



BUILDING CODE OF AUSTRALIA ASSESSMENT REPORT

(BCA 2016 Edition)

15 -17 DENT STREET, JAMISONTOWN

Assessment based on the architectural plans prepared by Alan Johnson Architect, Project No. 15015, Drawing No's DA101 (Rev.B), DA102 (Rev.B), DA201 (Rev.B), DA202 (Rev.B), DA203 (Rev.B), DA204 (Rev.B), DA205 (Rev.B), DA206 (Rev.B), DA207 (Rev.B), DA208 (Rev.B), DA301 (Rev.B), DA302 (Rev.B), DA303 (Rev.B), DA304 (Rev.B), DA401 (Rev.B) & DA402 (Rev.B) all dated 30 August 2016.

BCA Assessment Report	0	DA Issue	Grant McGrath / 21.11.16	
DOC. NAME	REV.	DESCRIPTION	PREPARED / DATE	SIGNED

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INTRODUCTION

1.1 General

The following Building Code of Australia Assessment report has been prepared for Alan Johnson (Architect) for the proposed residential apartment building proposed to be erected at 15 -17 Dent Street, Jamisontown.

1.2 Purpose of the Report

This purpose of the report is to detail all relevant deemed-to-satisfy provisions of the Building Code of Australia 2016 (BCA) that relate to the proposed residential apartment building and to make recommendations to ensure compliance with these provisions.

1.3 Report Basis

This report is based on:

- i. The Building Code of Australia 2016, inclusive of NSW variations.
- ii. The plans prepared by Alan Johnson (Architect) nominated above.

1.4 Exclusions

This report does not consider the following except where specifically mentioned;

- i. The Disability Discrimination Act 1992 (Commonwealth) including the suitability of adaptable units to comply with Council requirements.
- ii. The requirements of other service providers (i.e. Ausgrid, Sydney Water etc.)
- iii. Fire engineering analysis of any matter found not to meet with the deemed-to-satisfy provisions of the BCA.



BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	Proposed Design BCA "Deemed to Satisfy" OR "Alternative Solution" to Satisfy BCA Performance Requirements	Comments
BCA PART A0 - APPLICATION				
BCA General Application	A0.1 – A1.0	Noted as Applicable	---	Noted.
BCA PART A1 - INTERPRETATION				
BCA Interpretation	A1.1 – A1.7	Noted as Applicable	---	Noted. No recommendations.
BCA PART A2 - ACCEPTANCE OF DESIGN & CONSTRUCTION				
Acceptance of Design & Construction	A2.1 – A2.5	Noted as Applicable	---	Noted. No recommendations.
BCA PART A3 - CLASSIFICATIONS OF BUILDINGS & STRUCTURES				
Principles of Classification	A3.1	Noted	---	Noted. No recommendations.
Classifications	A3.2	BCA building classifications.	DTS	Class 2: (Residential) Class 7a: (Carpark)
Multiple Classification	A3.3	Each part of building to be classified separately.	---	Noted.
Parts with more than one Classification	A3.4	Each Classification to comply with relevant provisions of the BCA.	---	Noted.
BCA PART A4 - UNITED BUILDINGS				
When Buildings are United	A4.1	BCA provisions applicable to buildings connected through openings in the external walls dividing them.	---	Not applicable.
Alterations in a United Building	A4.2	BCA requirements where buildings cease to be united buildings.	---	Not applicable.

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BCA PART A - SPECIFICATIONS				
Fire-Protected Timber	Specification A1.1	This Specification contains requirements for fire-protected timber.	---	Noted.
Standards Adopted by Reference	Specification A1.3	This Specification calls up relevant Australian Standards adopted by the BCA.	---	Noted.
Fire Resistance of Building Elements	Specification A2.3	This Specification sets out the Procedures for determining the FRL of various building elements including providing some DTS solutions.	---	Noted.
Early Fire Hazard Tests for Assemblies	Specification A2.4	This Specification sets out the Procedures for determining the Early Fire Hazard Indices of components and assemblies.	---	Noted.
BCA PART B1 - STRUCTURAL PROVISIONS				
Deemed to Satisfy Provisions	B1.0	Specifies DTS means to satisfy Performance Requirements BP1.1 and BP1.2.	DTS	<p>Building to Comply.</p> <p>Where a <i>Building Solution</i> is proposed to comply with the <i>Deemed-to-Satisfy Provisions</i>, Performance Requirement BP1.1 to BP1.3 are satisfied by complying with B1.1, B1.2, B1.4 and BP5.</p> <p>All structural elements shall be designed and certified by a <i>professional Structural Engineer (NPER)</i> in accordance with these BCA requirements.</p> <p>In addition, the professional Structural Engineer is to nominate the fire resistance level of all structural elements in accordance with AS 3600 -2009 (Concrete Structures Code) and AS 3700-2011 (Masonry Structures Code).</p>

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Resistance to Actions	B1.1	Resistance to actions.	DTS	<p>Building to Comply.</p> <p>The resistance of a building or structure must be greater than the most critical action effect resulting from different combinations of actions, where –</p> <p>i) the most critical action effect on a building or structure is determined in accordance with B1.2 and the general design procedures contained in AS/NZS 1170.0-2002; and</p> <p>the resistance of a building or structure is determined in accordance with B1.4.</p> <p>All structural elements shall be designed and certified by a <i>professional</i> Structural Engineer (NPER) in accordance with these BCA requirements.</p> <p>In addition, the professional Structural Engineer is to nominate the fire resistance level of all structural elements in accordance with AS 3600 -2009 (Concrete Structures Code) and AS 3700-2011 (Masonry Structures Code).</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Determination of Individual Actions	B1.2	Determination of individual actions.	DTS	<p>Building to Comply.</p> <p>The magnitude of individual actions must be determined in accordance with the following:</p> <p>a) Permanent actions:</p> <p>i) the design or known dimensions of the building or structure; and</p> <p>ii) the unit weight of the construction; and</p> <p>iii) AS/NZS 1170.1-2002.</p> <p>b) Imposed actions:</p> <p>i) the known loads that will be imposed during the occupation or use of the building or structure; and</p>

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				<ul style="list-style-type: none"> ii) construction activity actions; and iii) AS/NZS 1170.1-2002. c) Wind and earthquake actions: i) the applicable annual probability of design event for safety, determined by— <ul style="list-style-type: none"> A) assigning the building or structure an Importance Level in accordance with Table B1.2a of the BCA; and B) determining the corresponding annual probability of exceedance in accordance with Table B1.2b of the BCA; and ii) AS/NZS 1170.2-2011; and iii) AS/NZS 1170.3-2003 & AS 1170.4-2007. d) Actions not covered in (a), (b) and (c) above: i) the nature of the action; and ii) the nature of the building or structure; and iii) the Importance Level of the building or structure determined in accordance with Table B1.2a of the BCA; and iv) AS/NZS 1170.1-2002. (e) For the purposes of (d) the actions include but are not limited to - i) liquid pressure action; and ii) ground water action; and iii) rainwater action (including ponding action); and iv) earth pressure action; and v) differential movement; and vi) time dependent effects (including creep and shrinkage); and vii) thermal effects; and viii) ground movement caused by— <ul style="list-style-type: none"> A) swelling, shrinkage or freezing of the subsoil; and

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				<p>B) landslip or subsidence; and C) site-works associated with the building or structure; and ix) construction activity actions.</p> <p>All structural elements shall be designed and certified by a professional Structural Engineer (NPER) in accordance with these BCA requirements.</p> <p>In addition, the professional Structural Engineer is to nominate the fire resistance level of all structural elements in accordance with AS 3600 -2009 (Concrete Structures Code) and AS 3700-2011 (Masonry Structures Code).</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
---	B1.3	This clause has been deliberately left blank in the BCA.	---	---
Determination of Structural Resistance	B1.4	Determination of structural resistance of materials and forms of construction.	DTS	<p>Building to Comply.</p> <p>All structural and other building elements are to comply with the following Australian Standards (as applicable):</p> <ul style="list-style-type: none"> ▪ Masonry (including masonry-veneer, unreinforced masonry and reinforced masonry – AS 3700-2011 ▪ Concrete – AS 3600-2009 ▪ Steel Structures – AS 4100-1998 ▪ Cold Formed Steel Structures – AS/NZS 4600-2005 ▪ Composite steel and concrete - AS 2327.1-2003 ▪ Design of timber structures – AS 1720.1-2010 ▪ Piling – AS 2159-2009

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				<ul style="list-style-type: none"> ▪ Glazed Assemblies – AS 2047-2014 & AS 1288-2006 ▪ Termite Risk Management – AS 3660.1-2000 <u>or</u> AS 3660.1-2014 <p>(A durable notice is to be provided in accordance with Clause B1.4 (i) & B1.4 (ii) of the BCA).</p> <ul style="list-style-type: none"> ▪ Metal Roofing – AS 1562.1-1992 <p>All structural elements shall be designed and certified by a professional Structural Engineer (NPER) in accordance with these BCA requirements.</p> <p>In addition, the professional Structural Engineer is to nominate the fire resistance level of all structural elements in accordance with AS 3600 -2009 (Concrete Structures Code) and AS 3700-2011 (Masonry Structures Code).</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Structural Software	B1.5	Structural software limitations.	DTS	<p>Building to Comply.</p> <p>Structural software used in computer aided design of a building or structure that uses design criteria based on deemed-to-satisfy provisions of the BCA (including its reference documents), must comply with the ABCB Protocol for Structural Software.</p> <p>The structural software limitations detailed above are limited to those elements listed in Clause B1.5(b)(i)-(v) of the BCA.</p> <p>All structural elements shall be designed and certified by a professional Structural Engineer (NPER) in accordance with these BCA requirements.</p>

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Construction of Buildings in Flood Hazard Areas	B1.6	Construction of Buildings in Flood Hazard Areas (Class 2, 3, 4, 9a, 9c buildings)	Development Consent Conditions	(Reference is to be made to specific condition of any Development Consent to be issued by Penrith City Council)
BCA PART C1 - FIRE RESISTANCE & STABILITY				
Deemed to Satisfy Provisions	C1.0	Specifies DTS means to satisfy Performance Requirements CP1 to CP9.	---	Noted. No recommendations.
Type of Construction Required	C1.1 Table C1.1	This Clause stipulates the "Type of Construction" required based on a buildings "Rise in Storeys". Also see Clause C2.2 regarding maximum floor area limited requirements.	DTS	Type A construction required.
Calculation of Rise in Storeys	C1.2	This Clause stipulates how you calculate a buildings "rise in storeys".	DTS	The building has a rise in storeys of seven (7) with an effective height of less than 25.0 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.
Mixed Types of Construction	C1.4	Allows mixed types of construction if parts are fire separated.	---	Not applicable
Two Storey Class 2 or 3 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.

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Lightweight Construction	C1.8	This Clause stipulates that "lightweight" construction must comply with Specification C1.8 if used.	DTS	<p>Buildings to Comply.</p> <p>Lightweight construction is to comply with Specification C1.8 of the BCA if it is used in a wall system –</p> <p>i) that is required to have an FRL; or</p> <p>ii) for a lift shaft, stair shaft or service shaft, or an external wall bounding a public corridor.</p> <p>Full documentation (including fire test certification) is to be provided with the Construction Certificate Application.</p>
---	C1.9	Deliberately left blank in the BCA.	---	---
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>The fire hazard properties of all materials, assemblies, fixtures and linings are to comply with Specification C1.10 of the BCA, as applicable.</p> <p>The following minimum requirements are applicable to this project:</p> <p><u>1) Class 2 (part)</u></p> <p>a) Wall & Ceiling Linings</p> <p>i) Public Corridors Walls: Group No. 1 or 2 ii) Public Corridors Ceilings: Group No. 1 or 2 iii) SOU's & Other Areas (Walls & Ceilings): Group No's. 1, 2 or 3</p> <p>In addition, all wall and ceiling materials throughout the building are to achieve a maximum <i>smoke growth rate</i> of not more than 100 or an average specific extinction area less than 250 m²/kg.</p> <p>b) Floor Coverings</p> <p>General Areas: <i>Critical Radiant Flux</i> of not less than 2.2 kW/m².</p>

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				<p>In addition, all floor coverings are to achieve a maximum <i>smoke development rate</i> of 750 percent-minutes.</p> <p><u>2) Class 7a (part)</u></p> <p>a) Wall & Ceiling Linings</p> <p>i) Public Corridors Walls: Group No. 1 or 2 ii) Public Corridors Ceilings: Group No. 1 or 2 iii) Specific Areas & Other Areas (Walls): Group No's. 1, 2 or 3 iv) Specific Areas (Walls): Group No's. 1, 2 or 3 v) Specific Areas (Ceilings): Group No's. 1 or 2 vi) Other Areas (Walls & Ceilings): Group No's. 1, 2 or 3</p> <p>In addition, all wall and ceiling materials throughout the building are to achieve a maximum <i>smoke growth rate</i> of not more than 100 or an average specific extinction area less than 250 m²/kg.</p> <p>b) Floor Coverings</p> <p>General Areas: <i>Critical Radiant Flux</i> of not less than 2.2 kW/m².</p> <p>In addition, all floor coverings are to achieve a maximum <i>smoke development rate</i> of 750 percent-minutes.</p> <p><u>3) Air-handling Ductwork</u></p> <p>Rigid and flexible ductwork is to comply with the fire hazard properties set out in AS 4254.1-2012 and AS 4254.2-2012.</p> <p><u>4) Lift Car</u></p> <p>i) Walls & Ceilings: Group No. 1 or 2 ii) Floor linings & floor coverings: <i>Critical Radiant Flux</i> of not less than 2.2 kW/m².</p>

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				<p><u>5) Fire Isolated Exits</u></p> <p>i) Walls & Ceilings: Group No.1</p> <p>In addition, all wall and ceiling materials throughout the building are to achieve a maximum <i>smoke growth rate</i> of not more than 100 or an average specific extinction area less than 250 m²/kg.</p> <p>ii) Floor Coverings: <i>Critical Radiant Flux</i> of not less than 2.2 kW/m².</p> <p>In addition, all floor coverings are to achieve a maximum <i>smoke development rate</i> of 750 percent-minutes.</p> <p><u>7) Sarking & Other Materials</u></p> <p>i) Sarking: <i>Flammability Index</i> no greater than 5.</p> <p>ii) Insulation Materials: <i>Spread of Flame Index</i> not greater than 9 and a <i>Smoke Developed Index</i> not greater than 8 if the <i>Spread of Flame Index</i> is more than 5.</p> <p>Full documentation (including fire test certification) is to be provided for assessment at the Construction Certificate stage.</p>
Performance of External Walls in Fire	C1.11	Requirements for tilt up walls and fixings.	---	Not applicable.
Non-Combustible Materials	C1.12	This clause outlines materials that can be classified as non-combustible.	---	Noted.
Fire-protected timber: Concession	C1.13	The clause outlines concessions for fire - protected timber in Class 2, 3 and 5 buildings.	---	Not applicable.

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BCA PART C2 - COMPARTMENTATION & SEPARATION				
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.	---	Noted. No recommendations.
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.	---	Noted. No recommendations.
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 Carpark fire-compartment floor area and volume comply as required.</p> <p>Note: <i>Not applicable to the Class 2 building (part).</i></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.
Vertical Separation of Openings in External Walls	C2.6	This Clause stipulates how vertical separation can be achieved for buildings of Type A Construction.	DTS	<p>Building to Comply.</p> <p>Spandrel separation is required to be provided in buildings of Type A construction where any window or door opening (or other opening) in an external wall is above another opening</p>

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				<p>(in the storey next below) and its vertical projection falls no further than 450 mm outside the lower opening. Spandrels must be provided as follows:</p> <p>A) Vertical Spandrels:</p> <ul style="list-style-type: none"> i) Not less than 900 mm in height; and ii) Extend not less than 600 mm above the upper surface of the intervening floor; and iii) Be of <i>non-combustible</i> material having an FRL of not less than 60/60/60. <p>B) Horizontal Spandrels:</p> <p>A reinforced concrete slab or other horizontal construction that-</p> <ul style="list-style-type: none"> i) projects outwards from the external face of the wall not less than 1100mm; and ii) extends along the wall not less than 450 mm beyond the opening concerned; and iii) is <i>non-combustible</i> and has an FRL of not less than 60/60/60. <p>Full documentation is to be provided for assessment at the Construction Certificate stage.</p>
Separation by Fire Walls	C2.7	This clause stipulates how you achieve fire separation	---	Noted.
Separation of Classifications in the Same Storey	C2.8	This clause stipulates how you can treat different classifications in the same storey	---	Not applicable.
Separation of Classifications in Different Storeys	C2.9	This Clause stipulates how you fire separate classifications in different storeys.	DTS	<p>Building to Comply.</p> <p>The concrete floor slab separating Parking Level 1 from the Level 1 residential sole-occupancy units is required to achieve an FRL of not less than 120/120/120. All associated</p>

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				<p>supporting columns, beams and walls are required to achieve an FRL of not less than 120/--/--.</p> <p><u>(See also Specification C1.1 below)</u></p> <p>All structural elements shall be certified by a professional Structural Engineer (NPER) as achieving the required fire resistance levels prior to the issue of the Construction Certificate.</p>
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.	DTS	<p>Building to Comply.</p> <p>i) Fire Separation - In a building of this type, lifts are to be separated from the remainder of the building by enclosure in a shaft having an FRL in accordance with Specification C1.1 of the BCA.</p> <p>ii) Lift Entry Doors - Openings for lift landing doors are to be protected by --/60/-- FRL fire doors that:</p> <p>a) comply with AS 1735.11-1986; and</p> <p>b) are set to remain in the closed position except when discharging or receiving passengers or goods.</p> <p>iii) Lift Indicator Panels – A lift call panel, indicator panel or other panel in the wall of the <i>fire-isolated</i> lift shaft are to be backed by construction having an FRL of not less than --/60/60 if it exceeds 35,000 mm².</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
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	DTS	<p>Complies.</p> <p>The lift and stair shafts are separated as required.</p>

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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.	DTS	<p>Building to Comply.</p> <p>1) The following services are to be separated from the remainder of the building by construction complying with Specification C1.1, but not less than 120/120/120 FRL:</p> <ul style="list-style-type: none"> i) Lift motors and lift control panels; or ii) Emergency generators used to sustain emergency equipment operating in the emergency mode; or iii) a battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours. <p>An exception to these requirements is that separating construction between a lift shaft and a lift motor room need only achieve an FRL of 120/--/--.</p> <p><u>Note: Lift installations without a machine room are not required to be separated from the remainder of the building.</u></p> <p>2) Separation of on-site fire pumps must comply with Clause E1.3 of the BCA and AS 2419.1-2005.</p> <p>3) Doorways to fire separated rooms are to be protected by self-closing, --/120/30 FRL fire doors.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
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". 	DTS	<p>Building to Comply.</p> <p>1) A main switchboard located within the building which sustains emergency equipment operating in the emergency mode (<u>i.e. fire hydrant pumps</u>) must be separated from the remainder of the building by construction achieving a minimum FRL of 120/120/120 and have any doorway protected by a self-closing,</p>

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		<ul style="list-style-type: none"> ▪ Electricity conductors that supply main switchboard. Switchboards must also be segregated (where applicable)		<p>--/120/30 FRL fire door.</p> <p>2) Electrical conductors located within the building that supply a substation (located within the building) which supplies a main electrical switchboard that sustains emergency equipment operating in the emergency mode, are to have a classification in accordance with AS/NZS 3013 -2005 of not less than:</p> <ul style="list-style-type: none"> a) WS 53W (if capable of being damaged by vehicles; or b) WS 52W; or c) enclosed or protected by construction achieving an FRL of not less than 120/120/120. <p>3) Switchboards that sustain electricity supply to the buildings emergency equipment (<u>i.e. fire hydrant pumps</u>) are to be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of a fault from non-emergency equipment switchgear.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
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	DTS	Complies.
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.	---	Noted. No recommendations.

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Application of Part	C3.1	Exempts openings such as control joints, weep holes, non combustible ventilators for sub floor or cavity ventilation, etc, are exempted from protection requirements.	---	Noted. No recommendations.
Protection of Openings in External Walls	C3.2	This Clause stipulates that openings less than 3m from a side or rear boundary or 6m from the far boundary of a road must be protected.	DTS and/or Alternative Solution Report by a C10 Accredited Fire Safety Engineer	<p>Building to Comply.</p> <p>In buildings of this type, openings in an external wall of the building that is required to have a fire resistance level must if located less than 3.0 metres from a side or rear boundary of the allotment (both parallel and perpendicular) be protected in accordance with Clause C3.4 of the BCA, and if wall-wetting sprinklers are used, they are located externally and not occupy more than 1/3 of the area of the external wall of the storey in which it is located.</p> <p>The BCA provides the following options for the protection of windows, doors and other openings:</p> <p>A) Window Openings:</p> <ul style="list-style-type: none"> ▪ --/60/-- FRL fire shutters; or ▪ External wall wetting sprinklers used with windows that are <i>automatic</i> or permanently fixed in the closed position; or ▪ --/60/-- FRL <i>fire windows (automatic or permanently fixed in the closed position).</i> <p>B) Door Opening:</p> <ul style="list-style-type: none"> ▪ External wall wetting sprinklers used with doors that are <i>automatic</i> closing or <i>self-closing</i>; or ▪ <i>Self-closing or automatic closing --/60/30 FRL fire doors.</i> <p>C) Other Openings (excluding voids):</p> <ul style="list-style-type: none"> ▪ External wall wetting sprinklers; or

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				<ul style="list-style-type: none"> ▪ Construction having an FRL of not less than --/60/--. <p>Assessment of the plans has revealed that the building has windows, doors and other openings that stand closer than 3.0 metres to the side property boundaries that are required to be protected in accordance with Clause C3.4 of the BCA.</p> <p>It is recommended that:</p> <p>i) The buildings window, door and other openings that stand closer than 3.0 metres to the side property boundaries are to be protected in accordance with Clause C3.4 of the BCA;</p> <p>or</p> <p>ii) An Alternative Solution Report is to be prepared by a C10 Accredited Fire Safety Engineer demonstrating compliance with Performance Requirement CP2 of the BCA.</p> <p><u>General Notes:</u></p> <p><u>Note i: Restrictions will apply for the use of fixed window systems where natural ventilation is required to be provided to the building in accordance with Clauses F4.5 & F4.6 of the BCA.</u></p> <p><u>Note ii: Fire windows, fire doors and fire shutters are to comply with Specification C3.4 of the BCA.</u></p> <p><u>Note iii: Dimensions are to be placed on the architectural plans detailing the distance of the building from the side and rear property boundaries.</u></p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	Proposed Design BCA "Deemed to Satisfy" OR "Alternative Solution" to Satisfy BCA Performance Requirements	Comments
Separation of External Walls and Associated Openings in Different Fire Compartments	C3.3	Separation required between external openings in different fire compartments.	---	Not applicable.
Acceptable Methods of Protection	C3.4	Acceptable methods of protecting openings in external walls.	DTS	Building to Comply. <u>(See Clause C3.2 above)</u>
Doorways in Fire Walls	C3.5	This stipulates how doorways in fire walls are to be constructed.	---	Not applicable.
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.	---	Not applicable.
Openings in Fire Isolated Exits	C3.8	Construction details of doorways leading into fire isolated exits.	DTS	<p>Building to Comply.</p> <p>1) All doors opening into the buildings fire isolated stairways are to be protected by self-closing (or <i>automatic</i> closing), --/60/30 FRL fire doors designed and installed in accordance with AS 1905.1-2015.</p> <p>2) Where <i>automatic</i> closing fire doors are to be installed, the automatic closing operation must be initiated by the activation of a smoke detector, installed in accordance with AS 1670.1-2015, and be located not more than 1.5 metres horizontal distance from the approach side of the doorway. In addition, the automatic closing operation of the fire doors is to be activated on receipt of a signal from the buildings automatic sprinkler system.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

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Service Penetrations in Fire Isolated Exits	C3.9	Services shall not be installed in fire isolated exits, except as permitted in this Clause.	DTS	<p>Building to Comply.</p> <p>The buildings fire isolated stairways are not to be penetrated by any services <u>other than</u> –</p> <p>1) Electrical wiring associated with -</p> <p>i) a lighting, detection, or pressurisation system serving the exit; or</p> <p>ii) a security, surveillance or management system serving the exit; or</p> <p>iii) an intercommunication system or an audible or visual alarm system in installed in accordance with Clause D2.22 of the BCA; or</p> <p>iv) the monitoring of hydrant or sprinkler isolating valves; or</p> <p>2) Water supply pipes for fire services.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Openings in Fire Isolated Lift Shafts	C3.10	Construction details of doorways leading into fire isolated lift shafts and construction of lift indicator panels.	DTS	<p>Building to Comply.</p> <p>i) Lift Entry Doors - Openings for lift landing doors are to be protected by --/60/-- FRL fire doors that:</p> <p>a) comply with AS 1735.11-1986; and</p> <p>b) are set to remain in the closed position except when discharging or receiving passengers or goods.</p> <p>ii) Lift Indicator Panels – A lift call panel, indicator panel or other panel in the wall of the <i>fire-isolated</i> lift shaft are to be backed by construction having an FRL of not less than --/60/60 if it exceeds 35,000 mm².</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

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Bounding Construction Class 2, 3, & 4 Buildings	C3.11	Stipulates how to protect openings in bounding construction (residential building / parts).	DTS	<p>Building to Comply.</p> <p>In buildings of Type A construction, doorways that open from a sole occupancy unit (or from any room not within a sole occupancy unit) to a public corridor, public lobby or the like, a room not within a sole occupancy unit or into another sole occupancy unit, are to be fitted with self-closing, --/60/30 FRL fire doors, designed and installed in accordance with AS 1905.1-2015.</p> <p>All residential sole-occupancy units are to be fitted self-closing, --/60/30 FRL fire doors, designed and installed in accordance with AS 1905.1-2015.</p> <p>In addition, all rooms that open onto the residential public corridors are to be fitted self-closing, --/60/30 FRL fire doors, selected and installed in accordance with AS 1905.1-2015.</p> <p><u>Note: Fire doors to the residential sole occupancy units are to achieve a sound transmission rating of not less than Rw 30 in accordance with Clause F5.5(b) of the BCA.</u></p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
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.	DTS	<p>Building to Comply.</p> <p>Any/all openings through the buildings fire rated floor and wall systems are to be protected in accordance with Clauses C3.12 and C3.15 of the BCA.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

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Openings in Shafts	C3.13	Any openings into fire rated service shafts shall be protected in accordance with this Clause.	DTS	<p>Building to Comply.</p> <p>Any/all openings into the buildings fire rated shafts (ventilating, pipe, garbage or other service shaft) are to be protected as follows:</p> <ul style="list-style-type: none"> i) if in a sanitary compartment – a door or panel which, together with its frame, is non-combustible or has an FRL of not less than --/30/30; or ii) a self-closing --/60/30 FRL fire door or hopper; or iii) an access panel having an FRL of not less than --/60/30; or iv) if the shaft is a garbage shaft – a door or hopper of non-combustible construction. <p>Full documentation is to be provided with the Construction Certificate Application.</p>
---	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).	DTS	<p>Building to Comply.</p> <p>(See Clause C3.12 above)</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
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>Construction joints between fire-rated building elements are to be "fire-stopped" by materials having the same fire resistance level as the element they are to be installed into. The method used is to be identical with an AS 1530.4-2014 tested prototype.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

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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.	---	Not applicable.
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.	---	Noted. No recommendations.
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 the building that does not have at least the same FRL as the part it supports.	DTS	Building to Comply. Full documentation is to be provided with the Construction Certificate Application.
Lintels	Specification C1.1 Clause 2.3	Details where lintels over doorways or openings require an FRL.	DTS	Building to Comply. Full documentation is to be provided with the Construction Certificate Application.
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	Building to Comply. Full documentation is to be provided with the Construction Certificate Application.
General Concessions	Specification C1.1 Clause 2.5	Outlines general FRL concessions that can be applied for various building components.	---	Not applicable.
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.	DTS	Building to Comply. 1) Shafts required to have an FRL are to be enclosed at the top, bottom and sides by construction having an FRL of not less than that

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				<p>required for the walls of a non-loadbearing shaft in the same building, except where the top of the shaft extends beyond the roof structure.</p> <p>2) The buildings fire-isolated stairway serving the Class 2 building (part) is to be enclosed at the top, bottom and sides with construction complying with Specification C1.1 of the BCA.</p> <p>3) The lift shaft is to be taken up to a point higher than the building's roof structure or alternatively is to be enclosed at the top with construction complying with Specification C1.1 of the BCA.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
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.	DTS	<p>Building to Comply.</p> <p>The BCA assigns the following fire resistance levels to the listed building elements:</p> <p>1) Parking Levels 1 & 2 (Class 7a)</p> <ul style="list-style-type: none"> ▪ Slab on ground: - nil. ▪ External Walls that extend above the external finished ground level): <ul style="list-style-type: none"> a) Less than 1.5 m (to fire source feature): 120/120/120 FRL (loadbearing) & --/120/120 FRL (non loadbearing). b) 1.5 m to 3.0 m (to fire source feature): 120/90/90 FRL (loadbearing) & --/90/90 FRL (non loadbearing).

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				<p>c) 3.0 m or more (to fire source feature): 120/60/30 FRL (loadbearing) & --/--/--- FRL (non loadbearing).</p> <ul style="list-style-type: none"> ▪ Floor between Parking Level 2 & Parking Level 1: 120/120/120 FRL. ▪ Floor between Parking Level 1 and the Ground Floor Level: 120/120/120 FRL. ▪ Wall separating the Ground Floor Level Carpark Driveway from the Class 2 (part): 120/120/120 FRL (loadbearing) & --/120/120 FRL (non loadbearing). ▪ Loadbearing internal walls, beams & columns: 120/--/-- FRL. ▪ Lift Shafts: 120/120/120 (loadbearing) or --/120/120 FRL (non loadbearing). ▪ Ventilation shafts (not used for the discharge of hot products of combustion): 120/120/120 FRL (loadbearing) or --/90/90 FRL (non-loadbearing). <p>2) Ground Floor Level - Roof Level (Class 2)</p> <ul style="list-style-type: none"> ▪ External Walls: <ul style="list-style-type: none"> a) 1.5 m to 3.0 m (to fire source feature): 90/60/60 FRL (loadbearing) & --/60/60 FRL (non loadbearing). b) 3.0 m or more (to fire source feature): 90/60/30 FRL (loadbearing) & --/--/--- FRL (non loadbearing). ▪ Floors: 90/90/90 FRL. ▪ Loadbearing internal walls, beams & columns: 90/--/-- FRL. ▪ Fire-Isolated Stairways & Passageways: 90/90/90 FRL (loadbearing) or --/90/90 FRL (non loadbearing). ▪ Lift Shafts: 90/90/90 (loadbearing) or --/90/90 FRL (non loadbearing).

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				<ul style="list-style-type: none"> ▪ Ventilation shafts (not used for the discharge of hot products of combustion): 90/90/90 FRL (loadbearing) or --/90/90 FRL (non-loadbearing). ▪ Roof: Non-combustible. <p><u>Note: The proposed skylight between Level 6 & Level 7 is to be deleted.</u></p> <p>Design certification for the buildings fire-rated structural elements is to be issued by a professional Structural Engineer (NPER). Full documentation is to be provided with the Construction Certificate Application.</p>
Type B Fire Resisting Construction	Specification C1.1 Clauses 4.1 – 4.3	This Clause and Table outline the FRLs of various buildings elements for Type B construction.	---	Not applicable.
Type C Fire Resisting Construction	Specification C1.1 Clauses 5.1 – 5.2	This Clause and Table outlines the FRLs of various building elements for Type C construction.	---	Not applicable.
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>Building to Comply.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</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>Building to Comply.</p> <p>All new floor, wall and ceiling materials and other assemblies are to comply as required.</p> <p>(See Clause C1.10 above)</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

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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	<p>Building to Comply.</p> <p>All fire doors, fire windows and/or fire shutters are to comply with Specification C3.4 of the BCA.</p> <p><u>(See also Clause C3.2 above)</u></p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
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.	DTS	<p>Building to Comply.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

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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.	---	Noted. No recommendations.
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.
Number of Exits Required	D1.2	This Clause outlines the number of exits required from each part of the building.	DTS	<p>Non-Compliant.</p> <p>Basements - In addition to any horizontal exit, not less than two (2) exits must be provided from any storey if egress from that storey involves a vertical rise within the building of more than 1.5 m, unless -</p> <ul style="list-style-type: none"> i) the floor area of the storey is not more than 50 m²; and ii) the distance of travel from any point on the floor to a single exit is not more than 20 m. <p>Assessment of the plans has revealed that a minimum of two (2) exits are required to be provided to serve Parking Level 1 as well as Parking Level 2, however, only a single exit stairway is proposed to serve these levels.</p> <p>It is recommended that:</p> <ul style="list-style-type: none"> i) The plans are to be amended detailing a minimum of two (2) exits from Parking Level 1 and Parking Level 2; <p>or</p> <ul style="list-style-type: none"> ii) An Alternative Solution Report is to be prepared by a C10 Accredited Fire Safety Engineer demonstrating compliance with Performance Requirements DP4 and EP2.2 of the BCA.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	Proposed Design BCA "Deemed to Satisfy" OR "Alternative Solution" to Satisfy BCA Performance Requirements	Comments
				Full documentation is to be provided with the Construction Certificate Application.
When Fire Isolated Exits are Required	D1.3	This Clause outlines when fire isolated exits are required in buildings.	DTS	<p>Complies.</p> <p>The proposed stairways serving the building are fire-isolated as required.</p>
Exit Travel Distances	D1.4	Travel distances to exits in various building types.	DTS	<p>Building to Comply.</p> <p>1) Class 2 Building (part)</p> <p>i) The entrance doorway of any sole-occupancy unit must be not more than -</p> <p>A) 6.0 metres from an exit or from a point from which travel in different directions to 2 exits is available; or</p> <p>B) 20 m from a single exit serving the storey at the level of egress to a road or open space; and</p> <p>(ii) no point on the floor of a room which is not in a sole-occupancy unit must be more than 20.0 metres from an exit or from a point at which travel in different directions to two (2) exits is available.</p> <p><u>Note: The Construction Certificate plans are to be dimensioned to ensure compliance with this clause of the BCA.</u></p> <p>2) Class 7a Building (part)</p> <p>Subject to compliance with Clause D1.2 above, the exit travel distances within the Carpark comply as required.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p> <p>(See also Clause D1.5 below)</p>
Distances between Alternative Exits	D1.5	Distance between alternative exits to be a maximum of 45m (Class 2 , 3 buildings and Class 9a patient care areas) and 60m (in all other cases)	DTS	<p>Building to Comply.</p> <p>Parking Levels 1 & 2 (Class 7a)</p> <p>Exits that are required as alternative means of</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	Proposed Design BCA "Deemed to Satisfy" OR "Alternative Solution" to Satisfy BCA Performance Requirements	Comments
				<p>egress must be –</p> <ul style="list-style-type: none"> a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least two (2) exits is readily available from all points on the floor including lift lobby areas; and b) not less than 9.0 m apart; and c) not more than 60 metres apart; and d) located so that alternative paths of travel do not converge such that they become less than 6.0 metres apart. <p>The additional exit stairway required to be provided to serve Parking Level 1 and Parking Level 2 is to comply as required.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Dimensions of Exits and Paths of Travel to Exits	D1.6	This Clause details clear dimensions and widths of exits.	DTS	<p>Building to Comply.</p> <p>In buildings of this type, all exits and paths of travel to the buildings 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 1.0 m.</p> <p>Dimensions for the width of all exits and paths of travel to the buildings exits are to be documented on the Construction Certificate plans.</p> <p><u>Note: The additional exit stairway required to serve Parking Level 1 and Parking Level 2 is to be protected by steel bollards to ensure that the exit is not able to be blocked by parked vehicles.</u></p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	Proposed Design BCA "Deemed to Satisfy" OR "Alternative Solution" to Satisfy BCA Performance Requirements	Comments
Travel via Fire Isolated Exits	D1.7	This Clause details connection into and discharge from fire isolated stairs / passageways.	DTS and Alternative Solution by a C10 Accredited Fire Safety Engineer	<p>Building to Comply.</p> <p>Each fire-isolated stairway must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway -</p> <ul style="list-style-type: none"> i) to a road or open space; or ii) into a covered area that - <ul style="list-style-type: none"> A) adjoins a road or open space; and B) is open for at least 1/3 of its perimeter; and C) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and D) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m. <p>Assessment of the plans has revealed the following:</p> <ul style="list-style-type: none"> 1) The fire-isolated stairway discharges at Ground Floor Level within the confines of the building (i.e. a covered area); and 2) The covered area is open for a minimum of 1/3rd of its perimeter; and 3) The covered area <u>does not</u> have a clear opening height throughout of not less than 3.0 metres. <p>It is recommended that an Alternative Solution Report is to be prepared by a C10 Accredited Fire Safety Engineer demonstrating compliance with Performance Requirement DP5 of the BCA.</p>
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.

BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	Proposed Design BCA "Deemed to Satisfy" OR "Alternative Solution" to Satisfy BCA Performance Requirements	Comments
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	Complies.
Horizontal Exits	D1.11	Use and construction of horizontal exits.	---	Not applicable.
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	The deemed-to-satisfy building population numbers are: Carpark Levels – Less than 100 persons per storey. Note: Not applicable to the Class 2 building (part).
Measurement of Distances	D1.14	Details how distances are measured in relation to egress design.	---	Noted. No recommendations.
Method of Measurement	D1.15	Details how distances are measured in relation to egress design.	---	Noted. No recommendations.
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.	DTS	Building to Comply. Access to the buildings lift pit may be through the lowest lift landing doors.

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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.	---	Noted. No recommendations.
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.	DTS	Building to Comply. The proposed fire-isolated stairways are to be designed to ensure that if there is a local failure, that it will not cause structural damage to nor impair the fire resistance of the fire stairway shafts. <u>Note: NPER Structural Engineer to certify the final Construction Certificate engineering plans as complying with this clause of the BCA.</u>
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.	DTS	Complies.
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 & Paths of Travel	D2.7	Outlines where service installations can be accessed and suitable separation to be incorporated.	DTS	Building to Comply. Services or equipment (comprising electricity meters, distribution boards or ducts, central telecommunication distribution boards/

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				equipment or electrical motors or other motors serving equipment) that are to be installed in a path of travel to an exit, the equipment is to be enclosed in non-combustible construction with any access panel/door suitably smoke sealed against smoke spreading from the enclosure. Full documentation is to be provided with the Construction Certificate Application.
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.	DTS	Building to Comply. Fire-isolated stairways - If the space below a required fire-isolated stairway is within the fire-isolated shaft, it must not be enclosed to form a cupboard or similar enclosed space. Full documentation is to be provided for assessment at the Construction Certificate stage.
Width of Stairways	D2.9	This Clause stipulates how stair widths and heights are measured.	DTS	Noted.
Pedestrian Ramps	D2.10	Stipulates how a pedestrian ramp can serve as a required exit.	DTS	Building to Comply. All floor surfaces and ramps must have a non-slip finish in accordance with Table D2.14 of the BCA and AS 4586-2013. Full documentation is to be provided with the Construction Certificate Application.
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.	DTS	Building to Comply. Details of the fire rating of the buildings fire isolated passageways are to be detailed on the Construction Certificate plans.
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 rooflights and the like must be located not less than 3m from path of travel.	---	Not applicable.

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Goings & Risers	D2.13	This Clause stipulates construction of stair treads and risers.	DTS	<p>Building to Comply. All stairways are to comply as required.</p> <p>All stairways are to have a non-slip surface or a non-slip nosing strip in accordance with Table D2.14 of the BCA and AS 4586-2013.</p> <p>The internal fire-isolated stairways are to be constructed in accordance with Clause 11.1 (f), Clause 11.1 (g) and Clause 12 of AS 1428.1-2009.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Landings	D2.14	This Clause stipulates construction of landings.	DTS	<p>Building to Comply. All stairways are to comply as required.</p> <p>All landings are to have a non-slip surface or a non-slip nosing strip in accordance with Table D2.14 of the BCA and AS 4586-2013.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Thresholds	D2.15	This Clause stipulates construction of thresholds to doorways.	DTS	<p>Building to Comply. All stairways are to comply.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Barriers to Prevent Falls	D2.16	Details of height and construction of balustrades to voids, stairs, balconies, etc.	DTS	<p>Building to Comply. All barriers and balustrades are to comply.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Handrails	D2.17	Details where handrails need to be incorporated along stairways.	DTS	<p>Building to Comply. All stairways are to comply as required.</p> <p>The internal fire-isolated stairways are to be constructed in accordance with Clause 11.1 (f), Clause 11.1 (g) and Clause 12 of AS 1428.1-2009.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

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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	Complies.
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 200m ² .	DTS	Building to Comply. All exit doors are to swing in the direction of egress from the building. Full documentation is to be provided with the Construction Certificate Application.
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	Building to Comply. 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. In addition, door hardware levers are to: 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 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. Full documentation is to be provided with the Construction Certificate Application.
Re-entry from Fire Isolated Exits	D2.22	Stipulates whether you can lock a fire stair entry door from the inside.	---	Not applicable.

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Signs on Doors	D2.23	Appropriate signage is required to exit doors opening to fire isolated passageways, and stairways.	DTS	<p>Building to Comply.</p> <p>The building is to be provided with signage to the fire-isolated stairway/passageway doors as required by this clause of the BCA.</p> <p>A) Doors into Fire Isolated Stairway and Passageway (Self-Closing Doors)</p> <p>"FIRE SAFETY DOOR-DO NOT OBSTRUCT-DO NOT KEEP OPEN" - 20 mm high capital letters.</p> <p><i>Note: Signs to be positioned on the approach side of the door.</i></p> <p>B) Doors into Fire Isolated Stairway and Passageway (Automatic Closing Doors)</p> <p>"FIRE SAFETY DOOR-DO NOT OBSTRUCT" - 20 mm high capital letters.</p> <p><i>Note: Signs to be positioned on both sides of the door.</i></p> <p>C) Doors Discharging from Fire Isolated Passageway</p> <p>"FIRE SAFETY DOOR-DO NOT OBSTRUCT" - 20 mm high capital letters.</p> <p><i>Note: Signs to be positioned on both sides of the door.</i></p> <p>D) Offences Signs - Offences signs are to be displayed adjacent to the entry doors that give access into the buildings fire-isolated stairways and passageways in accordance with Clause 183 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

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Protection of Openable Windows	D2.24	This Clause requires protection of window opening.	DTS	<p>Building to Comply.</p> <p>1) Windows in Bedrooms</p> <p>a) The BCA requires that openable bedroom windows in Class 2 buildings be provided with protection if the floor below the window is 2.0 metres or more above the surface beneath.</p> <p>b) Where the lowest level of the window opening is less than 1.7 metres above the floor, a window in a Class 2 bedroom is to comply with the following:</p> <p>i) The openable portion of the window must be protected with a device to restrict the window opening;</p> <p><u>or</u></p> <p>ii) a screen with secure fittings.</p> <p>The device or screen used to protect an openable window must comply with Clause D2.24(b)(ii) of the BCA.</p> <p>2) General Barriers to Windows</p> <p>A barrier with a height of not less than 865 mm above the floor is required to an openable window in addition to the requirements listed above for windows located 4.0 metres or more above the surface beneath.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

BCA PART D3 - ACCESS FOR PEOPLE WITH DISABILITIES (Clauses D3.0 – D3.12 of the BCA)

Disabled access and facilities are required to the building as follows:

- 1) Access is to be provided from the footpath in Dent Street to the main entry lift lobby in accordance with AS 1428.1-2009.
- 2) All public area doorways and circulation spaces are to be dimensioned on the architectural plan showing compliance with AS 1428.1-2009.

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Note i: The maximum gradient and the maximum crossfall of all thresholds and circulation spaces to the buildings doorways is to be no greater than 1:40 in accordance with Clause 13.3.1 of AS 1428.1-2009.

3) The accessible carparking spaces and associated shared zones are to be designed in accordance with AS/NZS 2890.6-2009.

Note i: The minimum clear unobstructed height above these spaces is to be no less than 2500 mm.

Note ii: The circulation space at the rear of the all designated accessible carparking spaces are to have the same gradient as the disabled carparking spaces (i.e. a slope no steeper than 1:40. In addition, the path(s) of travel from these circulation spaces are to have a gradient of not steeper than 1:40 nor a cross-fall greater than 1:40 in accordance with AS/NZS 2890.6-2009.

Note iii: The shared zone serving Accessible Carparking Space 16 fails to comply with AS/NZS 2890.6-2009.

4) Access is to be provided from the accessible carparking spaces to the lifts in accordance with AS 1428.1-2009.

5) Access is to be provided from the lifts to the entry door of all residential sole-occupancy units in accordance with AS 1428.1-2009.

Note: Compliant circulation space is to be provided on the Lift Lobby side of the unit entry doors in accordance with AS 1428.1-2009.

6) The vehicular accessway from the main entry point to the building, beneath the entry roller door/sectional overhead door and throughout the Carpark is to have a clear unobstructed height of not less than 2200 mm in accordance with AS/NZS 2890.6-2009.

7) The lifts are to comply with Clause E3.6 of the BCA (see Clauses E3.0 – E3.10 below).

Note: The lift call buttons are to be located no less than 500 mm from any adjoining wall surface in accordance with AS 1735.12-1999.

8) On an accessway where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and glazing capable of being mistaken for a doorway or opening must be clearly marked in accordance with AS 1428.1-2009.

9) Turning spaces and passing spaces for persons in a wheelchair are to be provided throughout the building in accordance with Clause D3.3 of the BCA and AS 1428.1-2009.

10) The fire-isolated stairways are to be designed and constructed in accordance with Clause 11.1(f), 11.1(g) & Clause 12 of AS 1428.1-2009.

11) Braille & tactile "Exit" signage is required to serve the development in accordance with Clause D3.6 (a)(ii) and Specification D3.6 of the BCA.

12) All stairways and ramps (excluding the fire-isolated stairways) are to be provided with tactile ground surface indicators (TGSIs) in accordance with Sections 1 and 2 of AS/NZS 1428.4.1-2009.

A report is to be prepared by an ACAA Accredited Access Consultant detailing all works required to be carried out to the building to ensure compliance with Part D3 and Clause F2.4 of the BCA.

Full documentation is to be provided for assessment at the Construction Certificate stage.

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BCA PART E1 - FIRE FIGHTING EQUIPMENT				
Deemed to Satisfy Provisions	E1.0	This Clause stipulates that the proposed development complies with Section E Performance Requirements of the BCA if the Deemed to Satisfy Provisions are met.	---	Noted. No recommendations.
---	E1.2	Deliberately left blank in the BCA.	---	---
Hydrants	E1.3	This Clause stipulates when fire hydrants are required.	DTS	<p>Building to Comply.</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.</p> <p>The fire hydrant system is to be designed and certified by a practising professional Hydraulic Engineer or other competent Hydraulic Designer.</p> <p><u>Note i: The fire hydrant booster facility is to be positioned within sight of the main entry to the building in accordance with Clause 7.3(d)(i) of AS 2419.1-2005.</u></p> <p><u>Note ii: The fire hydrant booster facility is required to be protected by a radiant heat barrier wall having an FRL of not less than 90/90/90. The wall is to have a height not less than 3.0 metres above the upper hose connections and project not less than 2.0 metres each side of the suction and booster valves in accordance with Clause 6.4.2(b) of AS 2419.1-2005.</u></p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Fire Hose Reels	E1.4	This Clause stipulates when fire hose reels are required.	DTS	<p>Building to Comply.</p> <p>A fire hose reel system is required to be provided to serve Parking Level 1 and Parking</p>

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				<p>Level 2 in accordance with Clause E1.4 of the BCA and AS 2441-2005.</p> <p>The fire hose reel system is to be designed and certified by a practising professional Hydraulic Engineer or other competent Hydraulic Designer.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Sprinklers	E1.5 & Table E1.5	This Clause stipulates when sprinklers are required.	DTS	<p>Building to Comply.</p> <p>A sprinkler system is required to be provided throughout the Lower Basement Level and Upper Basement Level Carpark in accordance with Specification E1.5 f the BCA and AS 2118.1-1999.</p> <p>The sprinkler system is to be designed and certified by a practising professional Hydraulic Engineer in accordance with Clause E1.5 & Specification E1.5 of the BCA.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Portable Fire Extinguishers	E1.6 & Table E1.6	This Clause stipulates where extinguishers need to be installed.	---	Not applicable.
---	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 in accordance with Clause E1.9.	DTS	<p>Building to Comply.</p> <p>1) Not less than one (1) portable fire extinguisher to suit Class A, B & C fires and electrical fires is to be provided at all times on each storey of the building adjacent to each required exit or temporary stairway or exit.</p>

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				<p>2) After the building has reached an effective height of 12.0 metres –</p> <p>i) the required fire hydrants must be operational in at least every storey that is covered by the roof or the floor structure above, except the two uppermost storeys; and</p> <p>ii) the fire hydrant booster facility must be operational.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
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 proposed development complies with Section E Performance Requirements of the BCA if the Deemed to Satisfy Provisions are met.	---	Noted. No recommendations.
Application of Part	E2.1	Stipulates where Smoke Hazard Management provisions do not apply.	---	Noted. No recommendations.
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	DTS	<p>Building to Comply.</p> <p>A) Mechanical Ventilation (General)</p> <p>1) An air handling system that does not form part of a smoke hazard management system and which recycles air from one fire</p>

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		Hazard Management System.		<p>compartment to another fire compartment <u>or</u> operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another must:</p> <p>i) be designed and installed to operate as a smoke control system to AS/NZS 1668.1-2015;</p> <p><u>or</u></p> <p>ii) incorporate smoke dampers where the air handling duct/s penetrate any fire compartment building element and be arranged to shut down and the smoke dampers activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1-2015.</p> <p>2) Miscellaneous air-handling systems covered by Sections 5 and 6 of AS/NZS 1668.1-2015 serving more than one fire compartment (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard.</p> <p>B) Automatic Fire Detection & Alarm System</p> <p>The building is to be provided with an automatic fire detection and alarm system in accordance with Specification E2.2a of the BCA.</p> <p>C) Carpark Ventilation Systems.</p> <p>The required mechanical ventilation system serving the Carparking Levels is to be designed in accordance with AS 1668.2-2012 and must comply with Clause 5.5 of AS/NZS 1668.1-2015, and</p> <p>i) fans with metal blades suitable for operation at normal temperatures may be used; and</p>

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				<p>ii) the electrical power and control cabling need not be fire rated.</p> <p><u>Note: The buildings automatic fire detection system is to be interconnected to activate a Building Occupant Warning System (BOWS) throughout the whole building (including Parking Levels 1 & 2) in accordance with Clause 6 of Specification E2.2a of the BCA.</u></p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
BCA PART E2 - SPECIFICATIONS				
Smoke Detection & Alarm Systems	Specification E2.2a	This Specification outlines the design of various smoke detection and alarm systems.	DTS	Building to Comply. (See Clause E2.2 above)
Smoke Exhaust Systems	Specification E2.2b	This Specification highlights the requirements for mechanical smoke exhaust and zone smoke control systems.	---	Not applicable.
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 – E3.7	These Clauses detail construction and design of lift installations.	DTS	<p>Building to Comply.</p> <p>1) One (1) x stretcher lift is required to be provided to serve all levels of the building in accordance with Clause E3.2 of the BCA.</p> <p><u>Note i: The stretcher lift is to be capable of accommodating a raised stretcher with a patient lying on it horizontally by providing a clear space of not less than 1400 mm wide x 2000 mm long x 1400 mm high AFFL.</u></p> <p><u>Note ii: The width of the stretcher lift is increased from 600 mm to 1400 mm to ensure compliance</u></p>

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				<p><u>with Table E3.6b of the BCA.</u></p> <p>2) Fire services controls are to be provided serve the lift in accordance with Clause E3.7 of the BCA.</p> <p>3) Warning signs are to be provided adjacent to all lift call buttons in accordance with Clause E3.3 of the BCA.</p> <p>4) The proposed passenger lift is to be selected from one (1) of the following types in accordance with Table E3.6a of the BCA:</p> <ul style="list-style-type: none"> ▪ <i>Electric Passenger Lift</i> – Spec. E3.1; or ▪ <i>Electrohydraulic Passenger Lift</i>– Spec. E3.1. <p>5) The passenger lift is to comply with Specification E3.1 of the BCA.</p> <p>6) The proposed passenger lift is required to be provided with the following facilities in accordance with Table E3.6b of the BCA:</p> <ul style="list-style-type: none"> i) A handrail complying with the provisions for a mandatory handrail in AS 1735.12-1999; and ii) Lift floor dimensions of not less than 1400 mm wide x 2000 mm deep; and iii) Minimum clear door opening complying with AS 1735.12-1999; and iv) Passenger protection system complying with AS 1735.12-1999; and v) Lift car and landing control buttons complying with AS 1735.12-1999; and vi) Lighting in accordance with AS 1735.12-1999; and vii) Automatic audible information within the lift car to identify the level each time the car stops; and

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				<p>viii) Audible and visual indication at each lift landing to indicate the arrival of the car; and</p> <p>ix) Audible information and audible indication required is to be provided in a range of between 20 – 80 dB(A) at a maximum frequency of 1500Hz; and</p> <p>x) Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received.</p> <p>7) The passenger lift must not rely on a constant pressure device for its operation.</p> <p>8) Fire services recall control switches are to be provided to serve the lift in accordance with Clauses E3.9 of the BCA.</p> <p>9) Lift car fire service drive control switches are to be provided to serve the lift in accordance with Clauses E3.10 of the BCA.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
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.	---	Noted. No recommendations.
Emergency Lighting	E4.2 – E4.4	Design and installation requirements for emergency lighting.	DTS	<p>Building to Comply.</p> <p>Emergency lighting is to be provided throughout the building in accordance with Clauses E4.2 and E4.4 of the BCA and AS 2293.1-2005.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>

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Exit Lighting	E4.5 – E4.8	Design and installation requirements for exit lighting.	DTS	<p>Building to Comply</p> <p>Exit and directional signs are required to be provided throughout the buildings in accordance with Clauses E4.5, E4.6, E4.7 and E4.8 of the BCA and AS 2293.1-2005.</p> <p>In addition, Braille & tactile "Exit" signage is required to serve the building in accordance with Clause D3.6 (a)(ii) and Specification D3.6 of the BCA.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Sound Systems and Intercommunication System for Emergency Purposes	E4.9	This Clause details where a EWIS system is required.	---	Not Applicable.
Photoluminescent Exit Signs	Specification E4.8	This Specification contains requirements for photoluminescent exit signs.	---	Not Applicable.
BCA SECTION F – HEALTH & AMENITY				
Damp / Weatherproofing	Part F1	Prevention of external and internal water / moisture accumulation.	DTS	<p>Building to Comply.</p> <p>1) Stormwater drainage is to comply with AS/NZS 3500.3-2003.</p> <p>2) Waterproofing of the buildings wet areas is to comply with Clause F1.7 of the BCA.</p> <p>3) Damp-proofing of the building is to comply with Clauses F1.9 & F1.10 of the BCA.</p> <p>4) All bathroom, laundry and enclosed balcony floors throughout the building are to be provided with a floor waste. All floors are to be graded and drained to the floor waste to prevent the ponding of water.</p> <p><u>Note: The plans are to detail the set down dimensions of the external balconies in relation to the internal floor levels to prevent the ingress</u></p>

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				<p><u>of water into the building.</u> Full documentation is to be provided with the Construction Certificate Application.</p>
Sanitary and Other Facilities	Part F2	Provisions of sanitary, washing facilities and control of micro organisms.	DTS	<p>Building to Comply. <u>1) A separate employee sanitary facility (i.e. WC and hand basin) is required to be provided at or near Ground Floor Level in accordance with Table F2.1 of the BCA.</u> 2) Each Class 2 residential sole occupancy unit is to be provided with a kitchen (including a kitchen sink), WC and a washbasin, shower or bath and a laundry. Each laundry is to be provided with a wash-tub and have sufficient space for a washing machine and a clothes dryer. 3) Sanitary compartment are to be constructed in accordance with Clause F2.5 of the BCA. Full documentation is to be provided with the Construction Certificate Application.</p>
Room Sizes	Part F3	Requirements for minimum room height.	DTS	<p>Building to Comply. Minimum ceiling heights are to be as follows: 1) Habitable rooms (excluding kitchens) – 2.4 m. 2) Kitchen – 2.1 m. 3) Corridor, passageway or the like – 2.1 m. 4) Bathroom, laundry, sanitary compartment, air-lock, pantry, storeroom, garage or the like – 2.1 m. 5) Stairways – 2.0 m measured vertically above landings and nosing lines. 6) Carpark (General) – 2.2 m. 7) Accessible Carparking Space & Associated Shared Zone – 2.5 m.</p>

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Light and Ventilation	Part F4	Requirements for light and ventilation.	DTS	<p>Full documentation is to be provided with the Construction Certificate Application.</p> <p>Building to Comply.</p> <p>1) Natural Lighting – natural lighting is required to be provided to all habitable rooms by windows that have an aggregate light transmitting area (measured exclusives of framing member, glazing bars or other obstructions) of not less than 10% of the floor area of the room. The glazing is to open to the sky or face a courtyard (or other space) that is open to the sky or an open verandah or the like.</p> <p>2) Natural Ventilation - natural ventilation is required to be provided to all habitable rooms by windows, doors or other devices which can be opened with an aggregate opening or openable size of not less than 5% of the floor area of the room required to be ventilated.</p> <p>These windows are to open to;</p> <p>a) a suitably sized court or space open to the sky; or</p> <p>b) an open verandah or the like.</p> <p><u>Note: A window and door schedule is to be provided demonstrating compliance with Clause F4.2 and Clause F4.6 of the BCA.</u></p> <p>3) The minimum height beneath an operable window is to be no less than 865 mm AFFL.</p> <p>(See also Clause D2.24 above).</p> <p>4) Mechanical ventilation is to be provided throughout all parts of the building (i.e. rooms not provided with complaint natural ventilation) in accordance with AS 1668.2-2012 and AS/NZS 1668.1-2015.</p>

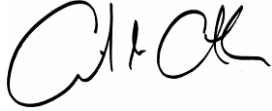
BCA Clause Title	Deemed to Satisfy Provisions (Clauses)	Description of Compliance Requirement	Proposed Design BCA "Deemed to Satisfy" OR "Alternative Solution" to Satisfy BCA Performance Requirements	Comments
				<p>Detailed plans, specifications and design certification are to be prepared by a <i>professional</i> Mechanical Engineer.</p> <p>5) Lighting - artificial lighting is to be provided to all areas throughout the buildings that are not provided with compliant natural lighting in accordance with AS/NZS 1680.0-2009.</p> <p>Plans and design certification are to be issued by a professional Electrical Engineer.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
Sound Transmission	Part F5	Requirements for sound transmission in Class 2 and 3 buildings.	DTS	<p>Building to Comply.</p> <p>The following sound transmission and insulation categories apply throughout the building:</p> <p>A) Floor Slabs (Levels 1 – Level 8) – $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w} + C_i$ (impact) of not more than 62.</p> <p>B) Party Walls (between and bounding SOU's)</p> <p>i) $R_w + C_{tr}$ (airborne) not less than 50, if it separates <i>sole-occupancy units</i>; and</p> <p>ii) have an R_w (airborne) not less than 50 if it separates a <i>sole-occupancy unit</i> from a lift shaft, stairway, <i>public corridor</i>, public lobby or the like, or parts of a building with different classification.</p> <p>iii) be of <u>discontinuous construction</u> and for masonry, where wall ties are required to connect leaves, the ties are to be of the resilient type; and for other than masonry, there is no mechanical linkage between leaves except at the periphery if it separates a bathroom, <i>sanitary compartment</i>, laundry or kitchen in one <i>sole-occupancy unit</i> from a <i>habitable</i></p>

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				<p>room (other than a kitchen) in an adjoining unit.</p> <p>C) Unit Entry Fire Doors R_w not less than 30.</p> <p>D) Services Ducts, soil, waste water or storm water pipes passing through residential sole-occupancy units are to achieve the following sound ratings:</p> <ul style="list-style-type: none"> ▪ $R_w + C_{tr}$ (airborne) not less than 40 if the adjacent room is a habitable room (other than a kitchen); or ▪ $R_w + C_{tr}$ (airborne) not less than 25 if the adjacent room is kitchen or non-habitable room). <p>B) Roof Slab (Level 7) – $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w} + C_i$ (impact) of not more than 62.</p> <p>A report is to be prepared by an Acoustic Engineer detailing the methods to be adopted to meet with these prescriptive requirements of the BCA.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
BCA PART G – ANCILLARY PROVISIONS				
Swimming Pools	G1.1(c)	Safety requirements for spa pools and swimming pools to prevent injury to persons.	---	Not Applicable.
Refrigerated Chambers, Strong Rooms and Vaults	G1.2	Requirements for the safety of persons inside Coolrooms, Strong Rooms and Vaults	---	Not Applicable.

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Provisions for Cleaning Windows	NSW G1.101	Provisions for Cleaning Windows	DTS	<p>Building to Comply.</p> <p>All external windows located 3 or more storeys above ground level are to be provided with a safe manner of cleaning windows as follows:</p> <p>i) all windows are to be capable of being cleaned wholly from within the building (i.e. pivot or reversible windows etc.); or</p> <p>ii) by a method complying with the <i>Occupational Health and Safety Act 2000</i> and regulations made under that Act.</p> <p>Full documentation is to be provided with the Construction Certificate Application.</p>
<p>BCA SECTION J – ENERGY EFFICIENCY</p> <p>1) The energy efficiency provisions of the BASIX and NSW Sub-section J(A) of the BCA are applicable to the Class 2 part of the building.</p> <p>2) The energy efficiency provisions of NSW Sub-section J(B) are applicable to the Class 7a building (part) of the building.</p> <p>A report is to be prepared by an ABSA accredited assessor detailing all works required to be carried out to the buildings envelope and systems to ensure compliance with these requirements. All works listed in the report of the ABSA Accredited Assessor are to be incorporated into the building design and services documentation.</p> <p>Full documentation is to be provided on the Construction Certificate plans.</p>				
<p>OTHER CONSIDERATIONS</p> <p>1) The development is to be sited on a single parcel of land (i.e. Lot 1 DP 123454).</p> <p>Note: <i>As the development occupies multiple parcels of land, the development site is to be consolidated into a single lot with a new deposited plan number prior to the issue of the Construction Certificate.</i></p> <p>2) The buildings carparking facilities are to be certified by a practising professional Traffic Engineer/Civil Engineer as complying with the requirements of Penrith City Council and AS/NZS 2890.6-2009.</p>				

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