



Sydney Fire Safety Consultancy & Building Inspections

BUILDING CODE OF AUSTRALIA REPORT – CLASS 6 BUILDINGS (NCC 2019 AMENDMENT NO 1)

44 – 50 TENCH AVENUE, JAMISONTOWN NSW 2750

BCA Inspection Report – DA/CC Submission	0	BCA Inspection Report	Manuyel Gregory – 26 July 2021
DOC. NAME	REV.	DESCRIPTION	PREPARED/DATE

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INTRODUCTION

EXECUTIVE SUMMARY

The following BCA Compliance Report has been prepared on behalf of the applicant for the construction of a Kitchen, Dining Pavilion, Café, House Dining and Bakery.

The objective of this report is to prepare a suitable a fire safety assessment against current BCA "deemed to satisfy" DTS provisions of the Building Code of Australia (BCA) 2019 Volume 1, Amendment 1 (Sections A to E) and to identify areas of deficiency (where applicable).

This report will recommend upgrading in line with current BCA "deemed to satisfy" (DTS) requirements where possible, however at the same time this upgrading must be considered reasonable in context of the existing building. Where such an approach is not possible or alternatively the required DTS work is considered unreasonable, the upgrading strategy may be based on satisfying the performance requirements of the BCA and ultimately offer an alternative solution approach for upgrading in this respect. For other items, formal dispensations will need to be requested from Council/NSW Fire & Rescue where specific upgrading solution is physically not possible or is considered "unreasonable".

In many respects, where alternative solutions are proposed, they are based on addressing life safety issues ahead of property protection issues. This approach is typically accepted by Council's in respect to developing suitable fire upgrading strategies for existing buildings.

This report is in response to a Development Application and Construction Certificate Application for the construction of several Class 6 Buildings on the subject property that will consist of a Kitchen, Dining Pavilion, Café, House Dining and Bakery.

INTRODUCTION

The applicant for the subject buildings has commissioned Sydney Fire Safety Consultancy & Building Inspections to prepare a report detailing fire safety requirements that will in our opinion provide a satisfactory level of fire safety within the building.

PURPOSE OF THE REPORT

To inspect the building and report on deficiencies relating to fire safety appropriate to its use and the relevant provisions of Sections C, D and E of the BCA. Where appropriate, the report will recommend works to satisfy the objectives of the Building Code of Australia (BCA) 2019 Volume 1, Amendment 1 (Sections A to E) and to identify areas of deficiency (where applicable).

The report will detail the works required in our opinion to bring the subject premises to a standard that will improve the safety of persons accommodated in the building in the event of a fire, particularly in relation to egress, the prevention of spread of fire, the detection of fire and the suppression of fire, appropriate to the use and classification of the building.

LIMITATION AND EXCLUSIONS

The information contained in this report was obtained from architectural plans provided by the applicant.

Furthermore, this report should not be construed to infer that an assessment for compliance with the following has been undertaken:

- (i) structural adequacy of the building and related matters;
- (ii) inaccessible spaces such as ceiling voids, riser shafts, service penetrations (where applicable) etc;
- (iii) the Fire Resistance Level (FRL) or Fire Hazard Indices of existing building elements;
- (iv) the individual requirements of other service providers i.e., Sydney Water, Energy Australia, etc;
- (v) operating capability of services including electrical, mechanical and hydraulic;
- (vi) health and amenity and energy efficiency issues covered in Sections F & J of the BCA including Basix requirements;
- (vii) access and egress for persons with a disability and including the Disability Discrimination Act (DDA), AS1428.1 and NCC/BCA Parts D3 & F2 requirements
- (viii) asbestos related matters (i.e., vermiculite sprayed ceilings within units and common areas);
- (ix) glazing assemblies within the building;
- (x) slip resistance of floor materials (i.e., tiles);
- (xi) Energy efficiency and Basix requirements;
- (xii) Assessment against the Food Premises Fitout Code;
- (xiii) Exhaust and Mechanical Ventilation System;
- (xiv) Carparking area/spaces.

REPORT BASIS

The content of this report reflects:

- (i) The Deemed to Satisfy (DTS) provisions of the Building Code of Australia 2019 Amendment 1 and including the NSW Appendix;
- (ii) Architectural Plans prepared by MW Reference 0461 and Dated 09.07.21.

STANDARDS ADOPTED BY REFERENCE

Reference to standards of construction will be to the Building Code of Australia (BCA) 2019 Volume 1 (Amendment 1) and the relevant Australian Standards adopted under Specification A1.3 (as relevant).

Fire Resistance Level (FRL) relates to Structural Adequacy/Integrity/Insulation to building elements in minutes e.g. -/60/30 FRL.

SITE DESCRIPTION

The applicant is proposing to construct single storey Class 6 Buildings to be located at 44 -50 Tench Avenue, Jamisontown, NSW 2750. The buildings will consist of a Kitchen, Dining Pavilion, Café, House Dining and Bakery.

The external walls will be constructed from steel and masonry, the floors from concrete, internal walls from plasterboard and roof cladding from steel.

SUMMARY OF BCA NON-COMPLIANCES AND FURTHER INVESTIGATIONS REQUIRED

The following list is a summary of some of the BCA non-compliances found during our assessment. Refer to report for all items. Some items listed below will require further investigation prior to the final scope of works being finalised for the subject building.

BCA Part C – Fire Resistance & Stability

- Protection of Openings – See Clauses C3.2 & C3.4 of the report.
- FRL of External Walls & Columns – See Specification C1.1, Table 5, Type C Construction of the report.
- Fire Hazard Indices – See Clause C1.10 and Specification C1.10 of the report.

BCA Part D – Access & Egress

- Recommendation Only – Install Emergency Evacuation Plans in accordance with AS3745-2010 – Planning for Emergencies in Facilities throughout the building.
- Dimension of Exits – See Clause D1.6 of the report.
- Total of Persons Accommodated – See Clause D1.13 of the report.
- Installations in Paths of Travel to Exits – Requires any electrical switchboards located in the path of travel to the exits to be lined with non-combustible material and have smoke seals installed. Refer to Clause D2.7 of the report.
- Risers/Goings and Landings - See Clauses D2.13 & D2.14 of the report.

- Barriers & Handrails – See Clauses D2.16 and D2.17 of the report.
- Required Exit Doors and Door Hardware – See Clauses D2.19, D2.20 & D2.21 of the report.

BCA Part E – Services & Equipment

- Emergency lighting is required to be installed throughout buildings where the floor area exceeds 300m² in accordance with BCA 2019 Amendment No 1 Clauses E4.2, E4.4 and AS/NZS2293.1-2018. Refer to Clauses E4.2-E4.4 of the report. A manual test facility must be installed in the building in accordance with AS/NZS2293.1-2018 to allow the routine 6-monthly test to be conducted in accordance with AS/NZS2293.2-2019.
- Install Exit & Directional signage throughout all buildings in accordance with BCA 2019 Amendment No 1 Clauses E4.5, NSW E4.6, E4.8 and AS/NZS2293.1-2018. Refer to Clauses E4.5-E4.8 of the report. A manual test facility must be installed in the building in accordance with AS/NZS2293.1-2018 to allow the routine 6-monthly test to be conducted in accordance with AS/NZS2293.2-2019.
- Portable Fire Extinguishers – Portable fire extinguishers are to be installed throughout all buildings. See Clause E1.6.
- Fire Blankets – Install fire blankets in kitchens in accordance with AS2444-2001 and AS/NZS3504-2006.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
BCA PART A1 - INTERPRETING THE NCC				
Interpreting the NCC	A1.0	Noted	DTS	Noted. No recommendation.
BCA PART A2 - COMPLIANCE WITH THE NCC				
Compliance with the NCC	A2.0 – A2.4	Noted.	DTS	Noted. No recommendation.
BCA PART A3 - APPLICATION OF THE NCC IN STATES AND TERRITORIES				
State and Territory Compliance	A3.0	Noted.	DTS	Noted. No recommendation.
BCA PART A4 - NCC REFERENCED DOCUMENTS				
NCC Referenced Documents	A4.0 – A4.2	Noted.	DTS	Noted. No recommendation.
BCA PART A5 - DOCUMENTATION OF DESIGN AND CONSTRUCTION				
Documentation of Design and Construction	A5.0 – A5.6	Noted.	DTS	Noted. No recommendation.
BCA PART A6 - BUILDING CLASSIFICATION				
Determining a Building Classification	A6.0 – A6.11	BCA building classifications.	DTS	Class 6: Commercial Shops
BCA PART A7 - UNITED BUILDINGS				
When Buildings are United	A7.0	BCA provisions applicable to buildings connected through openings in the external walls dividing them.	---	Not applicable.
Alterations in a United Building	A7.1	BCA requirements where buildings cease to be united buildings.	---	Not applicable.
BCA PART B1 - STRUCTURAL PROVISIONS – STRUCTURAL ADEQUACY OF THE BUILDING HAS NOT BEEN ASSESSED FOR BCA COMPLIANCE				

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
BCA PART C1 - FIRE RESISTANCE & STABILITY				
Deemed to Satisfy Provisions	C1.0	Specifies DTS means to satisfy Performance Requirements CP1 to CP9.	DTS	Noted. No recommendation.
Type of Construction Required	C1.1 Table C1.1	This clause stipulates the "Type of Construction" required based on a building's "Rise in Storeys". Also see Clause C2.2 regarding maximum floor area limitation requirements.	DTS	Type C Construction is required. The principal implication of Type C Construction is that all building elements consisting of external walls and columns must be suitably fire rated to resist fire spreading.
Calculation of Rise in Storeys	C1.2	This Clause stipulates how you calculate a building's "rise in storeys".	DTS	The building has a <i>rise in storeys</i> of one (1) and <i>effective height</i> of less than 25 metres.
Buildings of Multiple Classification	C1.3	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.	DTS	Noted. Type C construction required.
Mixed Types of Construction	C1.4	Allows mixed types of construction if parts are fire separated.	---	Not applicable.
Two Storey Class 2, 3 or 9c Buildings	C1.5	Gives concession for construction of certain residential buildings.	---	Not applicable.
Class 4 Parts of Building	C1.6	Specified FRLs and separation for Class 4 parts.	---	Not applicable.
Open Spectator Stands and Indoor Sports Stadiums	C1.7	Requirement for construction of spectator stands and stadiums.	---	Not applicable.
Lightweight Construction	C1.8	This Clause stipulates that "lightweight" construction must comply with Specification C1.8 if used.	DTS	Compliance with C1.8 required if lightweight construction is proposed to be used to achieve an FRL for building elements as described in NCC/BCA Specification C1.1, Table 5, Type C Construction (external walls & columns).
Non-combustible	C1.9	The Clause outlines where non-combustible	DTS	Noted. No recommendation.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
Building Elements		materials are to be used in buildings.		
Fire Hazard Properties	C1.10	Clause C1.10 requires materials and assemblies to comply with Fire Hazard Properties as outlined in Specification C1.10.	DTS	<p>Building to Comply</p> <p>New Materials & Assemblies to Comply.</p> <p>The fire hazard properties of all new materials, assemblies, fixtures and linings are to comply with Specification C1.10 of the BCA.</p> <p>All new floor, wall and ceiling linings/coverings are to be documented to comply with Specification C1.10 of the BCA.</p> <p><u>Note i: Where carpets and surface linings are proposed to be installed within the building those materials are to comply with Specification C1.10 of the BCA.</u></p> <p><u>Note ii: Typical new items to be assessed for compliance with this clause of the BCA are carpets, timber flooring, vinyl, linoleum, parquetry and wall & ceiling cladding materials...etc...).</u></p> <p><u>Note iii: No assessment has been made of the buildings existing fire hazard properties under this Fire Safety & BCA Assessment Report.</u></p>
Performance of External Walls in Fire	C1.11	Requirements for tilt up walls and fixings.	---	Not applicable.
---	C1.12	This clause has been deliberately left blank in the BCA.	---	---
Fire-protected timber: Concession	C1.13	The clause outlines concessions for fire - protected timber in Class 2, 3 and 5 buildings.	---	Not applicable.
Ancillary Elements	C1.14	The Clause outlines permitted ancillary elements that may be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible.	DTS	All ancillary elements that are proposed to be fixed, installed or attached to the internal parts or external face of an external wall is required to be of non-combustible material.
BCA PART C2 - COMPARTMENTATION & SEPARATION				

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
Deemed to Satisfy Provisions	C2.0	This Clause stipulates that the proposed development complies with BCA Section C Performance Requirements if the deemed to satisfy provisions are met.	DTS	Noted.
Application of Part	C2.1	Fire compartment sizes and volumes do not apply to either a carpark provided with a sprinkler system, an open deck carpark or a spectator stand, or residential occupancies. All other classes of building to comply as required.	DTS	Noted.
General Floor Area & Volume Limitations	C2.2	This Clause stipulates the maximum floor areas and volumes for all classes of buildings and for each type of construction.	DTS	<p>Complies</p> <p>The following applies to Type C Construction: -</p> <p>Table C2.2 Requirements: -</p> <p><u>Class 6</u></p> <p>Maximum Floor Area Allowed – 2,000m²</p> <p>Maximum Volume Allowed – 12,000m³</p> <p>Maximum Floor Area – It is understood that the maximum floor area of the buildings is less than 2,000m²</p> <p>Maximum Volume – It is understood that the maximum volume of the buildings is less than 12,000m³.</p>
Large Isolated Buildings	C2.3	Fire compartments can exceed specified areas and volumes under certain open space, fire protection and vehicular access conditions.	---	Not applicable.
Requirements for Open Spaces & Vehicular Access	C2.4	Conditions applying to vehicular access are required by Clause C2.3.	---	Not applicable.
Class 9a & Class 9c Buildings	C2.5	Additional fire and smoke compartmentation that is required for Class 9a Healthcare and 9c Aged Care buildings.	---	Not applicable.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
Vertical Separation of Openings in External Walls	C2.6	This Clause stipulates how vertical separation can be achieved for buildings of Type A Construction.	---	Not applicable.
Separation by Fire Walls	C2.7	This clause stipulates how you achieve fire separation	---	Not applicable.
Separation of Classifications in the Same Storey	C2.8	This clause stipulates how you can treat different classifications in the same storey	DTS	Noted. No recommendation.
Separation of Classifications in Different Storeys	C2.9	This Clause stipulates how you fire separate classifications in different storeys.	---	Not applicable.
Separation of Lift Shafts	C2.10	Lift shafts are required in Specification C1.1 (Type A Construction) to achieve an FRL as stated where lifts are not wholly within an atrium.	---	Not applicable.
Stairways & Lifts in One Shaft	C2.11	A stairway and lift must not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft	---	Not applicable.
Separation of Equipment	C2.12	Certain equipment (lift motors, lift control panels, emergency generators, central smoke control plant, boilers, and batteries) must be separated from the remainder of the building with construction achieving an FRL of not less than 120/120/120.	---	Not applicable.
Electricity Supply System	C2.13	<p>Certain electricity supply equipment must be protected with construction of not less than 120/120/120 FRL. Equipment includes:</p> <ul style="list-style-type: none"> ▪ Electricity substations. ▪ Main switchboards "which sustain emergency equipment operating in emergency mode". ▪ Electricity conductors that supply main switchboard. 	DTS	A main switchboard if located within the building within the proposed buildings which sustains emergency equipment operating in the emergency mode must be separated from any other part of the building by construction having an FRL of not less than 120/120/120 and have any doorway in that construction protected with a self-closing fire door having an FRL not less than - /120/30.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
		<ul style="list-style-type: none"> ▪ Switchboards must also be segregated (where applicable) 		
Public Corridors in Class 2 & 3 Buildings	C2.14	In a Class 2 or 3 building a public corridor, if more than 40 metres in length must be divided at intervals of not more than 40 metres with smoke proof walls complying with Clause 2 of Specification C2.5.	---	Not applicable.
BCA PART C3 - PROTECTION OF OPENINGS				
Deemed to Satisfy Provisions	C3.0	This Clause stipulates that the proposed development complies with BCA Section C Performance Requirements if the DTS provisions are met.	DTS	Noted. No recommendation.
Application of Part	C3.1	Exempt's openings such as control joints, weep holes, non-combustible ventilators for sub floor or cavity ventilation, etc, are exempted from protection requirements.	DTS	Noted. No recommendation.
Protection of Openings in External Walls	C3.2	This Clause stipulates that openings less than 3.0 m from a side or rear boundary or 6.0 m from the far boundary of a road must be protected.	DTS	<p>Buildings to Comply</p> <p>Openings in an external wall that are located with 3 metres from a side or rear adjoining boundary of the allotment or 6 metres from the far boundary of a road adjoining the allotment; or 6 metres from another building on the allotment that is not a class 10 building are required to be protected by one of the methods in accordance with Clause C3.4 below.</p> <p>The architectural plans indicate that protection of openings will be required in accordance with NCC/BCA Clause C3.4.</p>
Separation of External Walls and Associated Openings in Different Fire Compartments	C3.3	Separation required between external openings in different fire compartments.	DTS	Noted.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
Acceptable Methods of Protection	C3.4	Acceptable methods of protecting openings in external walls.	DTS	<p>Buildings to Comply (See Notes under BCA Clause C3.2 above).</p> <p>Where fire protection is required under Clause C3.2 above, doorways, windows and other openings must be protected as follows: -</p> <p>Doorways – internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or -/60/30 fire rated doors/frames that are self-closing or automatic closing.</p> <p>Windows – internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or -/60/- fire windows that are automatic closing or permanently fixed in the closed position; or -/60/- automatic closing fire shutters.</p> <p>Other Openings – construction having an FRL not less than -/60/; or internal or external wall-wetting sprinklers as appropriate. Excludes the protection of voids.</p> <p>Fire doors, fire windows and fire shutters must comply with Specification C3.4 of the BCA.</p> <p>If compliance cannot be achieved with the Deemed to Satisfy Provisions of the BCA, it is recommended that an Accredited Fire Engineer be engaged to prepare a suitable FER (Fire Engineering Solution).</p>
Doorways in Fire Walls	C3.5	This stipulates how doorways in fire walls are to be constructed.	DTS	Applicable only if doors are proposed to be installed in fire rated walls.
Sliding Fire Doors	C3.6	Installation requirements for sliding fire doors.	---	Not applicable.
Protection of Doorways in Horizontal Exits	C3.7	This stipulates how horizontal exits are to be protected.	DTS	Applicable only if doors are proposed to be installed in fire rated walls.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
Openings in Fire Isolated Exits	C3.8	Construction details of doorways leading into fire isolated exits.	---	Not applicable.
Service Penetrations in Fire Isolated Exits	C3.9	Services shall not be installed in fire isolated exits, except as permitted in this Clause.	---	Not applicable.
Openings in Fire Isolated Lift Shafts	C3.10	Construction details of doorways leading into fire isolated lift shafts and construction of lift indicator panels.	---	Not applicable.
Bounding Construction Class 2, 3, & 4 Buildings	C3.11	Stipulates how to protect openings in bounding construction (residential building / parts).	---	Not applicable.
Openings in Floors & Ceilings for Services	C3.12	Services where passing through fire rated floors and/or walls shall be suitably protected to maintain the FRL of the building element(s) either by the introduction of fire rated shafts and/ or fire stopping / sealing at the penetration.	---	Not applicable.
Openings in Shafts	C3.13	Any openings into fire rated service shafts shall be protected in accordance with this Clause.	---	Not applicable
---	C3.14	Deliberately left blank in the BCA.	---	---
Openings for Service Installations	C3.15	Services where passing through fire rated floor or walls shall be suitably protected to maintain the FRL of the building element(s).	---	Not applicable.
Construction Joints	C3.16	Construction joints shall achieve the same FRL as the building component in which it is installed.	DTS	<p>Building to Comply</p> <p>Applicable where external walls to buildings are required to achieve an FRL in accordance with the NCC/BCA Specification C1.1 Table 5 Type C Construction. Applicable where external walls of buildings are located less than 3 metres to the adjoining boundaries and within 3 metres from another building on the same allotment.</p> <p>Construction joints, spaces and the like in and between elements required to be fire-resisting</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
				with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS1530.4 to achieve the required FRL.
Columns Protected with Lightweight Construction to achieve an FRL	C3.17	Any column protected with lightweight construction should maintain the fire integrity of a building element through which it passes.	DTS	<p>Building to Comply</p> <p>Applicable where external walls to buildings are required to achieve an FRL in accordance with the NCC/BCA Specification C1.1 Table 5 Type C Construction. Applicable where external walls of buildings are located less than 3 metres to the adjoining boundaries and within 3 metres from another building on the same allotment.</p> <p>Compliance required where lightweight construction is proposed to be used on columns that are required to be protected to achieve the required Fire Resistance Level (FRL).</p>
PART C - SPECIFICATION C1.1 - FIRE RESISTING CONSTRUCTION				
Exposure to Fire Source Features	Specification C1.1 Clause 2.1	This Clause stipulates when a building element is exposed to a fire source feature.	DTS	<p>A part of a building element is exposed to a fire-source feature if any of the horizontal lines between that part and the fire source feature, or vertical projection of the feature, is not obstructed by another part of the building that an FRL of not less than 30/-/- and is neither transparent nor translucent.</p> <p>If various distances apply for different parts of a building element then the entire element must have an FRL applicable to that part having the least distance between itself and the relevant fire source feature; or each part of the element must have an FRL applicable according to its individual distance from the relevant-fire source feature.</p>
Fire Protection for a Support of Another Part	Specification C1.1 Clause 2.2	The structural integrity of any part of a building required to have a particular FRL shall not be reduced or undermined by reason of it being supported by a part of	DTS	Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must have an FRL not less than

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		the building that does not have at least the same FRL as the part it supports.		that required by other provisions of BCA Specification C1.1.
Lintels	Specification C1.1 Clause 2.3	Details where lintels over doorways or openings require an FRL.	DTS	If a building element is required to have an FRL any lintel proposed to be installed must have the same FRL. Structural adequacy of the building has not been assessed.
Attachments not to impair fire resistance	Specification C1.1 Clause 2.4	This clause outlines how combustible elements can be attached to an element that is required to have an FRL.	DTS	The method of attaching or installing a finish, lining, ancillary element or service installation to the building element must not reduce the fire-resistance of that element below that required.
General Concessions	Specification C1.1 Clause 2.5	Outlines general FRL concessions that can be applied for various building components.	DTS	Noted. No recommendation.
Mezzanine Floors Concession	Specification C1.1 Clause 2.6	Stipulates that a mezzanine and its supports do not need to achieve a fire rating provided other measures are adopted.	---	Not applicable.
Enclosure of Shafts	Specification C1.1 Clause 2.7	This Clause stipulates how you enclose various shafts both at the top and the bottom.	---	Not applicable.
Carparks in Class 2 & 3 Buildings	Specification C1.1 Clause 2.8	This Clause allows for a concession to fire rating to carparks in Class in Class 2 and 3 buildings.	---	Not applicable.
Residential Aged Care Building: Concession	Specification C1.1 Clause 2.9	Allows FRL concessions to sprinklered residential aged care buildings.	---	Not applicable.
Type A Fire Resisting Construction	Specification C1.1 Clause 3.1 – 3.10 & Table 3	This Clause and Table outline the Fire Resistance Levels of various building elements for Type A Construction.	---	Not applicable.
Type B Fire Resisting Construction	Specification C1.1 Clauses	This Clause and Table outline the FRLs of various buildings elements for Type B	---	Nor applicable.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
Type C Fire Resisting Construction	4.1 – 4.3 Specification C1.1 Clauses 5.1 – 5.2	construction. This Clause and Table outlines the FRLs of various building elements for Type C construction.	DTS	<p>Buildings to Comply</p> <p>The principal implication of Type C Construction is that all building elements consisting of external walls, & columns must be suitably fire rated. All external walls are required to achieve the following FRL's if applicable: -</p> <p><u>Class 6 Buildings</u></p> <p>External Walls as follows-</p> <p>Less than 1.5m from a fire source feature – 90/90/90 (adjoining boundary and buildings on the same allotment).</p> <p>1.5m to less than 3 m from a fire source feature – 60/60/60 (adjoining boundary and buildings on the same allotment).</p> <p>3 m or more from a fire source feature - -/-/ - (adjoining boundary and buildings on the same allotment).</p> <p><u>Class 6 Building</u></p> <p>External Columns as follows:</p> <p>Less than 1.5m from a fire source feature- 90/-/- adjoining boundary and buildings on the same allotment).</p> <p>1.5m to less than 3 m from a fire source feature – 60/-/- adjoining boundary and buildings on the same allotment).</p> <p>3m or more -/-/- adjoining boundary and buildings on the same allotment).</p> <p><u>Common Walls & Fire Walls (Internal)</u></p> <p>Between or bounding Sole-Occupancy Units Class 6 buildings of Type C Construction – -/-/- adjoining boundary and buildings on the same allotment).</p>

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				<p><u>Note: The determination of the buildings required fire resistance levels and structural integrity is beyond the scope of this Fire Safety & BCA assessment report.</u></p> <p>The architectural plans indicate that external walls are located within 3 metres of a fire source feature.</p> <p>Where the distance of external walls are located less than 3 metres from the adjoining boundaries and less than 3 metres from buildings on the same allotment, the external walls of the subject building/s shall achieve the minimum FRL'S as specified above. Details of the Fire Resistance Levels are to be indicated on the architectural plans.</p>
PART C - SPECIFICATION C1.8 - STRUCTURE TESTS FOR LIGHTWEIGHT CONSTRUCTION				
Structural Tests for Lightweight Construction	Specification C1.8	This Specification describes the tests to be applied to & criteria to be satisfied by a wall system of lightweight construction that has an FRL.	DTS	<p>(See Notes under BCA Clause C1.8 above).</p> <p>Compliance required where lightweight construction is proposed to be used in the building to achieve the required Fire Resistance Level (FRL).</p>
PART C - SPECIFICATION C1.10 - FIRE HAZARD PROPERTIES				
Fire Hazard Properties	Specification C1.10	This Specification sets out requirements in relation to the fire hazard properties of materials, linings, & surface finishes in buildings.	DTS	<p>Buildings to Comply</p> <p><u>Note i: Where carpets and surface linings are proposed within the building those materials are to comply with Specification C1.10 of the BCA.</u></p> <p><u>Note ii: Typical new items to be assessed for compliance with this clause of the BCA are carpets, timber flooring, vinyl, linoleum, parquetry and wall & ceiling cladding materials...etc...).</u></p> <p><u>Note iii: No assessment has been made of the buildings existing fire hazard properties under this Fire Safety & BCA Assessment Report.</u></p> <p>(See Comments under BCA Clause C1.10 above)</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
PART C - SPECIFICATION C1.11 - PERFORMANCE OF EXTERNAL WALLS IN FIRE				
Performance of External Walls in Fire	Specification C1.11	Design considerations for tilt up construction.	---	Not applicable.
PART C - SPECIFICATION C1.13 - CAVITY BARRIERS FOR FIRE-PROTECTED TIMBERS				
Cavity Barriers for Fire-protected Timber	Specification C1.13	This Specification sets out requirements for cavity barriers in <i>fire-protected timber</i> construction.	---	Not applicable.
PART C - SPECIFICATION C2.5 - SMOKE-PROOF WALLS IN HEALTH CARE & AGED CARE				
Smoke Proof-Walls in Health Care/Aged Care	Specification C2.5	Requirements for smoke-proof walls in Clause 9a and 9c buildings.	---	Not applicable.
PART C - SPECIFICATION C3.4 - FIRE DOORS, SMOKE DOORS, FIRE WINDOWS, & SHUTTERS				
Fire Doors, Smoke Doors, Fire Windows, & Shutters	Specification C3.4	This Specification sets out the requirements for the construction of fire doors, smoke doors, fire windows, and fire shutters.	DTS	Refer to previous comments under Clauses C3.2 & C3.4 above.
PART C - SPECIFICATION C3.15 - PENETRATION OF WALLS, FLOORS, & CEILINGS BY SERVICES				
Penetration of Walls, Floors, & Ceilings by Services	Specification C3.15	This Specification sets out prescribed materials and methods of installation for services that penetrate walls, and floors that are required to have an FRL.	---	Not applicable.
BCA PART D1 - PROVISION FOR ESCAPE				
Deem to Satisfy Provisions	D1.0	The Clause stipulates that the proposed development complies with Section D Performance Requirements of the BCA if the deem to satisfy provisions are met.	DTS	Noted. No recommendation.
Application of Part	D1.1	This Clause stipulates that Part D of the BCA does not apply to the internal parts of a sole occupancy unit in a Class 2, 3, or 4 part building.	---	Not applicable.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
Number of Exits Required	D1.2	This Clause outlines the number of exits required from each part of the building.	DTS	Complies
When Fire Isolated Exits are Required	D1.3	This Clause outlines when fire isolated exits are required in buildings.	---	Not applicable.
Exit Travel Distances	D1.4	Travel distances to exits in various building types.	DTS	Complies The maximum travel distance in buildings complies with the NCC/BCA.
Distances between Alternative Exits	D1.5	Distance between alternative exits to be a maximum of 45 m (Class 2, 3 buildings and Class 9a patient care areas) and 60 m (in all other cases). Alternative exits must not be located less than 9 metres apart.	DTS	Complies
Dimensions of Exits and Paths of Travel to Exits	D1.6	This Clause details clear dimensions and widths of exits.	DTS	<p>See Comments Below</p> <p>In buildings of this type, all exits and paths of travel to the building's exits are to achieve a minimum unobstructed height of not less than 2.0 metres (except the height of a doorway may be reduced to not less than 1980 mm), with a minimum unobstructed width not less than 1000 mm. The final exit discharge doors can have a clear opening width of 750mm.</p> <p>The total number of persons to be calculated for dining areas must be in accordance with NCC/BCA Clause D1.13 to determine the minimum required unobstructed width throughout the buildings.</p> <p>Ramps & Stairs – must be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and extend without interruption to a height of not less than 2 m vertically above a line along the nosing's of the treads or the floor surface of the ramp or landing.</p> <p>Details of the door dimensions is to be indicated on the architectural plans for the Construction</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
				Certificate.
Travel via Fire Isolated Exits	D1.7	This Clause details connection into and discharge from fire isolated stairs / passageways.	---	Not applicable.
External Stairways or Ramps in-lieu of Fire Isolated Exits	D1.8	Use of an external stair or ramp instead of a fire isolated stair.	---	Not applicable.
Travel by Non-Fire Isolated Stairways or Ramps	D1.9	This Clause outlines how you can utilise an open stair for egress.	---	Not applicable.
Discharge from Exits	D1.10	Clear width and disposition of exit discharges.	DTS	<p>See Comments Below</p> <p>Ensure that exit points are not blocked at the point of discharge and where necessary, suitable barriers must be provided are to be provided to prevent vehicles from blocking the exit, or access to it.</p> <p>If a required exit leads to an open space, the path of travel must have an unobstructed width throughout of not less than the required exit; or 1 metre – whichever is greater.</p>
Horizontal Exits	D1.11	Use and construction of horizontal exits.	DTS	Noted. No recommendation.
Non-Required Stairways, Ramps or Escalators	D1.12	Non required stairways, ramps and escalators use and permissible storeys connected.	---	Not applicable.
Number of Persons Accommodated	D1.13	Calculation of the number of occupants in each part of a building based on floor area.	DTS	<p>Buildings to Comply</p> <p>The following is applicable for the maximum number of persons to be accommodated based on the use of the buildings –</p> <p>Café/Dining Room – 1 m2 required per person.</p> <p>Restaurant – 1 m2 required per person.</p> <p>Details of the maximum number of persons accommodated is to be indicated on the architectural plans for the Construction</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
				Certificate.
Measurement of Distances	D1.14	Details how distances are measured in relation to egress design.	DTS	Complies
Method of Measurement	D1.15	Details how distances are measured in relation to egress design.	DTS	Noted. No recommendation.
Plant Rooms and Lift Motor Rooms: Concession	D1.16	Egress dispensations in relation to Plant Rooms and Lift Motor Rooms.	---	Not applicable.
Access to Lift Pits	D1.17	Access requirements to lift pits.	---	Not applicable.
BCA PART D2 - CONSTRUCTION OF EXITS				
Deem to Satisfy	D2.0	This Clause stipulates that the proposed development complies with Section D Performance Requirements of the BCA if the deem to satisfy provisions are met.	DTS	Noted. No recommendation.
Application of Part	D2.1	Relieves the interior of SOUs in Class 2 and 3 buildings from stair, landing and balustrade requirements.	---	Not applicable.
Fire Isolated Stairways & Ramps	D2.2	Structural design of fire isolated stair shafts.	---	Not applicable.
Non-Fire Isolated Stairways & Ramps	D2.3	This Clause stipulates how you must construct required open stairs where the rise in storeys of the building exceeds 2.	---	Not applicable.
Separation of Rising & Descending Stair Flights	D2.4	Fire isolated stairways must not connect storeys both above and below street level.	---	Not applicable.
Open Access Ramps & Balconies	D2.5	Construction of open access ramps and balconies in lieu of pressurised stairs.	---	Not applicable.
Smoke Lobbies	D2.6	Construction of smoke lobbies required by D1.7.	---	Not applicable.
Installations in Exits &	D2.7	Outlines where service installations can be	DTS	See Comments Below

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
Paths of Travel		accessed and suitable separation to be incorporated.		<p>Proposed services or equipment comprising of electricity meters and electrical distributions boards located in the path of travel to exits must be enclosed by non-combustible construction or a fire protective covering with doorways/openings suitably sealed against smoke spreading from the enclosure.</p> <p>Details are to be indicated on the architectural plans for the Construction Certificate.</p>
Enclosure of Space Under Stairs & Ramps	D2.8	This Clause highlights how you can store under an open stair. Storage under fire isolated stairs is not permissible. The space below a required non-fire isolated stairway must not be enclosed to form a cupboard or other enclosed space unless the enclosing walls and ceilings have an FRL of not less than 60/60/60; and any access doorway to the enclosed space is fitted with a self-closing -/60/30 fire door.	DTS	<p>See Comments Below</p> <p>NCC/BCA Clause D2.8 states any space below a required non-fire-isolated stairway (including an external stairway) or a non-fire isolated ramp must not be enclosed to form a cupboard or other enclosed space unless the enclosing walls and ceilings have an FRL of not less than 60/60/60. Any access doorway to the enclosed space is to be fitted with self-closing -/60/30 fire door.</p>
Width of Stairways	D2.9	This Clause stipulates how stair widths and heights are measured.	DTS	<p>A required stairway or ramp that exceeds 2 metres in width is counted as having a width of only 2 metres unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2 metres.</p>
Pedestrian Ramps	D2.10	Stipulates how a pedestrian ramp can serve as a required exit.	DTS	<p>See Comments Below</p> <p>A ramp serving as a required exit must where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS1428.1; or in any other case, have a gradient not steeper than 1:8.</p> <p>The floor surface of a ramp must have a slip-resistance classification in accordance with Table D2.14, NCC/BCA Clause D2.14 when tested in accordance with AS4586-2013 as follows –</p> <p>Ramp steeper than 1:14 Dry Surface Conditions – P4 or R11.</p> <p>Ramp steeper than 1:14 Wet Surface Conditions – P5 or R12.</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
				<p>Ramp steeper than 1:20 but not steeper than 1:14 Dry Surface Conditions – P3 or R10.</p> <p>Ramp steeper than 1:20 but not steeper than 1:14 Wet Surface Conditions – P4 or R11.</p> <p>Details are to be indicated on the architectural plans for the Construction Certificate.</p>
Fire-Isolated Passageways	D2.11	Fire isolated passageways to have an FRL of 60/60/60 or that of the fire isolated stair from which is extends.	---	Not applicable.
Roof as Open Space	D2.12	If the roof is considered "open space" then the slab must have an FRL of 120/120/120, and roof lights and the like must be located not less than 3m from path of travel.	---	Not applicable.
Goings & Risers	D2.13	This Clause stipulates construction of stair treads and risers.	DTS	<p>See Comments Below</p> <p>Proposed stairs are to comply with the following riser and going dimensions in accordance with NCC/BCA –</p> <p>Riser Dimensions – (NCC/BCA Requires min 115-190mm max).</p> <p>Going Dimensions - (NCC/BCA Requires min 250-355mm max).</p> <p>The variation between adjacent risers, or between adjacent goings cannot be greater than 5mm.</p> <p>The variation between the largest and smallest riser within a flight, or the largest and the smallest going within a flight, does not exceed 10mm.</p> <p>Risers must not have any openings that would allow a 125mm sphere to pass through the treads.</p> <p>Slip Resistance Classification for stairs and landings to comply with NCC/BCA Table D2.14 and AS4586-2013 as follows –</p> <p>Tread or Landing Surface Dry Surface Conditions – P3 or R10.</p> <p>Tread or Landing Surface Wet Surface Conditions</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
				<p>– P4 or R11.</p> <p>Nosing or landing edge strip Dry Surface Conditions – P3.</p> <p>Nosing or landing edge strip Dry Surface Conditions – P4.</p> <p>Details are to be indicated on the architectural plans for the Construction Certificate.</p>
Landings	D2.14	This Clause stipulates construction of landings.	DTS	<p>See Comments Below</p> <p>Slip Resistance Classification for stairs and landings to comply with NCC/BCA Table D2.14 and AS4586-2013 as follows –</p> <p>Tread or Landing Surface Dry Surface Conditions – P3 or R10.</p> <p>Tread or Landing Surface Wet Surface Conditions – P4 or R11.</p> <p>Nosing or landing edge strip Dry Surface Conditions – P3.</p> <p>Nosing or landing edge strip Dry Surface Conditions – P4.</p> <p>Details are to be indicated on the architectural plans for the Construction Certificate.</p>
Thresholds	D2.15	This Clause stipulates construction of thresholds to doorways.	DTS	<p>See Comments Below</p> <p>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 unless in a building required to be accessible by D3, the doorway opens to a road or open space; and is provided with a threshold ramp or step ramp in accordance with AS1428.1. In all other cases the doorway opens to a road or open space, external stair landing or external balcony; the door sill is not more than 190mm above the finished surface of the ground, balcony, or the like, to which the door opens.</p> <p>Details are to be indicated on the architectural plans for the Construction Certificate.</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
Barriers to Prevent Falls	D2.16	Details of height and construction of balustrades to voids, stairs, balconies, etc.	DTS	<p>See Comments Below</p> <p>A continuous barrier must be provided along the side of a stairway, ramp, deck or the like and any delineated path of access to a building if the trafficable surface is 1 metre or more above the surface beneath. The height of the barrier must be a minimum of 1 metre from the finished floor with no gaps more than 125 mm.</p> <p>Details are to be indicated on the architectural plans for the Construction Certificate.</p>
Handrails	D2.17	Details where handrails need to be incorporated along stairways.	DTS	<p>See Comments Below</p> <p>Handrails must be located along at least one side of a ramp or flight; and located along each side if the total width of the stairway or ramp is 2 metres or more.</p> <p>Handrails required to assist people with a disability must be provided in accordance with NCC/BCA Clause D3.3.</p> <p>Details are to be indicated on the architectural plans for the Construction Certificate.</p>
Fixed Platforms, Walkways, Stairways, & Ladders	D2.18	Details compliance with AS 1657 in respect to walkways, stairways and ladders serving machinery rooms, boiler houses, lift motor rooms, plant rooms, and the like.	---	Not applicable.
Doorways & Doors	D2.19	Details how doors serving as required exits are to operate.	DTS	<p>See Comments Below</p> <p>If installed power operated doors in the path of travel to required exit doors must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source.</p>
Swinging Doors	D2.20	Swing Doors serving as required exits must swing in the direction of travel, unless it serves a building or part less than 200 m ² .	DTS	<p>Buildings to Comply</p> <p>A swinging door in a required exit or forming a part of a required exit must not encroach at any part of its swing by more than 500mm on the required width (including any landings) of a required stairway, ramp or passageway if it is likely to impede the path of travel of the people</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
				<p>using the exit.</p> <p>A swinging door in a required exit or forming a part of the required exit must swing in the direction of egress unless it serves a building or part with a floor area of not more than 200m², it is the only exit from the building or part and is fitted with a device for holding the door in an open position. The swing must not otherwise impede the path or direction of egress.</p> <p>Buildings with a floor area exceeding 200m² will require exit doors located in the path of travel to swing in the direction of egress.</p> <p>Details are to be indicated on the architectural plans for the Construction Certificate.</p>
Operation of Latch	D2.21	This Clause details hardware / operating requirements for doors in a required exit, forming part of a required exit or in the path of travel to a required exit.	DTS	<p>Buildings to Comply</p> <p>The BCA requires that all <i>exit</i> doors and doors in the path of travel to an <i>exit</i> are to be fitted with single handed action (downward) door hardware positioned at a height of between 900 mm – 1100 mm above finished floor level.</p> <p>Compliant door hardware to be installed where an area is required to be accessible by NCC/BCA Part D3.</p> <p>In addition, door hardware levers are to:</p> <p>a) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and</p> <p>b) have a clearance between the handle and the back of the plate or door face at the centre of the grip section of the handle of not less than 35 mm and not more than 45 mm.</p> <p>Details are to be indicated on the architectural plans for the Construction Certificate.</p>
Re-entry from Fire Isolated Exits	D2.22	Stipulates whether you can lock a fire stair entry door from the inside.	---	Not applicable.
Signs on Doors	D2.23	Appropriate signage is required to exit	DTS	Only applicable if fire rated doors are required in

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		doors opening to fire isolated passageways, and stairways.		accordance with NCC/BCA Specification C1.1, Table 5, Type C Construction and Clauses C3.2, C3.4.
Protection of Openable Windows	D2.24	This Clause requires protection of window opening.	DTS	<u>Not assessed under this Fire Safety & BCA Assessment Report as it is considered to be a child protection issue not a fire safety issue.</u>
Timber stairways: Concession	D2.25	This Clause provides concessions for fire-isolated stairways and passageways constructed from fire-protected timbers.	---	Not applicable.
BCA PART E1 - FIRE FIGHTING EQUIPMENT				
Deemed to Satisfy Provisions	E1.0	This Clause stipulates that the building complies with Section E Performance Requirements of the BCA if the Deemed to Satisfy Provisions are met.	DTS	Noted. No recommendation.
---	E1.1	Deliberately left blank in the BCA.	---	---
---	E1.2	Deliberately left blank in the BCA.	---	---
Hydrants	E1.3	This Clause stipulates when fire hydrants are required.	DTS	<p>See Comments Below</p> <p>Buildings of this type are required to be served by a fire hydrant system in accordance with Clause E1.3 of the BCA and AS 2419.1-2005 where the total floor area is greater than 500m². The total floor area of the building is understood to be over 500m². During our assessment it was determined that the attached awning located between the buildings and over the walkway would create one compartmentation in which the overall floor area of the building/s would be greater 500m².</p> <p>Note - There is no hydrant system currently on site.</p> <p>The applicant is proposing to delete the awning located between the buildings, (For example the Dining Pavilion, Kitchen and Bakery Retail). It is understood by removing the awning, roof frame</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
				<p>and columns located between the subject buildings and over the walkway will reduce the total floor area to less than 500m², A hydrant system will not be required if the floor area of the building is less than 500m²</p> <p>It is recommended that the DA Plans be amended and a Section 4.55 be lodged with the local Council.</p>
Fire Hose Reels	E1.4	This Clause stipulates when fire hose reels are required.	DTS	<p>See Comments Below</p> <p>A fire hose reel is required to be installed in a building where the fire compartment has a floor area of greater than 500m²; or where the whole building is served by one or more internal hydrants. During our assessment it was determined that the attached awning located between all buildings would create one compartmentation in which the overall floor area of the building/s would be greater 500m².</p> <p>Note - There is no hose reel system currently on site.</p> <p>The applicant is proposing to delete the awning located between the House Dining, Dining Pavilion, Kitchen and Bakery Retail). It is understood by removing the awning, roof frame and columns located between the subject buildings and over the walkway will reduce the total floor to less than 500m², Hose reels will not be required if the total floor area of the building is reduced to less than 500m²</p> <p>It is recommended that the DA Plans be amended and a Section 4.55 be lodged with the local Council.</p>
Sprinklers	E1.5 & Table E1.5	This Clause stipulates when sprinklers are required.	---	Not applicable.
Portable Fire Extinguishers	E1.6 & Table E1.6	This Clause stipulates where extinguishers need to be installed.	DTS	<p>Buildings to Comply</p> <p>Portable fire extinguishers are required</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
				<p>throughout all buildings in accordance with Table E1.6 of the BCA and AS 2444-2001 with identification and location signage.</p> <p>Note i: The portable fire extinguishers must be positioned to ensure that they do not encroach on the minimum 1000 mm exit widths.</p> <p>Note ii: The portable fire extinguishers required to be provided throughout the Class 2 building must be positioned at a distance of no greater than 10.0 metres from the entry doors of all residential sole occupancy units. These portable fire extinguishers are to serve only the storey that they are located on and are to be AB(E) type having a minimum size of 2.5 kg in accordance with Table E1.6 of the BCA. We however recommend the installation of 4.5kg AB(E) portable fire extinguishers. The portable fire extinguishers are to be securely mounted on the wall at a maximum height of 1200m from the finished floor level. Location signs are to be mounted above or near the fire extinguishers at a minimum height of 2 metres from the finished floor level.</p> <p>Details of the portable fire extinguishers is to be indicated on the architectural plans prior to the issue of the Construction Certificate.</p> <p>An installation certificate by the installer is to be provided upon completion of the above works.</p> <p>A Final Fire Safety Certificate is to be issued by a suitably qualified Fire Safety Consultant prior to the issue of the Occupation Certificate.</p>
---	E1.7	Deliberately left blank in the BCA.	---	---
Fire Control Centres	E1.8	This Clause stipulates when a fire control centre is required.	---	Not applicable.
Fire Precautions during Construction	E1.9	Fire services must be provided and be operational during the construction phase	---	Not applicable.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
		in accordance with Clause E1.9.		
Provision for Special Hazards	E1.10	Outlines where special provisions are required certain hazards.	---	Not applicable.
BCA PART E1 - SPECIFICATIONS				
Fire Sprinkler Systems	Specification E1.5	This Specification sets out requirements for the design and installation of fire sprinkler systems.	---	Not applicable.
Fire Control Centres	Specification E1.8	This Specification describes the construction & content of required Fire Control Centres or Rooms.	---	Not applicable.
BCA PART E2 - SMOKE HAZARD MANAGEMENT				
Deemed to Satisfy Provisions	E2.0	This Clause stipulates that the building complies with Section E Performance Requirements of the BCA if the Deemed to Satisfy Provisions are met.	DTS	Noted. No recommendation.
Application of Part	E2.1	Stipulates where Smoke Hazard Management provisions do not apply.	---	Not applicable.
General Requirements	E2.2, Table E2.2a & E2.2b	Details how compliance is achieved with both Smoke Hazard Management Provisions including treatment of systems that may not be part of the overall Smoke Hazard Management System.	---	Not applicable.
BCA PART E2 - SPECIFICATIONS				
Smoke Detection & Alarm Systems	Specification E2.2a	This Specification outlines the design of various smoke detection and alarm systems.	---	Not applicable.
Smoke Exhaust Systems	Specification E2.2b	This Specification highlights the requirements for mechanical smoke exhaust and zone smoke control systems.	---	Not applicable.

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Smoke & Heat Vents	Specification E2.2c	Details use and construction of smoke and heat vents.	---	Not applicable.
BCA PART E3 - LIFT INSTALLATIONS				
Lift Installations	E3.0 – E3.10	These Clauses detail construction and design of lift installations.	---	Not applicable.
BCA PART E4 - EMERGENCY LIGHTING, EXIT SIGNS, & WARNING SYSTEMS				
Deemed to Satisfy Provisions	E4.0	Specifies DTS means to satisfy performance requirements E4.1 to E4.9.	DTS	Noted. No recommendation.
Emergency Lighting	E4.2 – E4.4	Design and installation requirements for emergency lighting.	DTS	<p>See Comments Below</p> <p>Consistent with the Prescriptive Requirements of the NCC/BCA, emergency lighting is required in accordance with Clauses E4.2 and E4.4 of the BCA and AS/NZS 2293.1-2018 where the floor area of the storey/building is more than 300m².</p> <p>A manual testing facility must be installed in the building in accordance with AS/NZS2293.1-2018 to allow the 90-minute test to be carried out on a 6-monthly basis in accordance with AS/NZS2293.2-2019.</p> <p>The location of the emergency lights is to be indicated on the Construction Certificate Plans.</p> <p>The licensed electrician is to prepare the installation certificate prior to the issue of the Occupation Certificate.</p> <p>A Final Fire Safety Certificate shall be prepared by a Fire Safety Consultant prior to the issue of the Final Occupation Certificate.</p>
Exit Lighting	E4.5 – E4.8	Design and installation requirements for exit lighting.	DTS	<p>Buildings to Comply</p> <p>Illuminated exit and directional signs shall be installed throughout the building in accordance with BCA Clauses E4.5, E4.6 (NSW), E4.8 & AS/NZS2293.1-2018.</p> <p>A manual testing facility must be installed in the</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	"Deemed to Satisfy" OR "Performance Solution" to Satisfy BCA Performance Requirements	Comments
				<p>building in accordance with AS/NZS2293.1-2018 to allow the 90-minute test to be carried out on a 6-monthly basis in accordance with AS/NZS2293.2-2019.</p> <p>The location of the illuminated exit and directional signs is to be indicated on the Construction Certificate Plans.</p> <p>The licensed electrician is to prepare the installation certificate prior to the issue of the Occupation Certificate.</p> <p>A Final Fire Safety Certificate shall be prepared by a Fire Safety Consultant prior to the issue of the Final Occupation Certificate.</p>
Sound Systems and Intercommunication System for Emergency Purposes	E4.9	This Clause details where a SSISEP system is required.	---	Not applicable.
Photoluminescent Exit Signs	Specification E4.8	This Specification contains requirements for photoluminescent exit signs.	---	Not applicable.

CONCLUSION

In summary it is considered that the adoption of the recommendations in this report will result in enhanced fire and life safety commensurate with the age and nature of the building.

Where compliance with the Deemed to Satisfy Provisions cannot be achieved, we recommend that an Accredited Fire Engineer be engaged to prepare an Alternative Fire Engineering Solution.

Note – We were not provided with any details of the carparking spaces/area, and therefore the accredited certifier may require the provision of an onsite fire hydrant.

We recommend that an Emergency Evacuation Plan should be installed in the building in accordance with AS3745-2010 Planning for Emergencies in Facilities.

If you have any questions in relation to the above, please do not hesitate to contact the undersigned on 0414 420 516.

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Diploma Applied Science Building Surveying,
Diploma in Building Construction
& Certificate IV Fire Technology*



Sydney Fire Safety Consultancy & Building Inspections

**Proposed Fire Safety Measures for 44-50 Tench Avenue, JAMISONTOWN, NSW
2750 (Essential Fire Safety Measures Subject to Change)**

ESSENTIAL FIRE SAFETY MEASURE	STANDARD OF PERFORMANCE
▪ Emergency Lighting (with manual testing facility)	BCA 2019 Amendment 1 Clauses E4.2, E4.4 & AS/NZS2293.1-2018
▪ Illuminated Exit & Directional Signage (with manual testing facility)	BCA 2019 Amendment 1 Clauses E4.5, E4.6 (NSW), E4.8 & AS/NZS2293.1-2018
▪ Fire Blankets	AS2444-2001 & AS/NZS3504-2006
▪ Emergency Evacuation Procedures – Planning for Emergencies in Facilities	AS3734-2010
▪ Portable Fire Extinguishers	BCA 2019 Amendment 1 Clause E1.6/Table E1.6 & AS2444-2001
▪ Protection of Openings (only required if openings along the external walls of the buildings are located within 3.0 metres of the adjoining boundaries and 6 metres from buildings on the same allotment - fire measure subject to change if the distance to the adjoining boundaries is 3 metres from the adjoining boundaries and 6 metres to buildings on the same allotment)	BCA 2019 Amendment 1 Clauses C3.2, C3.4 & BCA 2019 Amendment 1 Specification C3.4
▪ Paths of Travel to Exits	Clause 186 of the Environmental Planning & Assessment Regulation 2000

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