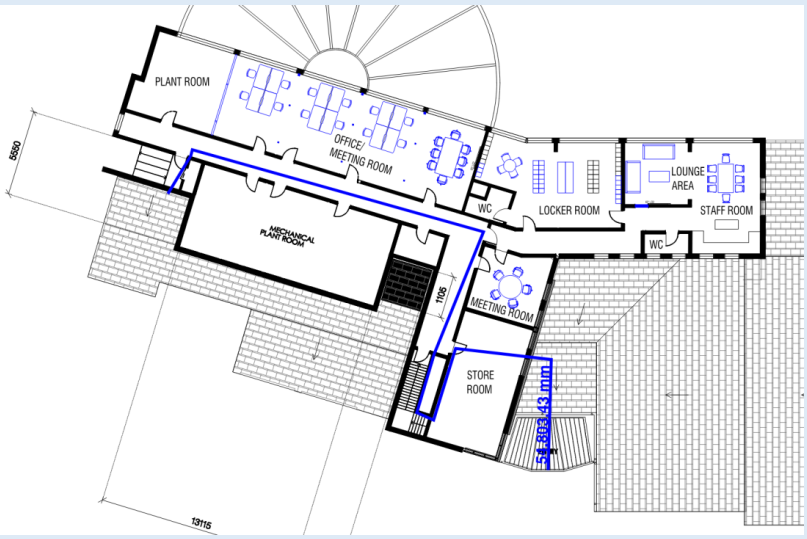 ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D1.6 Dimensions of Exits and paths of Travel to Exits				X	In a required exit or path of travel to an exit— (a) the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and (b) the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than— (i) 1 m; (f) the unobstructed width of a doorway must be not less than— (iii) the unobstructed width of each exit provided to comply with (b), (c), (d) or (e), minus 250 mm; or (v) in any other case except where it opens to a sanitary compartment or bathroom — 750 mm wide; and (g) the unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with (b)(ii) or (f)(i); and (h) the required width of a stairway or ramp must— (i) be measured clear of all obstructions such as handrails, projecting parts of balustrades or other barriers and the like; and (ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing. (i) to determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D1.13; and

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					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
D1.7 Travel via Fire Isolated Stairs			X		Not Applicable.
D1.8 External Stairways or ramps in lieu of Fire Isolated Stairs			X		Not Applicable.
D1.9 Travel by non-fire-isolated stairs				X	(a) A non-fire-isolated stairway or non-fire-isolated ramp serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided. (c) In a Class 5 building, the distance from any point on a floor to a point of egress to a road or open space by way of a required non-fire-isolated stairway or non-fire-isolated ramp must not exceed 80 m. (e) In a Class 5 building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than— (i) 20 m from a doorway providing egress to a road or open space or from a fire isolated passageway leading to a road or open space; or (ii) 40 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D1.10 Discharge from Exits				X	(a) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it. (b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than— (i) the minimum width of the required exit; (ii) or 1 m, whichever is the greater. (c) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by— (i) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to-Satisfy Provisions of Part D3; or

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					(ii) a stairway complying with the Deemed-to-Satisfy Provisions of the BCA. (d) The discharge point of alternative exits must be located as far apart as practical. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D1.11 Horizontal Exits			X		Not Applicable.
D1.12 Non-required stairways, ramps or escalators			X		Not Applicable.
D1.13 Number of Persons Accommodated Note NSW Table D1.13 Area per person according to use			X		For the purpose of the Deemed-to-Satisfy provisions, the number of persons accommodated in a storey, room or mezzanine must be determined with consideration to the purpose for which it is used and the layout of the floor area by— (a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in Table D1.13 according to the use of that part, excluding spaces set aside for— (i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and (ii) service ducts and the like, sanitary compartments or other ancillary uses; or (b) reference to the seating capacity in an assembly building or room; or (c) any other suitable means of assessing its capacity. *Refer NSW Table D1.13 to calculate area per person according to use.* ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D1.14 Measurement of Distances			X		The nearest part of an exit means in the case of— (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and (d) a doorway opening to a road or open space, the nearest part of the doorway; and ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D1.15 Method of Measurement			X		The following rules apply: (c) Subject to (d), the distance between exits is measured in a straight line between the nearest parts of those exits.

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					(d) Only the shortest distance is taken along a corridor, hallway, external balcony or other path of travel that curves or changes direction. (e) If more than one corridor, hallway, or other internal path of travel connects required exits, for the purposes of D1.5(c) the measurement is along the path of travel through the point at which travel in different directions to those exits is available, as determined in accordance with D1.4. (f) If a wall (including a demountable internal wall) that does not bound – (i) A room; or (ii) A corridor, hallway or the like, causes a change in direction in proceeding to a required exit, the distance is measured along the path of travel past the wall. (iii) If permanent fixed seating is provided, the distance is measured along the path of travel between the rows of seats. (iv) In the case of a non-fire isolated stairway or non-fire isolated ramp, the distance is measured along a line connecting the nosings of the treads, along the slope of the ramp, together with the distance connecting those lines across any intermediate landing.
D1.16 Plant Rooms and lift Motor Rooms: Concession			X		Not Applicable.
D1.17 Access to lift pits			X		Not Applicable.
Part D2 - Construction of Exits					
D2.1 Application of Part			X		Informational.
D2.2 Fire-Isolated stairways and ramps			X		Not Applicable.
D2.3 Non-fire Isolated stairways and ramps			X		Not Applicable.
D2.4 Separation of Rising and Descending Stairs			X		Not Applicable.
D2.5 Open Access ramps and balconies			X		Not Applicable.
D2.6 Smoke Lobbies			X		Not Applicable.

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D2.7 Installations in Exits and Paths of Travel				X	(c) Gas or other fuel services must not be installed in a required exit (d) Services or equipment comprising – (i) Electricity meters, distribution boards or cuts; or (ii) Central telecommunications distribution boards or equipment; or (iii) Electrical motors or other motors service equipment in the building, May be installed in – (i) A required exit; or (ii) In any corridor, hallway, lobby or the like leading to a required exit, If the services or equipment are enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure **Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification**
D2.8 Enclosure of Space Under Stairs and ramps				X	(b) Non fire-isolated stairways and ramps — The space below a required non fire-isolated stairway (including an external stairway) or non-fire-isolated ramp must not be enclosed to form a cupboard or other enclosed space unless— (i) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and (ii) any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.9 Width of Stairs			X		Not Applicable.
D2.10 Pedestrian Ramps			X		Not Applicable.
D2.11 Fire-Isolated Passageways			X		Not Applicable.
D2.12 Roof as Open Space			X		Not Applicable.
D2.13 Goings & Risers				X	(a) A stairway must have— (i) not more than 18 and not less than 2 risers in each flight; and (ii) going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13, except as permitted by (b) and (c); and

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					(iii) constant goings and risers throughout each flight, except as permitted by (b) and (c), and the dimensions of goings (G) and risers (R) in accordance with (a)(ii) are considered constant if the variation between— (A) adjacent risers, or between adjacent goings, is no greater than 5 mm; and (B) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm; and (iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and (v) treads which have— (A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or (B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and (vi) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and (viii) in the case of a required stairway, no winders in lieu of a landing. (b) In the case of a non-required stairway— (i) the stairway must have— (A) not more than 3 winders in lieu of a quarter landing; and (B) not more than 6 winders in lieu of a half landing; and (ii) the going of all straight treads must be constant throughout the same flight and the dimensions of goings (G) is considered constant if the variation between— (A) adjacent goings, is no greater than 5 mm; and (B) the largest and smallest going within a flight, does not exceed 10 mm; and (iii) the going of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight provided that the going of all such winders is constant. (c) Where a stairway discharges to a sloping public walkway or public road— (i) the riser (R) may be reduced to account for the slope of the walkway or road; and (ii) the quantity (2R+G) may vary at that location. **Compliance Commentary**

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					Full drawings of the stairway are required to be provided including drawings showing the configuration of the stairway on the ground floor, the going and riser dimensions, handrail locations, dimensions of the clear width and confirmation whether the space underneath the stairway on the ground floor will be enclosed. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.14 Landings				X	In a stairway (a) Landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must – (i) Be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and (ii) Have – (A) A surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586; or (B) A strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586, where the edge leads to a flight below; and ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.15 Thresholds				X	The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless— (c) in a building required to be accessible by Part D3, the doorway— (i) opens to a road or open space; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or (e) in other cases— (i) the doorway opens to a road or open space, external stair landing or external balcony; and (ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.16				X	(a) A continuous barrier must be provided along the side of— (ii) a stairway or ramp; and

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Balustrades and other Barriers Note NSW D2.16					(iii) a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and (iv) any delineated path of access to a building, if the trafficable surface is 1 m or more above the surface beneath. (c) A barrier required by (a) must be constructed in accordance with NSW Table D2.16a 1. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.17 Handrails				X	(a) Except for handrails referred to in D2.18, handrails must be— (i) located along at least one side of the ramp or flight; and (iv) fixed at a height of not less than 865 mm measured above the nosings of stair treads and the floor surface of the ramp, landing, or the like; and (v) continuous between stair flight landings and have no obstruction on or above them that will tend to break a hand-hold; and (vi) in a required exit serving an area required to be accessible, designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail required by (a)(iii)(B). (c) Handrails required to assist people with a disability must be provided in accordance with D3.3. (e) The requirements of (d) do not apply to— (i) handrails referred to in D2.18; or (ii) a stairway or ramp providing a change in elevation of less than 1 m; or (iii) a landing; or (iv) a winder where a newel post is installed to provide a handhold. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.***
D2.18 Fixed Platforms, walkways and ladders				X	A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail or barrier attached thereto may comply with AS1657 in lieu of D2.13, D2.14 D2.16 and D2.17 if it only serves: (a) Machinery rooms, boiler houses, lift machine rooms, plant-rooms and the like ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.***
D2.19 Doorways & Doors			X		Not Applicable.

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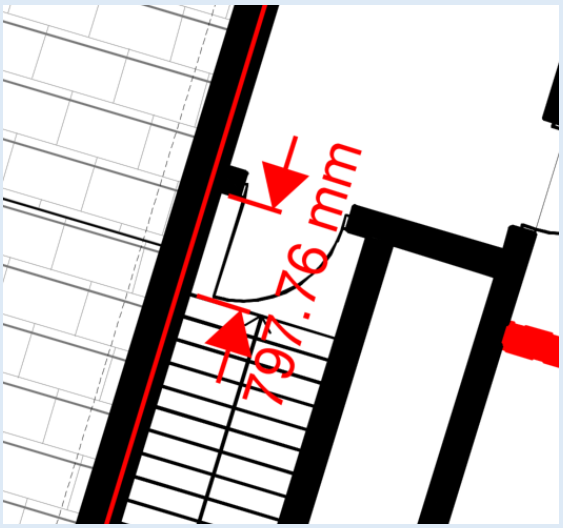
D2.20 Swinging Doors		X			A swinging door in a required exit or forming part of a required exit – (a) Must not encroach – (i) At any part of its swing by more than 500mm of the require width (including any landings) of a required – (A) Stairway; or (B) Ramp; or (C) Passageway, If it is likely to impede the path of travel of the people already using the exit; and (ii) When fully open, by more than 100 mm on the required width of the required exit, and The measurement of encroachment in each case is to include door handles or other furniture or attachments to the door; and (b) Must swing in the direction of egress unless (i) It serves a building part with a floor area not more than 200m^2, it is the only required exit from the building part and it is fitted with a device for holding it in the open position; or (ii) It serves a sanitary compartment or airlock (in which case it may swing in either direction; and (b) Must not otherwise impede the path or direction of egress. **Compliance Commentary** **The exit doorway that swings into the stairway adjacent to the Storeroom encroaches on the required landing by more than 500mm of the required width. Additionally, the door circulation would not be complaint, as insufficient landing space in front of the door has been provided. Refer to a separate report prepared by an access consultant.** 

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					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.
D2.21 Operation of Latch				X	(a) A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress by – (i) A single hand downward action or pushing action on a single device which is located between 900mm and 1.1 m from the floor and if serving an area required to be accessible by Part D3 – (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 (B) have a clearance between the handle and the back plate or door face at the center grip section of the handle of not less than 35mm and not more than 45mm; or (ii) a single hand pushing action on a single device which is located between 900mm and 1.2m from the door; and (iii) where the latch operation device referred to in (ii) is not located on the door leaf itself – (A) manual controls to power operated doors must be at least 25mm wide, proud of the surrounding surface and located – (aa) not less than 500mm from an internal corner; and (bb) for a hinged door, between 1m and 2m from the door leaf in any position; and (cc) for a sliding door, within 2m of the doorway and clear of a surface mounted door in the open position. (B) Braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. (b) The requirements of (a) do not apply to a door that – (i) Serves a vault, strong-room, sanitary compartment, or the like; or (ii) Serves only, or is within – (D) A space which is otherwise inaccessible to persons at all times when the door is locked; or (iv) Is fitted with a fail-safe device which automatically unlocks the door upon the activation of any sprinkler system complying with Specification E1.5, or smoke , or any other detector system deemed suitable in accordance with AS1670.1 installed throughout the building, and is readily operable when unlocked; or

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					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
D2.22 Re-entry from Fire isolated exits			X		Not Applicable.
D2.23 Signs on Doors			X		Not Applicable.
D2.24 Protection of openable windows			X		Not Applicable.
D2.25 Timber stairways concession					(a) Notwithstanding D2.2(a), timber treads, risers, landings and associated supporting framework which – (i) has a finished thickness of not less than 44mm: and (ii) has an average density of not less than 800kg/m3 at a moisture content of 12%, may be used within a required fire isolated stairway or fire isolated passageway constructed from fire-protected timber in accordance with C1.13 subject to – (iii) the building being protected throughout by a sprinkler system complying with specification E1.5 which extends to within the fire isolated enclosure; and (iv) fire protection being provided to the underside of stair flights and landings located immediately above a landing level which- (A) is at or near the level of egress: or (B) provides direct access to a carpark. (b) Fire protection required by (a) must be not less than one layer of 13mm fire protective grade plasterboard fixed in accordance with the system requirements for a fire protective covering. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part D3 – BCA Part D3 is excluded from this assessment. Please refer to AED's Access Report for a separate access assessment.					
SECTION E SERVICES & EQUIPMENT					
Part E1 - Fire Fighting Equipment					
E1.3 Fire Hydrants				X	(a) A hydrant system must be provided to serve a building – (i) Having a total floor area greater than 500m²; and (ii) Where a fire brigade station is – (A) No more than 50 km from the building as measured along roads; and

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					(B) Equipped with equipment capable of utilising a fire hydrant. (b) The fire hydrant system- (i) Must be installed in accordance with AS2419.1, except – (B) Where a sprinkler system is installed throughout a building in accordance with AS 2118.1, AS 2118.4, AS 2118.6, FPAA101H or FPAA101D the fire hydrant booster protection requirements of Clause 7.3(c)(ii) and 7.3(d)(iii) of AS 2419.1 do not apply, and (C) A fire hydrant booster assembly may be located between 3.5m and 10m of the building, and need not comply with Clause 7.3(d)(iii) of AS 2419.1 where the assembly is protected by an adjacent fire rated freestanding wall that – (aa) achieves an FRL of not less than 90/90/90; and (bb) extends not less than 1m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3m wide; and (cc) extends to a height of not less than 2m above finished ground level; and (ii) Where internal fire hydrants are provided, they must serve only the storey on which they are located except that a sole occupancy unit – (B) Of not more than 2 storeys in a Class 5 building may be served by a single fire hydrant located at the level of egress from that sole occupancy unit provided the fire hydrant can provide coverage to the whole of the sole occupancy unit. **Compliance Commentary** **It is recommended that an accredited fire services contractor is engaged to inspect and test the existing system to ensure compliance to AS2410.1-2005, including confirmation of the existing hydrant coverage to the modified area. This will assist the fire engineer to determine if the hydrant system complies with EP1.3. Where compliance cannot be achieved it is recommended that the fire service is to be upgraded to comply with the current code, with any non-compliances addressed by a fire engineer.** ***Hydraulic Services Design Certification and associated plans must be incorporated into the construction certificate specification***
E1.4 Fire Hose Reels			X		Not Applicable.
E1.5 Sprinklers			X		Not Applicable.

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E1.6 Portable Fire Extinguishers				X	(a) Portable fire extinguishers must be – (i) Provided as listed in Table E1.6; (ii) For a Class 5 building, provided – (A) To serve the whole Class 5 building or Class 4 part of a building where one or more internal fire hydrants are installed; or (B) Where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500m², (iii) Subject (b), selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444. **Compliance Commentary** **Portable fire extinguishers are to be provided within the proposed office tenancy and comply with the requirements under AS 2444-2001.** ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
E1.8 Fire Control Centre			X		Not Applicable.
E1.9 Fire Precautions during construction			X		Not Applicable.
E1.10 Provision for Special Hazards			X		Not Applicable.
Part E2 Smoke Hazard Management					
E2.2 General Requirements (inclusive of Table E2.2a / Table E2.2b & NSW amendments)				X	**General smoke hazard management requirements** (a) A building must comply with (b), (c), (d) and— (i) Table E2.2a as applicable to Class 5 buildings such that each separate part complies with the relevant provisions for the classification; and (b) An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must— (i) be designed and installed to operate as a smoke control system in accordance with AS 1668.1; or (ii)

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					(A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and (B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1; and (c) Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment and not forming part of a smoke hazard management system must comply with that Section of the Standard. **Compliance Commentary** **An FPAS accredited designer is to review the proposed smoke detection system and the mechanical air handling system within the modified parts of the building and confirm the design complies with AS 1670.1 – 2018. It should be noted the existing smoke detection system has been designed and maintained to AS 1670.1 – 2015, as per the Fire Safety Schedule supplied.** ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.***
E2.3 Provision for Special Hazards			X		Not Applicable.
Part E3 - Lift Installations					
E3.1 Lift installations			X		Not Applicable.
E3.2 Stretcher Facility in Lifts			X		Not Applicable.
E3.3 Warning Against the use of lifts in Fire			X		Not Applicable.
E3.4 Emergency Lifts			X		Not Applicable.
E3.5 Landings			X		Not Applicable.
E3.6 Facilities for People with Disabilities			X		Not Applicable.
E3.7 Fire Service Controls			X		Not Applicable.
E3.8 Residential Care Buildings			X		Not Applicable.

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E3.9 Fire service recall operation switch			X		Not Applicable.
E3.10 Lift car fire service drive control switch			X		Not Applicable.
Part E4 - Visibility in an Emergency, Exit signs and Warning Systems					
E4.2 Emergency Lighting Requirements				X	An emergency lighting system must be installed— (b) in every storey of a Class 5 building where the storey has a floor area more than 300 m^2— (i) in every passageway, corridor, hallway, or the like, that is part of the path of travel to an exit; and (ii) in any room having a floor area more than 100 m^2 that does not open to a corridor or space that has emergency lighting or to a road or open space; and (iii) in any room having a floor area more than 300 m^2 ***Compliance Commentary*** **An emergency lighting system must be installed throughout the modified portions of the ground floor. The emergency lighting system and exit signs must comply with AS/NZS 2293.1-2018.** ***Electrical Design Certification must be incorporated into the construction certificate specification***
E4.3 Measurement of Distance			X		Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.
E4.4 Design and Operation of Emergency Lighting			X		The emergency lighting system must comply with AS/NZS 2293.1-2018
E4.5 Exit Signs				X	An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each— (a) door providing direct egress from a storey to— (i) an enclosed stairway, passageway or ramp serving as a required exit; and (ii) an external stairway, passageway or ramp serving as a required exit; and (iii) an external access balcony leading to a required exit; and (b) door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space; and (c) horizontal exit; and (d) door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4.2.

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					Electrical design plans and certification must be incorporated into the construction certificate specification
E4.6 Direction Signs (inclusive of NSW E4.6)				X	If an exit is not readily apparent to persons occupying or visiting the building, then exit signs must be installed— (a) in appropriate positions in corridors, hallways, lobbies, foyers, auditoria, and the like, indicating the direction to a required exit ***Electrical Design Certification must be incorporated into the construction certificate specification and directional exit sign locations must be illustrated on the architectural floor plans***
E4.7 Class 2 & 3 Buildings & Class 4 Parts: Exemption			X		Not Applicable.
E4.8 Design & Operation of Exit Signs				X	Exit signs must comply with: (a) AS/NZS 2293.1-2018; or (b) For a photoluminescent exit sign, Specification E4.8. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
E4.9 Emergency Warning & Intercom Systems			X		Not Applicable.
SECTION F HEALTH & AMENITY					
Part F1 - Damp & Weatherproofing					
F1.0 Deemed -to-Satisfy Provisions			X		Performance Requirements FP1.4, for the prevention of the penetration of water through external wall, must be complied. There are no Deemed -to Satisfy Provisions for this Performance Solution in respect to external walls. ***Informational.***
F1.1 Stormwater Drainage			X		Not Applicable.
F1.4 External above ground membranes			X		Not Applicable.
F1.5 Roof coverings			X		Not Applicable.
F1.6 Sarking			X		Not Applicable.
F1.7 Waterproofing of wet area				X	(b) In a Class 5 building, building elements in the bathroom or shower room, a slop hopper or sink compartment, a laundry or sanitary compartment must—

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					(i) be water resistant or waterproof in accordance with Table F1.7; and (ii) comply with AS 3740, as if they were in a Class 2 or 3 building or a Class 4 part of a building. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1.9 Damp-proofing			X		Not Applicable.
F1.10 Damp-proofing of floors on the ground			X		Not Applicable.
F1.11 Provision of Floor Wastes			X		Not Applicable.
F1.12 Sub Floor Ventilation			X		Not Applicable.
F1.13 Glazed Assemblies			X		Not Applicable.
Part F2 - Sanitary & Other Facilities					
F2.1 Facilities in residential buildings			X		Not Applicable.
F2.2 Calculation of number of occupants and fixtures			X		Informational clause. ❖ The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means. ❖ Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females. ❖ In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility required for people with a disability may be counted once for each sex. ❖ For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary towels.
F2.3 Facilities for Class 3 to 9 Buildings				X	(a) Except where permitted by (b), (c), (f), F2.4(a) and F2.4(b), separate sanitary facilities for males and females must be provided for Class 5 buildings in accordance with Table F2.3. (b) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex. (c) If the majority of employees are of one sex, not more than 2 employees of the other sex may share toilet facilities if the

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					facilities are separated by means of walls, partitions and doors to afford privacy. (e) Adequate means of disposal of sanitary towels must be provided in sanitary facilities for use by females. **Compliance Commentary** **The occupant numbers are required to be provided to ascertain compliance with this Clause. Base building sanitary facilities may be used to achieve compliance with this Clause. The calculations of the existing sanitary are to be provided, alternatively occupant numbers and drawings showing existing sanitary facilities are to be provided to AED, so that detailed assessment can be undertaken.** **Please Note: It is up to the Registered Certifier issuing the approval for CDC/CC to consider the potential for upgrade to the existing sanitary facilities and if this is required. The type of approval and conditions of consent can influence these requirements.** ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F2.4 Facilities for People with Disabilities			X		***Assessment of Clause F2.4 is excluded from this assessment. Please refer to AED's Access Report for a separate access assessment.***
F2.5 Construction of Sanitary Compartments				X	Sanitary compartments must have: (a) Doors and partitions that separate adjacent compartments; and (b) the door to a fully enclosed sanitary compartment must open outwards, or slide, or be removable from outside of the compartment, unless there is a clear space of at least 1.2m between the closet pan within the compartment and the doorway. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F2.6 Interpretation: Urinals and washbasins			X		Information relevant to urinal and washbasin design. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F2.7 Microbial Control Note NSW F2.7 (Clause Deleted)			X		N/A Clause Deleted in NSW.
F2.8 Waste Management			X		Not Applicable.
F2.9			X		Not Applicable.

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Accessible adult change facilities					
Part F3 Room Sizes					
F3.1 Height of Rooms and other spaces				X	The ceiling height must be not less than— (b) in a Class 5 building— (i) except as allowed in (ii) and (f) — 2.4 m; and (ii) a corridor, passageway, or the like — 2.1 m; and (f) In any building— (i) a bathroom, shower room, sanitary compartment, airlock, tea preparation room, pantry, storeroom, garage, car parking area, or the like — 2.1 m; and (iii) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like.
Part F4 - Light & Ventilation					
F4.1 Provision of natural light			X		Not Applicable.
F4.2 Methods and extent of natural lighting			X		Not Applicable.
F4.3 Natural light borrowed from adjoining room			X		Not Applicable.
F4.4 Artificial lighting				X	Information relevant to the provision of artificial lighting in accordance with AS/NZS 1680.0-2009 to specific building areas. ***Electrical Design Certification must be incorporated into the construction certificate specification***
F4.5 Ventilation of Rooms				X	All rooms to be provided with Clause F4.6 compliant natural ventilation **OR** a mechanical ventilation or air-conditioning system complying with AS 1668.2-2012. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F4.6 Natural Ventilation			X		(a) Natural ventilation provided in accordance with F4.5(a) must consist of permanent openings, windows, doors or other devices which can be opened— (i) with ventilating area not less than 5% of the floor area of the room required to be ventilated; and (ii) open to— (A) a suitably sized court, or space open to the sky; or (B) an open verandah, carport, or the like; or (C) an adjoining room in accordance with F4.7.

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					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F4.7 Ventilation borrowed from adjoining room			X		Natural ventilation to a room may come through a window, opening, ventilating door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same sole-occupancy unit or the enclosed verandah is common property, and— (b) in a Class 5 building— (i) the window, opening, door or other device has a ventilating area of not less than 10% of the floor area of the room to be ventilated, measured not more than 3.6 m above the floor; and (ii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 10% of the combined floor areas of both rooms; and (c) the ventilating areas specified in (a) and (b) may be reduced as appropriate if direct natural ventilation is provided from another source. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F4.8 Restriction of position of water closets and urinals			X		Rooms containing closet pans or urinals must not open directly into kitchen / pantry areas, public dining areas, Class 3 dormitory areas, public assembly areas and a workplace normally occupied by more than one person. **Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification**
F4.9 Airlocks				X	Information relevant to the provision of airlocks and the like to separate rooms prohibited under Clause F4.8 from opening directly into another room. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F4.11 Carparks			X		Not Applicable.
F4.12 Kitchen local exhaust			X		Not Applicable.
Part F5 - Sound Transmission					
F5.1 Application of Part			X		Not Applicable.
F5.2 Determination of airborne sound insulation ratings			X		Not Applicable.

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
F5.3 Determination of impact sound insulation ratings			X		Not Applicable.
F5.4 Sound Insulation of floors between units			X		Not Applicable.
F5.5 Sound insulation of walls between units			X		Not Applicable.
F5.6 Sound insulation rating of services			X		Not Applicable.
F5.7 Sound isolation of pumps			X		Not Applicable.
Part F6 – Condensation Management					
F6.1 Application of Part			X		Not Applicable.
F6.2 Pliable building membrane			X		Not Applicable.
F6.3 Flow rate and discharge of exhaust systems			X		Not Applicable.
F6.4 Ventilation of roof spaces			X		Not Applicable.
SECTION G ANCILLIARY PROVISIONS					
Part G1 - Minor Structures and Components					
G1.1 Swimming Pools			X		Not Applicable.
NSW G1.101 Provision for cleaning windows			X		Not Applicable.
G1.2 Refrigeration chambers, strong-rooms and vaults			X		Not Applicable.
G1.3 Outdoor play areas			X		Not Applicable.
Part G2 - Boilers, Pressure Vessels, Heating Appliances, Fireplaces, Chimneys and Flues					
G2.2 Installation of appliances			X		Not Applicable.

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G2.3 Open fire places			X		Not Applicable.
G2.4 Incinerator rooms			X		Not Applicable.
Part G3 - Atrium Construction					
G3.1 Application of Part			X		Not Applicable.
G3.2 Dimensions of atrium well			X		Not Applicable.
G3.3 Separation of atrium by bounding walls			X		Not Applicable.
G3.4 Construction of bounding walls			X		Not Applicable.
G3.5 Construction at balconies			X		Not Applicable.
G3.6 Separation at roof			X		Not Applicable.
G3.7 Means of egress			X		Not Applicable.
G3.8 Fire and smoke control systems			X		Not Applicable.
Part G4 - Construction in Alpine Areas					
G4.1 Application of Part			X		Not Applicable.
G4.3 External doorways			X		Not Applicable.
G4.4 Emergency lighting			X		Not Applicable.
G4.5 External ramps			X		Not Applicable.
G4.6 Discharge of exits			X		Not Applicable.
G4.7 External trafficable structures			X		Not Applicable.
G4.8 Fire-fighting services and equipment			X		Not Applicable.
G4.9 Fire orders			X		Not Applicable.

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Part G5 - Construction in Bushfire Prone Areas					
G5.1 Application of Part			X		Not Applicable.
G5.2 Protection			X		Not Applicable.
Part G6 - Occupiable Outdoor Areas					
G6.1 Application of Part			X		Not Applicable.
G6.2 Fire hazard properties			X		Not Applicable.
G6.3 Fire separation			X		Not Applicable.
G6.4 Provision for escape			X		Not Applicable.
G6.5 Construction of exits			X		Not Applicable.
G6.6 Firefighting equipment			X		Not Applicable.

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5.0 CONCLUSION

This report provides a Building Code of Australia 2019 Amendment 1 (BCA) assessment of the proposed a proposed office fit out in an existing building located at 1 Kalinya Street, Newport.

The primary purpose of this report was to identify the non-compliance matters contained in the proposed design philosophy against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

This report provided a BCA assessment table in Section 3.0 that summarises the identified non-compliance matters and offers specific recommendations that are also outlined in the Executive Summary.

Further, if compliance with the deemed-to-satisfy provisions is not achievable or desirable, Alternative Solutions could be further developed and verified by an appropriately qualified BCA Consultant or Fire Safety Engineer.

Prepared by:	**Reviewed and Approved by:**
 Dariya Vovnenko **Building Surveyor/Fire Safety Officer** Bachelor of Construction Project Management and Property (UNSW) Accredited Practitioner – Fire Safety Assessment (FPASF054573A) For AED	 Joshua Curan **Director** Graduate Diploma in Fire Safety Engineering (WSU) Graduate Diploma in Building Surveying (WSU) Building Surveyor Level 1 (AIBS 7637) Building Surveyor - Unrestricted (BDC2679) Accredited Practitioner – Fire Safety Assessment (FPASF054805A) For AED

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6.0 ATTACHMENT A - INSPECTION & MAINTENANCE

6.1 Fire Safety Measures

The fire safety measures within the building must be maintained to ensure correct operation at all times the building is occupied. All firefighting equipment should be tagged when tested/inspected and log books kept up-to-date for all smoke detection, warning systems and sprinkler systems (where installed).

An annual fire safety certificate must be submitted to the local consent authority and the NSW Fire Brigade each year indicating satisfactory performance of the fire safety measures contained within the building. The annual fire safety statement should be displayed in a prominent place within the building (i.e. the main entry foyer)

The correct operation and maintenance of the buildings fire safety measures is critical in affording an adequate level of fire safety.

6.2 Good Housekeeping

The ongoing management of the building should ensure good housekeeping procedures. The following matters should be considered by building management:

- Ensure exits and paths of travel to exits remain unobstructed (in particular stairways)
- Avoid storage of materials in unoccupied areas
- Limit storage of flammable/combustible materials to designated and approved areas
- Prevent chocking open fire/smoke doors
- Prevent storage of materials that could hinder access to firefighting equipment

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8.0 ATTACHMENT B - Type B Fire-Resisting Construction

4.1 Fire-resistance of building elements

In a building *required* to be of Type B construction—

(a) each building element listed in Table 4, and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and

(b) * * * * *

(c) if a stair shaft supports any floor or a structural part of it—

(i) the floor or part must have an FRL of 60/–/– or more; or

(ii) the junction of the stair *shaft* must be constructed so that the floor or part will be free to sag or fall in a fire without causing structural damage to the *shaft*; and

(d) any *internal wall* which is *required* to have an FRL with respect to *integrity* and *insulation*, except a wall that bounds a *sole-occupancy unit* in the topmost (or only) *storey* and there is only one unit in that *storey*, must extend to—

(i) the underside of the floor next above if that floor has an FRL of at least 30/30/30; or

(ii) the underside of a ceiling having a *resistance to the incipient spread of fire* to the space above itself of not less than 60 minutes; or

(iii) the underside of the roof covering if it is *non-combustible* and, except for roof battens with dimensions of 75 mm x 50 mm or less or *sarking-type material*, must not be crossed by timber or other *combustible* building elements; or

(iv) 450 mm above the roof covering if it is *combustible*; and

(e) a *loadbearing internal wall* and a *loadbearing fire wall* (including those that are part of a *loadbearing shaft*) must be constructed from—

(i) concrete; or

(ii) masonry; or

(iii) *fire-protected timber*, provided that—

(A) the building is—

(aa) a separate building; or

(bb) a part of a building—

(AA) which only occupies part of a *storey*, and is separated from the remaining part by a *fire wall*; or

(BB) which is located above or below a part not containing *fire-protected timber* and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a *fire wall* for the lower *storey*; and

(B) the building has an *effective height* of not more than 25 m; and

(C) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification E1.5; and

(D) any insulation installed in the cavity of the timber building element *required* to have an FRL is *non-combustible*; and

(E) cavity barriers are provided in accordance with Specification C1.13; or

(iv) any combination of (i) to (iii); and

(f) * * * * *

(g) in a Class 5, 6, 7, 8 or 9 building, in the *storey* immediately below the roof, internal columns and *internal walls* other than *fire walls* and *shaft* walls, need not comply with Table 4; and

(h) * * * * *

(i) in a Class 2 or 3 building, except where within the one *sole-occupancy units*, or a Class 9a *health-care building* or a Class 9b building, a floor separating *storeys* or above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, must—

(i) be constructed so that it is at least of the standard achieved by a floor/ceiling system incorporating a ceiling which has a *resistance to the incipient spread of fire* to the space above itself of not less than 60 minutes; or

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(ii) have an FRL of at least 30/30/30; or

(iii) have a *fire-protective covering* on the underside of the floor, including beams incorporated in it, if the floor is *combustible* or of metal; and

(j) in a Class 9c building a floor above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, and any column supporting the floor must—

(i) be constructed so that it is at least of the standard achieved by a floor/ceiling system incorporating a ceiling which has a *resistance to the incipient spread of fire* to the space above itself of not less than 60 minutes; or

(ii) have an FRL of at least 30/30/30; or

(iii) have a *fire-protective covering* on the underside of the floor, including beams incorporated in it, if the floor is *combustible* or of metal.

Table 4 Type B construction: FRL of building elements

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

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Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Between or bounding *sole-occupancy units*—				
Loadbearing	60/ 60/ 60	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
OTHER LOADBEARING INTERNAL WALLS and COLUMNS—	60/–/–	120/–/–	180/–/–	240/–/–
ROOFS	–/–/–	–/–/–	–/–/–	–/–/–

4.2 Carparks

(a) Notwithstanding Clause 4.1, a *carpark* may comply with Table 4.2 if it is an *open-deck carpark* or is protected with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 and is—

(i) a separate building; or

(ii) a part of a building, and if occupying only part of a *storey*, is separated from the remaining part by a *fire wall*.

(b) For the purposes of this Clause, a *carpark*—

(i) includes—

(A) an administration area associated with the functioning of the *carpark*; and

(B) There the *carpark* is sprinklered, is associated with a Class 2 or 3 building and provides carparking for separate *sole-occupancy units*, each carparking area with an area not greater than 10% of its *floor area* for purposes ancillary to the *sole-occupancy units*; but

(ii) excludes—

(A) except for (b)(i), any area of another classification, or other part of a Class 7 building not used for carparking; and

(B) a building or part of a building specifically intended for the parking of trucks, buses, vans and the like.

Table 4.2 Requirements for carparks

Note to Table 4.2: ESA/M means the ratio of exposed surface area to mass per unit length.

4.3 Class 2 and 3 buildings: Concession

(a) A Class 2 or 3 building having a *rise in storeys* of not more than 2 need not comply with Clause 4.1(e) of Specification C1.1 and the requirements of C1.9(a) and (b) for *non-combustible* materials if it is constructed using—

(i) timber framing throughout; or

(ii) *non-combustible* material throughout; or

(iii) a combination of (i) and (ii), provided—

(iv) * * * * *

(v) any insulation installed in the cavity of a wall *required* to have an FRL is *non-combustible*; and

(vi) the building is fitted with an *automatic* smoke alarm system complying with Specification E2.2a.

(b) A Class 2 or 3 building having a *rise in storeys* of not more than 2 may have the top *storey* constructed in accordance with (a) provided—

(i) the lowest storey is used solely for the purpose of parking motor vehicles or for some other ancillary purpose; and

(ii) the lowest storey is constructed of concrete or masonry including the floor between it and the Class 2 or 3 part of the building above; and

(iii) the lowest storey and the storey above are separated by construction having an FRL of not less than 90/90/90 with no openings or penetrations that would reduce the fire-resisting performance of that

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construction except that a doorway in that construction may be protected by a –/60/30 self-closing fire door.

(c) In a Class 2 or 3 building complying with (a) or (b) and fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5, any FRL criterion prescribed in Table 4—

(i) for any *loadbearing* wall, may be reduced to 60, except any FRL criterion of 90 for an *external wall* must be maintained when tested from the outside; and

(ii) for any non-*loadbearing internal wall*, need not apply, if—

(A) it is lined on both sides with 13 mm standard grade plasterboard or similar *non-combustible* material; and

(B) it extends—

(aa) to the underside of the floor next above if that floor has an FRL of at least 30/30/30 or is lined on the underside with a *fire-protective covering*; or

(bb) to the underside of a ceiling with a *resistance to the incipient spread of fire* of 60 minutes; or

(cc) to the underside of a *non-combustible* roof covering; and

(C) any insulation installed in the cavity of the wall is *non-combustible*; and

(D) any construction joints, spaces and the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material.

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