

BUILDING CODE OF AUSTRALIA COMPLIANCE ASSESSMENT REPORT FOR DA SUBMISSION

PROPOSED INDUSTRIAL UNITS

330 EDGAR STREET, CONDELL PARK

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PREPARED FOR ► GPM Architecture

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1.0 EXECUTIVE SUMMARY AND RECOMMENDATIONS

This report provides a Building Code of Australia (BCA) 2022 assessment of the proposed industrial warehouse, to be located at 98 Rogers Street, Roselands, for the purposes of Development Application (DA) submission.

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

1.1 Recommendations

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

BCA Clause	Deemed-to-Satisfy Provision to be addressed
NIL	NIL



2.0 INTRODUCTION

This report provides a Building Code of Australia (BCA) 2022 assessment of the proposed industrial warehouse, to be located at 98 Rogers Street, Roselands, for the purposes of Development Application (DA) submission.

This report provides a BCA assessment table in Section 4.0 that summarises the identified non-compliance matters and offers specific recommendations.

2.1 Basis of Report

The key basis of this report is to address compliance with the Building Code of Australia (BCA) 2022. The scope of services is limited to Sections C – “Fire Resistance”, Section D – “Access & Egress”, Section E – “Services & Equipment”, Section F “Health and Amenity” and Section G “Ancillary Provisions”.

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

- Architectural plans prepared by GPM Architecture, Project No. 24.8204 Drawing Numbers:

	Drawing Title	Drawing No.	Revision	Dated
1.	Cover Sheet and Location Plan	AR0000	DA1	OCT2024
2.	Proposed Site Plan	AR0012	DA1-A	OCT 2024
3.	Proposed Ground Floor Plan	AR0110	DA1-A	OCT 2024
4.	Proposed First Floor Plan	AR0111	DA1	OCT 2024
5.	Proposed Roof Plan	AR0120	DA1	OCT 2024
6.	Proposed Elevations	AR0201,0202.0203	DA2-A	SEPT 2024
7.	Proposed Section A-A B-B	AR0301.0302	DA1-A	OCT 2024
8.	Area Calculations	AR0661	DA1	OCT 2024
9.	Material – Schedule of Finishes	AR0900	DA1	26/10/2024
10.	Proposed 3D Perspective (Rogers Street)	AR0901,0902	DA1	31/10/ 2024

- The Building Code of Australia 2022, prepared by the Australian Building Codes Board.
- The Guide to the BCA 2022, prepared by the Australian Building Codes Board.

2.2 Purpose of the Report

The purpose of this report is to assess the following:

- Assessment under the current Building Code of Australia 2022 and list any departures from the BCA 2022.
- Provide recommendations to address identified non-compliances, and/or identify potential performance solutions.

2.3 Limitations of the Report

This report does not assess the following:

- This assessment has been undertaken for the purposes of DA submission. For DA submission a holistic assessment of the building is undertaken to ensure that the fundamental design can be developed to comply with the BCA at construction stage. This report provides high-level commentary only in relation to items that require construction level detail for compliance to be determined.
- Structural Provisions of the BCA (Section B) have not been considered. A suitably qualified Structural Engineer should be engaged to determine compliance.
- Accessibility Provisions of the BCA (BCA Part D4, BCA Clause E3D7-E3D8 (inclusive), F4D5-F4D7 (inclusive) and F4D12) have not been considered. A suitably qualified Access Consultant should be engaged to determine compliance.

- Energy Efficiency Provisions of the BCA (Section J) have not been considered. A suitably qualified Energy Consultant should be engaged to determine compliance.
- Sections H & I of the BCA have not been considered as part of this assessment.
- Reporting on hazardous materials, WHS matters, or site contamination.
- Assessment of any structural elements or geotechnical matters relating to the building, including any structural or other assessment of the existing fire-resistant levels of the building.
- Consideration of any fire services operations (including hydraulic, electrical, or other systems).
- Assessment of plumbing and drainage installations, including stormwater.
- Assessment of mechanical plant operations, electrical systems, or security systems.
- Heritage significance.
- Consideration of energy or water authority requirements.
- Consideration of Council's local planning policies.
- Environmental or planning issues.
- Requirements of statutory authorities.
- Pest inspection or assessment building damage caused by pests (general/visual pest invasion or damage will be reported, however invasive or intrusive inspections have not been carried out).
- Provision of any construction approvals or certification under Part 6 of the Environmental Planning & Assessment Act 1979.
- Glazing, shading, lighting calculations and the like required by Section J of the BCA have not been carried out.
- BCA 2022 does not directly specify slip-resistance classification(s) for all *accessible paths of travel*; however, we highlight the need under AS 1428.1-2009 for all *accessible paths of travel* to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant.

3.0 BCA ASSESSMENT DATA

The following data is provided in respect to review of the building under the Building Code of Australia 2022 in respect to the compliance assessment of the proposed industrial warehouse, to be located at 98 Rogers Street, Roselands.

BCA Building Classifications:	Class 5 – Office Class 8 – Warehouse
Building rise in storeys:	2 (determined in accordance with C2D3 of the BCA).
Type of Construction:	Type C (determined in accordance with C2D2 of the BCA)
Floor area:	Less than 2,000m ² (Approx. 596.7m ²)
Volume:	Less than 12,000m ³
Effective Height (m):	4.25m
Climate Zone (Thermal Design)	N/A (determined in accordance with ABCB Climate Map, Sept 2019)

3.1 Location of Fire Source features

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

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

- North western – less than 1.5m from the rear boundary of the allotment adjoining.
- North eastern – less than 1.5m from the rear boundary of the allotment adjoining.
- South western – less than 1.5m from the rear boundary of the allotment adjoining.
- South eastern – more than 6m from the far boundary of Rogers Street.

3.2 Summary of Fire Services Required

Summarised below are the BCA Deemed-to-Satisfy fire services required for the building:

- A fire hydrant system must be provided to serve all parts of the building in accordance with BCA Clause E1D2 and AS 2419.1-2021.
- A fire hose reel system must be provided in accordance with BCA Clause E1D3 and AS 2441-2005.
- Portable fire extinguishers must be provided in accordance with BCA Clause E1D14 and must be selected, located, and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444-2001.
- Emergency lighting must be provided throughout the building in accordance with BCA Clause E4D2, E4D4 and AS 2293.1-2018.
- Exit signage must be provided throughout the building in accordance with BCA Clause E4D5, NSW E4D6, E4D8 and AS 2293.1-2018.
- Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in accordance with BCA Clause C4D16.
- Fire doors must be provided in accordance with BCA Sections C & D as applicable, BCA Specification 12 and AS 1905.1-2015.

4.0 BCA ASSESSMENT SUMMARY

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

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS															
National Construction Code BCA 2022 (Volume 1)																				
Section B Structure																				
Part B1 Structural provisions																				
B1D1 Deemed-to-Satisfy Provisions [2019: B1.0]				X	(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements B1P1 to B1P4 are satisfied by complying with B1D2 to B1D6. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable. Structural plans and specifications demonstrating compliance with Section B must be developed by a suitably qualified structural engineer at construction stage.															
Section C Fire resistance																				
Part C2 Fire resistance and stability																				
C2D2 Type of construction required [2019: C1.1]			X	X	Compliance commentary: The proposed industrial warehouse is to be constructed of Type C construction BCA Requirements: (1) The minimum Type of fire-resisting construction of a building must be determined in accordance with Table C2D2— (2) Each building element must comply with Specification 5 as applicable. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification															
<table><tr><th>Rise in storeys</th><th>Class of building 2, 3, 9</th><th>Class of building 5, 6, 7, 8</th></tr><tr><td>4 of more</td><td>A</td><td>A</td></tr><tr><td>3</td><td>A</td><td>B</td></tr><tr><td>2</td><td>B</td><td>C</td></tr><tr><td>1</td><td>C</td><td>C</td></tr></table>						Rise in storeys	Class of building 2, 3, 9	Class of building 5, 6, 7, 8	4 of more	A	A	3	A	B	2	B	C	1	C	C
Rise in storeys	Class of building 2, 3, 9	Class of building 5, 6, 7, 8																		
4 of more	A	A																		
3	A	B																		
2	B	C																		
1	C	C																		
C2D3 Calculation of rise in storeys [2019: C1.2]			X		Compliance commentary: The proposed industrial warehouse has a rise in stories of 2. BCA Requirements: (1) The rise in storeys is the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space— (a) above the finished ground next to that part; or (b) if part of the external wall is on the boundary of the allotment, above the natural ground level at the relevant part of the boundary. (2) A storey is not counted if—															



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(a) it is situated at the top of the building and contains only heating, ventilating or lift equipment, water tanks, or similar service units or equipment; or</p> <p>(b) it is situated partly below the finished ground and the underside of the ceiling is not more than 1 m above the average finished level of the ground at the external wall, or if the external wall is more than 12 m long, the average for the 12 m part where the ground is lowest.</p> <p>(3) In a Class 8 building, a storey that has an average internal height of more than 6 m is counted as—</p> <p>(a) one storey if it is the only storey above the ground; or</p> <p>(b) 2 storeys in any other case.</p>
C2D4 Buildings of multiple classification [2019: C1.3]			X		Not applicable.
C2D5 Mixed types of construction [2019: C1.4]			X		Not applicable.
C2D6 Two storey Class 2, 3 or 9c buildings [2019: C1.5]			X		Not applicable.
C2D7 Class 4 parts of buildings [2019: C1.6]			X		Not applicable.
C2D8 Open spectator stands and indoor sports stadiums [2019: C1.7]			X		Not applicable.
C2D9 Lightweight construction [2019: C1.8]				X	<p>(1) Lightweight construction must comply with Specification 6 if it is used in a wall system—</p> <p>(a) that is required to have an FRL.</p> <p>(2) If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if—</p> <p>(a) the covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting; and</p> <p>(b) the column is liable to be damaged from the movement of vehicles, materials, or equipment, then the covering must be protected by steel or other suitable material.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>Lightweight construction:</i> Construction which incorporates or comprises—</p> <p>(a) sheet or board material, plaster, render, sprayed application, or other material similarly susceptible to damage by impact, pressure or abrasion; or</p> </div>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(b) concrete and concrete products containing pumice, perlite, vermiculite, or other soft material similarly susceptible to damage by impact, pressure or abrasion; or</p> <p>(c) masonry having a width of less than 70 mm</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C2D10 Non-combustible building elements [2019: C1.9]			X		Not applicable.
NSW C2D11 Fire hazard properties [2019: C1.10 and NSW C1.10]				X	<p>The fire hazard properties of the internal linings, materials and assemblies within the building must comply with Specification 7, except where concession is provided under this clause.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C2D12 Performance of external walls in fire [2019: C1.11]				X	<p>Concrete external walls that could collapse as complete panels (e.g. tilt-up and pre-cast concrete), in a building having a rise in storeys of not more than 2, must comply with Specification 8.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C2D13 Fire-protected timber: Concession [2019: C1.13]			X		Not applicable.
C2D14 Ancillary elements [2019: C1.14]			X		Not applicable.
C2D15 Fixing of bonded laminated cladding panels [New for 2022]			X		Not applicable.
Part C3 Compartmentation and separation					
C3D2 Application of Part [2019: C2.1]			X		Not applicable.
C3D3 General floor area and volume limitations [2019: C2.2]				X	<p>(1) The size of any fire compartment in a Class 5 or 8 building must not exceed the relevant maximum floor area nor the relevant maximum volume set out in Table C3D3 and C3D6 except as permitted in C3D4.</p> <p>(2) A part of a building which contains only heating, ventilating, or lift equipment, water tanks, or similar service units is not counted in the floor area or volume of a fire compartment or atrium if it is situated at the top of the building.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Classification	Type A construction		Type B construction		Type C construction
5, 9b or 9c	Max floor area—8 000m ²		Max floor area—5 500m ²		Max floor area—3 000m ²
	Max volume—48 000m ³		Max volume—33 000m ³		max volume—18 000m ³
6, 7, 8 or 9a (except for patient care areas)	Max floor area—5 000m ²		Max floor area—3 500m ²		Max floor area—2 000m ²
	Max volume—30 000m ³		Max volume—21 000m ³		Max volume—12 000m ³
C3D4 Large isolated buildings [2019 C2.3]			X		Not applicable.
C3D5 Requirements for open spaces and vehicular access [2019: C2.4]			X		Not applicable.
C3D6 Class 9 buildings [2019: C2.5]			X		Not applicable.
C3D7 Vertical separation of openings in external walls [2019: C2.6]			X		Not applicable.
C3D8 Separation by fire walls [2019: C2.7]			X		Not applicable.
C3D9 Separation of classifications in the same storey [2019: C2.8]			X		Not applicable.
C3D10 Separation of classifications in different storeys [2019: C2.9]			X		Not applicable.
C3D11 Separation of lift shafts [2019: C2.10]			X		Not applicable.
C3D12 Stairways and lifts in one shaft [2019: C2.11]			X		Not applicable.





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
C3D13 Separation of equipment [2019: C2.12]				X	<p>(1) Equipment other than that described in (2) must be separated from the remainder of the building with construction complying with (4), if that equipment comprises—</p> <ul style="list-style-type: none">(a) boilers; or(b) a battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more. <p>(2) Separation of on-site fire pumps must comply with the requirements of AS 2419.1.</p> <p>(3) Separating construction must have—</p> <ul style="list-style-type: none">(a) except as provided by (b)—<ul style="list-style-type: none">(i) an FRL as required by Specification 5, but not less than 120/120/120; and(ii) any doorway protected with a self-closing fire door having an FRL of not less than –/120/30; or(b) when separating a lift shaft and lift motor room, an FRL not less than 120/–/–. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3D14 Electricity supply system [2019: C2.13]			X		Not applicable.
C3D15 Public corridors in Class 2 and 3 buildings [2019: C2.14]			X		Not applicable.
Part C4 Protection of openings					
C4D2 Application of Part [2019: C3.1]			X		<p>(1) The Deemed-to-Satisfy Provisions of this Part do not apply to the following:</p> <ul style="list-style-type: none">(a) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre-cast concrete panel construction if, in all cases they are not larger than necessary for the purpose.(b) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or verandah, colonnade, terrace, or the like. <p>(2) For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings in building elements required to be fire-resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL.</p> <p>(3) For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings, other than those covered under (1)(b), between building elements such as columns, beams and the like, in the plane formed at the construction edge or perimeter of the building, are deemed to be openings in an external wall.</p>
C4D3	X				<p>(1) Subject to (2), openings in an external wall that is required to have an FRL must be protected in accordance with C4D5, and if wall-wetting sprinklers are used they must be located externally.</p>





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Protection of openings in external walls [2019: C3.2]					<p>(2) The requirements of (1) only apply if the distance between the opening and the fire-source feature to which it is exposed is less than—</p> <p>(a) 3 m from a side or rear boundary of the allotment; or</p> <p>(b) 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or</p> <p>(c) 6 m from another building on the allotment that is not Class 10.</p> <p>(3) Openings in an external wall that is required to have an FRL, if required to be protected under (1), must not occupy more than 1/3 of the area of the external wall of the storey in which it is located unless they are in a Class 9b building used as an open spectator stand.</p>
C4D4 Separation of external walls and associated openings in different fire compartments [2019: C3.3]			X		Not applicable.
C4D5 Acceptable methods of protection [2019: C3.4]			X		<p>(1) Where protection is required, doorways, windows and other openings must be protected as follows:</p> <p>(a) Doorways—</p> <p>(i) internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or</p> <p>(ii) –/60/30 fire doors that are self-closing or automatic closing.</p> <p>(b) Windows—</p> <p>(i) internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or</p> <p>(ii) –/60/– fire windows that are automatic closing or permanently fixed in the closed position; or</p> <p>(iii) –/60/– automatic closing fire shutters.</p> <p>(c) Other openings—</p> <p>(i) excluding voids — internal or external wall-wetting sprinklers, as appropriate; or</p> <p>(ii) construction having an FRL not less than –/60/–.</p> <p>(2) Fire doors, fire windows and fire shutters must comply with Specification 12.</p>
C4D6 Doorways in fire walls [2019: C3.5]			X		Not applicable.
C4D7 Sliding fire doors [2019: C3.6]			X		Not applicable.
C4D8			X		Not applicable.





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Protection of doorways in horizontal exits [2019: C3.7]					
C4D9 Openings in fire-isolated exits [2019: C3.8]			X		Not applicable.
C4D10 Service penetrations in fire-isolated exits [2019: C3.9]			X		Not applicable.
C4D11 Openings in fire-isolated lift shafts [2019: C3.10]			X		Not applicable.
NSW C4D12 Bounding construction: Class 2 and 3 buildings and Class 4 parts [2019: C3.11]			X		Not applicable.
C4D13 Openings in floors and ceilings for services [2019: C3.12]			X		Not applicable.
C4D14 Openings in shafts [2019: C3.13]			X		Not applicable.
C4D15 Openings for service installations [2019: C3.15]			X		Not applicable.
C4D16 Construction joints [2019: C3.16]				X	(1) Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner— (a) identical with a prototype tested in accordance with AS 4072.1 and AS 1530.4 to achieve the required FRL; or (b) that differs from a prototype in accordance with Section 4 of AS 4072.1 and achieves the required FRL. (2) The determination of the required FRL must be confirmed in a report from an Accredited Testing Laboratory in accordance with Specifications 1 and 2.





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C4D17 Columns protected with lightweight construction to achieve an FRL [2019: C3.17]				X	A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
Section D Access and Egress					
Part D2 Provision for escape					
D2D2 Application of Part [2019: D1.1]			X		Not applicable.
NSW D2D3 Number of exits required [2019: D1.2]	X				(1) All buildings — Every building must have at least one exit from each storey.
D2D4 When fire-isolated stairways and ramps are required [2019: D1.3]			X		Not applicable.
D2D5 Exit travel distances [2019: D1.4]	X				(1) Class 5 or 8 buildings — (a) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m
D2D6 Distance between alternative exits [2019: D1.5]	X				Exits that are required as alternative means of egress must be— (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— (i) in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6m apart.
D2D7 Height of doorways in exits and paths of travel to exits [2019: D1.6(a)]				X	In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
NSW D2D8 Width of exits and paths of travel to exits [2019: D1.6(b), (c), (d) and (e)]	X				(1) The unobstructed width of each required exit or path of travel to an exit, except for ladders provided in accordance with D2D21, D3D23 or I3D5, and doorways, must be not less than— (a) 1 m.
NSW D2D9 Width of doorways in exits or paths of travel to exits [2019: D1.6, NSW D1.6(f)(vi)]	X				In a required exit or path of travel to an exit, the unobstructed width of a doorway must be not less than— (a) the unobstructed width of each exit provided to comply with D2D8(1) minus 250 mm; or (b) in any other case except where it opens to a sanitary compartment or bathroom — 750 mm wide.
D2D10 Exit width not to diminish in direction of travel [2019: D1.6(g)]			X		Not applicable.
D2D11 Determination and measurement of exits and paths of travel to exits [2019: D1.6(h) and (i)]			X		For the purposes of D2D7 to D2D10 the following apply: (a) The required width of a stairway or ramp in a required exit or path of travel to an exit must— (i) be measured clear of all obstructions such as handrails projecting parts of barriers and the like; and (ii) extend without interruption, except for ceiling cornices, to a height not less than 2m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing. (b) To determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D2D18.
D2D12 Travel via fire-isolated exits [2019: D1.7]			X		Not applicable.
D2D13 External stairways or ramps in lieu of fire-isolated exits [2019: D1.8]			X		Not applicable.
D2D14 Travel by non-fire-isolated stairways or ramps [2019: D1.9]				X	(1) A non-fire-isolated stairway serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided. (2) In a Class 5 or 8 building, the distance from any point on a floor to a point of egress to a road or open space by way of a required non-fire-isolated stairway or non-fire-isolated ramp must not exceed 80 m. (3) In a Class 5 or 8 building, a required non-fire-isolated stairway must discharge at a point not more than— (a) 20 m from a doorway providing egress to a road or open space.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
NSW D2D15 Discharge from exits [2019: D1.10]				X	<p>(1) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it.</p> <p>(2) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than 1m.</p> <p>(3) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by—</p> <p style="padding-left: 40px;">(a) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to- Satisfy Provisions of Part D4.</p> <p>(4) The discharge point of alternative exits must be located as far apart as practical.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2D16 Horizontal exits [2019: D1.11]			X		Not applicable.
D2D17 Non-required stairways, ramps or escalators [2019: D1.12]			X		Not applicable.
NSW D2D18 Number of persons accommodated [2019: D1.13]			X		<p>For the purposes of the Deemed-to-Satisfy Provisions, the number of persons accommodated in a storey, room or mezzanine must be determined with consideration to the purpose for which it is used and the layout of the floor area by—</p> <p style="padding-left: 40px;">(a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in Table D2D18 according to the use of that part, excluding spaces set aside for—</p> <p style="padding-left: 80px;">(i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and</p> <p style="padding-left: 80px;">(ii) service ducts and the like, sanitary compartments or other ancillary uses; or</p> <p style="padding-left: 40px;">(b) reference to the seating capacity in an assembly building or room; or</p> <p style="padding-left: 40px;">(c) any other suitable means of assessing its capacity.</p>
D2D19 Measurement of distances [2019: D1.14]			X		Informational clause only.
D2D20 Method of measurement [2019: D1.15]			X		Informational clause only.





D2D21			X		Not applicable.
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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Plant rooms, lift machine rooms and electricity network substations: Concession [2019: D1.16]					
D2D22 Access to lift pits [2019: D1.17]			X		Not applicable.
D2D23 Egress from primary schools [2019: D1.18]			X		Not applicable.
Part D3 Construction of exits					
NSW D3D2 Application of Part [2019: NSW D2.1(c)]			X		Not applicable.
D3D3 Fire-isolated stairways and ramps [2019: D2.2]			X		Not applicable.
D3D4 Non-fire-isolated stairways and ramps [2019: D2.3]			X		Not applicable.
D3D5 Separation of rising and descending stair flights [2019: D2.4]			X		Not applicable.
D3D6 Open access ramps and balconies [2019: D2.5]			X		Not applicable.
D3D7 Smoke lobbies [2019: D2.6]			X		Not applicable.
D3D8				X	(1) An opening to any chute or duct intended to convey hot products of combustion from a boiler, must not be located in any part of a required exit or any corridor, hallway, lobby or the like leading to a required exit.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Installations in exits and paths of travel [2019: D2.7]					<p>(2) Gas or other fuel services must not be installed in a required exit.</p> <p>(3) Services or equipment enclosed in accordance with (4) may be installed in a required exit, or in any corridor, hallway, lobby or the like leading to a required exit, where that service or equipment comprises—</p> <ul style="list-style-type: none"> (a) electricity meters, distribution boards or ducts; or (b) central telecommunications distribution boards or equipment; or (c) electrical motors or other motors serving equipment in the building. <p>(4) An enclosure for the purposes of (3) must be suitably sealed against smoke spreading from the enclosure and be—</p> <ul style="list-style-type: none"> (a) non-combustible construction; or (b) a fire-protective covering. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D3D9 Enclosure of space under stairs and ramps [2019: D2.8]				X	<p>(1) Non fire-isolated stairways and ramps — The space below a required non fire-isolated stairway (including an external stairway) or non fire-isolated ramp must not be enclosed to form a cupboard or other enclosed space unless—</p> <ul style="list-style-type: none"> (a) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and (b) any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D3D10 Width of required stairways and ramps [2019: D2.9]			X		Not applicable.
D3D11 Pedestrian ramps [2019: D2.10]			X		Not applicable.
D3D12 Fire-isolated passageways [2019: D2.11]			X		Not applicable.
D3D13 Roof as open space [2019: D2.12]			X		Not applicable.
NSW D3D14 Goings and risers [2019: D2.13]				X	<p>(1) A stairway must have—</p> <ul style="list-style-type: none"> (a) not more than 18 and not less than 2 risers in each flight; and (b) going (G), riser (R) and quantity (2R + G) in accordance with Table D3D14, except as permitted by (2) and (3); and (c) constant goings and risers throughout each flight, except as permitted by (2) and (3), and the dimensions of goings (G) and



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>risers (R) in accordance with (1)(b) are considered constant if the variation between—</p> <ul style="list-style-type: none"> (i) adjacent risers, or between adjacent goings, is no greater than 5 mm; and (ii) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm; and <p>(d) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and</p> <p>(e) treads which have—</p> <ul style="list-style-type: none"> (i) a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or (ii) a nosing strip with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; and <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D3D15 Landings [2019: D2.14]				X	<p>In a stairway—</p> <p>(a) landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must—</p> <ul style="list-style-type: none"> (i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and (ii) have— <ul style="list-style-type: none"> (A) a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or (B) a strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586, where the edge leads to a flight below; and <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
NSW D3D16 Thresholds [2019: D2.15, NSW D2.15(d), (e)]	X				<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 leaf unless—</p> <p>(a) in a building required to be accessible by Part D4, the doorway—</p> <ul style="list-style-type: none"> (i) opens to a road or open space; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or <p>(b) In other cases—</p> <ul style="list-style-type: none"> (i) the doorway opens to a road or open space, external stair landing or external balcony; and (ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.
D3D17				X	<p>(1) A continuous barrier must be provided along the side of—</p> <p>(a) a stairway or ramp; and</p>





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Barriers to prevent falls [2019: D2.16(a), (b) and (c)]					<p>(b) a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and</p> <p>(c) any delineated path of access to a building, if the trafficable surface is 1 m or more above the surface beneath.</p> <p>(2) A barrier required by (1) must be constructed in accordance with D3D18, D3D19, D3D20 and, if a wire barrier is used, D3D21.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
NSW D3D18 Height of barriers [2019: Table D2.16a]				X	<p>(1) The height of a barrier required by D3D17 must be not less than the following:</p> <p>(a) For stairways or ramps with a gradient of 1:20 or steeper — 865 mm.</p> <p>(b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length — 865 mm.</p> <p>(c) For all other locations — 1m.</p> <p>(2) For a barrier provided under (1) —</p> <p>(a) barrier heights are measured vertically from the surface beneath, except that for stairways the height must be measured above the nosing line of the stair treads; and</p> <p>(b) a transition zone may be incorporated where the barrier height changes from 865 mm on a stair flight or ramp to 1 m at a landing or floor.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D3D19 Openings in barriers [2019: Table D2.16a]				X	<p>(1) Openings in a required barrier must not allow a 125 mm sphere to pass through.</p> <p>(2) For a barrier provided under (1), the maximum 125 mm barrier opening for a stairway, such as a non fire-isolated stairway, is measured above the nosing line of the stair treads.</p> <p>(3) Where a required barrier is fixed to the vertical face forming an edge of a landing, balcony, deck, stairway or the like, the opening formed between the barrier and the face must not exceed 40 mm.</p> <p>(4) For the purposes of (3), the opening is measured horizontally from the edge of the trafficable surface to the nearest internal face of the barrier.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D3D20 Barrier climbability [2019: Table D2.16a]	X				<p>(1) A barrier required by D3D17, located on a floor more than 4 m above the surface beneath, must not incorporate horizontal or near horizontal elements that could facilitate climbing between 150 mm and 760 mm above the floor.</p>
D3D21 Wire barriers [2019: D2.16(d)]				X	<p>Where a required barrier is constructed of wire, it is deemed to meet the requirements of D3D19(1) if it is constructed in accordance with the following:</p> <p>(a) For horizontal wire systems—</p> <p>(i) when measured with a strain indicator, it must be in Accordance with the tension values in Table D3D21a; or</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(ii) must not exceed the maximum deflections in Table D3D21c.</p> <p>(b) For non-continuous vertical wire systems, when measured with a strain indicator, must be in accordance with the tension values in Table D3D21a (see Note 4).</p> <p>(c) For continuous vertical or continuous near vertical sloped wire systems—</p> <p>(i) must have wires of no more than 2.5 mm diameter with a lay of 7×7 or 7×19 construction; and</p> <p>(ii) changes in direction at support rails must pass around a pulley block without causing permanent deformation to the wire; and</p> <p>(iii) must have supporting rails, constructed with a spacing of not more than 900 mm, of a material that does not allow deflection that would decrease the tension of the wire under load; and</p> <p>(iv) when the wire tension is measured with a strain indicator, it must be in accordance with the tension values in Table D3D21b and measured in the furthestmost span from the tensioning device.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D3D22 Handrails [2019: D2.17]				X	<p>(1) Subject to (2), handrails must—</p> <p>(a) be located along at least one side of the flight; and</p> <p>(b) be fixed at a height of not less than 865 mm; and</p> <p>(c) be continuous between stair flight landings and have no obstruction on or above them that will tend to break a hand- hold; and</p> <p>(d) in a required exit serving an area required to be accessible, be designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail required by (1)(c)(ii).</p> <p>(2) The height required by (1)(b) is measured above the nosings of stair treads and the floor surface of the ramp, landing or the like.</p> <p>(3) Handrails required to assist people with a disability must be provided in accordance with D4D4.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D3D23 Fixed platforms, walkways, stairways and ladders [2019: D2.18]			X		Not applicable.
NSW D3D24 Doorways and doors [2019: D2.19]				X	<p>(1) A doorway serving as a required exit or forming part of a required exit—</p> <p>(a) must not be fitted with a roller shutter or tilt-up door; and</p> <p>(b) must not be fitted with a sliding door unless—</p> <p>(i) it leads directly to a road or open space; and</p> <p>(ii) the door is able to be opened manually under a force of not more than 110 N; and</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(c) if fitted with a door which is power-operated—</p> <p>(i) it 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; and</p> <p>(ii) if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door; and</p> <p>(2) A power-operated door in a path of travel to a required exit 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> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D3D25 Swinging doors [2019: D2.20]	X				<p>(1) A swinging door in a required exit or forming part of a required exit—</p> <p>(a) must not encroach—</p> <p>(i) at any part of its swing by more than 500 mm on the required width (including any landings) of a required stairway or passageway if it is likely to impede the path of travel of the people already using the exit; and</p> <p>(ii) when fully open, by more than 100 mm on the required width of the required exit; and</p> <p>(b) must swing in the direction of egress unless; and</p> <p>(c) must not otherwise impede the path or direction of egress.</p> <p>(2) The measurement of encroachment referred to in (1)(a) in each case is to include door handles or other furniture or attachments to the door.</p>
NSW D3D26 Operation of latch [2019: D2.21]				X	<p>(1) A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by—</p> <p>(a) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area required to be accessible by Part D4—</p> <p>(i) 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>(ii) have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35 mm and not more than 45 mm; or</p> <p>(b) a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor.</p> <p>(2) Where the latch operation device referred to in (1)(b) is not located on the door leaf itself—</p> <p>(a) manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located—</p> <p>(i) not less than 500 mm from an internal corner; and</p> <p>(ii) for a hinged door, between 1 m and 2 m from the door leaf in any position; and</p> <p>(iii) for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position; and</p> <p>(b) braille and tactile signage complying with S15C3 and S15C6 must identify the latch operation device.</p>





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(3) The requirements of (1) and (2) do not apply to a door that—</p> <p>(a) serves a vault, strong-room, sanitary compartment, or the like; or</p> <p>(b) serves only, or is within—</p> <p>(i) a sole-occupancy unit with a floor area not more than 200 m² in a Class 5 building; or</p> <p>(ii) a space which is otherwise inaccessible to persons at all times when the door is locked; or</p> <p>(c) is fitted with a fail-safe device which automatically unlocks the door upon the activation of any smoke, or any other detector system deemed suitable in accordance with AS 1670.1 installed throughout the building, and is readily openable when unlocked; or</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D3D27 Re-entry from fire-isolated exits [2019: D2.22]			X		Not applicable.
D3D28 Signs on doors [2019: D2.23]			X		Not applicable.
D3D29 Protection of openable windows [2019: D2.24]			X		Not applicable.
D3D30 Timber stairways: Concession [2019: D2.25]			X		Not applicable.
NSW D3D31 Doors in paths of travel to an entertainment venue [2019: NSW D2.101]			X		Not applicable.
Part D4 Access for people with a disability – Access consultant to undertake an assessment of this part					
Section E Services and equipment					
Part E1 Fire fighting equipment					
E1D2 Fire hydrants [2019: E1.3]				X	<p>(1) A fire hydrant system must be provided to serve a building—</p> <p>(a) having a total floor area greater than 500 m²; and</p> <p>(b) where a fire brigade station is—</p> <p>(i) no more than 50 km from the building as measured along roads; and</p> <p>(ii) equipped with equipment capable of utilising a fire hydrant.</p>





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(2) The fire hydrant system must be installed in accordance with AS 2419.1.</p> <p>(3) Where internal fire hydrants are provided, they must serve only the storey on which they are located except that a sole-occupancy unit—</p> <p>(b) of not more than 2 storeys in a Class 5 or 8 building may be served by a single fire hydrant located at the level of egress from that sole-occupancy unit provided the fire hydrant can provide coverage to the whole of the sole-occupancy unit.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification. Relevant fire safety systems are required to be designed and endorsed by an accredited practitioner (fire safety) in accordance with Section 22 of the EP&A (DC&FS) Regulation 2021.</p>
E1D3 Fire hose reels [2019: E1.4]				X	<p>(1) E1D3 does not apply to—</p> <p>(a) a Class 5 building.</p> <p>(2) A fire hose reel system must be provided—</p> <p>(a) to serve the whole building where one or more internal fire hydrants are installed; or</p> <p>(b) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500 m².</p> <p>(3) The fire hose reel system must—</p> <p>(a) have fire hose reels installed in accordance with AS 2441.</p> <p>(4) Fire hose reels must be located internally, externally or in combination, to achieve the system coverage specified in AS 2441.</p> <p>(5) In achieving system coverage, one or a combination of the following criteria for individual internally located fire hose reels must be met in determining the layout of any fire hose reel system:</p> <p>(a) Fire hose reels must be located adjacent to an internal fire hydrant (other than one within a fire-isolated exit), except that a fire hose reel need not be located adjacent to every fire hydrant, provided system coverage can be achieved.</p> <p>(b) Fire hose reels must be located within 4 m of an exit, except that a fire hose reel need not be located adjacent to every exit, provided system coverage can be achieved.</p> <p>(c) Where system coverage is not achieved by compliance with (a) and (b), additional fire hose reels may be located in paths of travel to an exit to achieve the required coverage.</p> <p>(6) Where the normal water supply cannot achieve the flow and pressures required by AS 2441, or is unreliable—</p> <p>(a) a pump; or</p> <p>(b) water storage facility; or</p> <p>(c) both a pump and water storage facility must be installed to provide the minimum flow and pressures required by clause 6.1 of AS 2441.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification. Relevant fire safety systems are required to be designed and endorsed by an accredited practitioner (fire safety) in accordance with Section 22 of the EP&A (DC&FS) Regulation 2021.</p>
E1D4			X		Not applicable.





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Sprinklers [2019: E1.5]					
E1D5 Where sprinklers are required: all classifications [2019: Table E1.5]			X		Not applicable.
E1D6 Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings [2019: Table E1.5]			X		Not applicable.
E1D7 Where sprinklers are required: Class 3 building used as a residential care building [2019: Table E1.5]			X		Not applicable.
E1D8 Where sprinklers are required: Class 6 building [2019: Table E1.5]			X		Not applicable.
E1D9 Where sprinklers are required: Class 7a building, other than an open-deck carpark [2019: Table E1.5]			X		Not applicable.
E1D10 Where sprinklers are required: Class 9a health-care building used as a residential care building, Class 9c buildings [2019: Table E1.5]			X		Not applicable.





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
E1D11 Where sprinklers are required: Class 9b buildings [2019: Table E1.5]			X		Not applicable.
E1D12 Where sprinklers are required: additional requirements [2019: Table E1.5]			X		Not applicable.
E1D13 Where sprinklers are required: occupancies of excessive hazard [2019: Table E1.5 (Note 4)]			X		Compliance commentary: The client has confirmed that the building will not be used for the processing or storage of any combustible or hazardous materials, including those listed under this clause.
E1D14 Portable fire extinguishers [2019: E1.6 and Table E1.6]				X	(1) Portable fire extinguishers must be— (a) provided as listed in (3) and (4); and (b) for a Class 5 building, provided— (i) to serve the whole Class 5 building where one or more internal fire hydrants are installed; or (ii) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500 m ² ; and (c) selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444. (3) In Class 2 to 9 buildings, portable fire extinguishers must be provided as follows: (a) To cover Class A fire risks associated with a Class 5 building. (4) For the purposes of (3): (a) Fire risks are defined in accordance with AS 2444. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
E1D15 Fire control centres [2019: E1.8]			X		Not applicable.
E1D16 Fire precautions during construction [2019: E1.9]			X		In a building under construction— (a) not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit.
E1D17			X		Not applicable.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Provision for special hazards [2019: E1.10]					
Part E2 Smoke hazard management – This part does not apply					
Part E3 Lift Installations – This part does not apply					
Part E4 Visibility in an emergency, exit signs and warning systems					
E4D1 Deemed-to-Satisfy Provisions [2019: E4.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements E4P1 to E4P3 are satisfied by complying with— (a) E4D2 to E4D9. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
E4D2 Emergency lighting requirements [2019: E4.2]				X	An emergency lighting system must be installed— (a) in every storey of a Class 5 or 8 building where the storey has an area more than 300 m ² — (i) in every passageway, corridor, hallway, or the like, that is part of the path of travel to an exit; and (ii) in any room having a floor area more than 100 m ² that does not open to a corridor or space that has emergency lighting or to a road or open space; and (iii) in any room having a floor area more than 300 m ² ; and (b) in every required non-fire-isolated stairway; and (c) in a sole-occupancy unit in a Class 5 building if— (i) the floor area of the unit is more than 300 m ² ; and (ii) an exit from the unit does not open to a road or open space or to an external stairway, passageway, balcony or ramp, leading directly to a road or open space; and <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
E4D3 Measurement of distance [2019: E4.3]			X		Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.
E4D4 Design and operation of emergency lighting [2019: E4.4]				X	Every required emergency lighting system must comply with AS/NZS 2293.1. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
E4D5 Exit signs [2019: E4.5]				X	An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each— (a) door providing direct egress from a storey to— (i) an enclosed stairway serving as a required exit; and (b) door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4D2.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
NSW E4D6 Direction signs [2019: NSW E4.6]				X	If an exit is not readily apparent to persons occupying or visiting the building, then exit signs must be installed— (a) in appropriate positions in corridors, hallways, lobbies, foyers, auditoria, and the like, indicating the direction to a required exit. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
E4D7 Class 2 and 3 buildings and Class 4 parts: exemptions [2019: E4.7]			X		Not applicable.
E4D8 Design and operation of exit signs [2019: E4.8]				X	Every required exit sign must— (a) comply with— (i) AS/NZS 2293.1; or (ii) for a photoluminescent exit sign, Specification 25; and (b) be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
E4D9 Emergency warning and intercom systems [2019: E4.9]			X		Not applicable.
Section F Health and Amenity					
Part F1 External waterproofing, rainwater management and rising damp					
F1D2 Application of Part [New for 2022]			X		(1) F1D4 and F1D5 do not apply to a roof with a covering complying with F3D2(a) to (d). (2) F1D3 to F1D5 do not apply to a balcony, podium or similar horizontal surface part of a building— (a) where the flooring is of timber decking or other perforated flooring; or (b) which is located directly above ground.
F1D3 Stormwater Drainage [2019: F1.1]				X	Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F1D4 Exposed Joints [New for 2022]			X		Not applicable.
F1D5			X		Not applicable.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
External waterproofing membranes [2019: F1.4]					
F1D6 Damp-proofing [2019: F1.9]				X	<p>(1) Moisture from the ground must be prevented from reaching—</p> <p>(a) the lowest floor timbers and the walls above the lowest floor joists; and</p> <p>(b) the walls above the damp-proof course; and</p> <p>(c) the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders.</p> <p>(2) Where a damp-proof course is provided, it must consist of—</p> <p>(a) a material that complies with AS/NZS 2904; or</p> <p>(b) impervious sheet material in accordance with AS 3660.1.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F1D7 Damp-proofing of floors on the ground [2019: F1.10]				X	<p>(1) If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F1D8 Subfloor ventilation [2019: F1.12]			X		Not applicable.
Part F2 Wet areas and overflow protection					
F2D2 Wet area construction [2019: F1.7(a) and (b)]				X	<p>(1) In a Class 5 or 8 building, building elements in a bathroom or shower room, a slop hopper or sink compartment, a laundry or sanitary compartment must—</p> <p>(a) be water resistant or waterproof in accordance with Specification 26; and</p> <p>(b) comply with AS 3740, as if they were in a Class 2 or 3 building or a Class 4 part of a building.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F2D3 Rooms containing urinals [2019: F1.7(c), (d) and (e)]			X		Not applicable.
F2D4 Floor wastes [2019: F1.11]			X		Not applicable.
Part F3 Roof and wall cladding					
F3D1			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirement F3P1 is satisfied by complying with F3D2 to F3D5.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Deemed-to-Satisfy Provisions [New for 2022]					(2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
F3D2 Roof coverings [2019: F1.5]				X	<p>A roof must be covered with—</p> <ul style="list-style-type: none"> (a) roof tiles complying with AS 2049, fixed in accordance with AS 2050; or (b) metal sheet roofing complying with AS 1562.1; or (c) plastic sheet roofing designed and installed in accordance with AS 1562.3; or (d) terracotta, fibre-cement and timber slates and shingles designed and installed in accordance with AS 4597, except in cyclonic areas; or (e) an external waterproofing membrane complying with F1D5. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F3D3 Sarking [2019: F1.6]				X	<p>Sarking-type material used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F3D4 Glazed assemblies [2019: F1.13]				X	<p>(1) Subject to (2), the following glazed assemblies in an external wall, must comply with AS 2047 requirements for resistance to water penetration:</p> <ul style="list-style-type: none"> (a) Windows. (b) Sliding and swinging glazed doors with a frame, including French and bi-fold doors with a frame. (c) Adjustable louvres. (d) Shopfronts. (e) Window walls with one piece framing. <p>(2) The following glazed assemblies need not comply with (1):</p> <ul style="list-style-type: none"> (a) All glazed assemblies not in an external wall. (b) Revolving doors. (c) Fixed louvres. (d) Skylights, roof lights and windows in other than the vertical plane. (e) Sliding and swinging glazed doors without a frame. (f) Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047. (g) Second-hand windows, re-used windows and recycled windows. (h) Heritage windows. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F3D5 Wall cladding [New for 2022]				X	<p>(1) External wall cladding must comply with one or a combination of the following:</p> <ul style="list-style-type: none"> (a) Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. (b) Autoclaved aerated concrete: AS 5146.3. (c) Metal wall cladding: AS 1562.1.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification. Where compliance cannot be achieved with the requirements of this clause, a Performance Solution will need to be obtained from a suitably qualified Façade Engineer.</i>
Part F4 Sanitary and other facilities					
F4D2 Facilities in residential buildings [2019: F2.1]			X		Not applicable.
F4D3 Calculation of number of occupants and facilities [2019: F2.2]			X		<p>(1) The number of persons accommodated must be calculated according to D2D18 if it cannot be more accurately determined by other means.</p> <p>(2) Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females.</p> <p>(3) In calculating the number of sanitary facilities to be provided under F4D2 and F4D4, a unisex facility required for people with a disability (other than a facility provided under F4D12) may be counted once for each sex.</p> <p>(4) For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary products.</p>
F4D4 Facilities in Class 3 to 9 buildings [2019: F2.3]	X				<p>Compliance commentary:</p> <p>The client has confirmed that no more than 10 people are to be employed within the building. As such the proposed unisex facility is compliant.</p> <p>BCA Requirements:</p> <p>(1) Except where permitted by (3), (4), F4D5(a) and F4D5(b), separate sanitary facilities for males and females must be provided for Class 5 or 8 buildings in accordance with Tables F4D4a to F4D4l, as appropriate.</p> <p>(2) In Tables F4D4a to F4D4l—</p> <ul style="list-style-type: none"> (a) 'Number' means the number of facilities required; and (b) '>' means greater than; and (c) a hyphen means no data (refer to the row above for the highest value applicable); and (d) 'N/A' means not applicable; and (e) a reference to— <ul style="list-style-type: none"> (i) employees includes owners and managers using the building; and (ii) add 1 per 100 or 150, 250, 500" etc. includes any part of that number. <p>(3) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex.</p> <p>(4) If the majority of employees are of one sex, not more than 2 employees of the other sex may share toilet facilities if the facilities are separated by means of walls, partitions and doors to afford privacy.</p> <p>(4) Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by females.</p> <p>(5) Not less than one washbasin must be provided where closet pans or urinals are provided.</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F4D5 Accessible sanitary facilities [2019: F2.4]			X		Engage an access consultant to undertake an assessment of this part
F4D6 Accessible unisex sanitary compartments [2019: Table F2.4a]			X		Engage an access consultant to undertake an assessment of this part
F4D7 Accessible unisex showers [2019: Table F2.4b]			X		Engage an access consultant to undertake an assessment of this part
F4D8 Construction of sanitary compartments [2019: F2.5]				X	<p>(1) Sanitary compartments must have doors and partitions that separate adjacent compartments and extend—</p> <ul style="list-style-type: none"> (a) from floor level to the ceiling in the case of a unisex facility; or (b) 1.8 m above the floor in all other cases. <p>(2) The door to a fully enclosed sanitary compartment must—</p> <ul style="list-style-type: none"> (a) open outwards; or (b) slide; or (c) be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2 m, measured in accordance with Figure F4D8, between the closet pan within the sanitary compartment and the doorway. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4D9 Interpretation: urinals and washbasins [2019: F2.6]			X		<p>(1) A urinal may be—</p> <ul style="list-style-type: none"> (a) an individual stall or wall-hung urinal; or (b) each 600 mm length of a continuous urinal trough; or (c) a closet pan used in place of a urinal. <p>(2) A washbasin may be—</p> <ul style="list-style-type: none"> (a) an individual basin; or (b) a part of a hand washing trough served by a single water tap.
F4D11 Waste management [2019: F2.8]			X		Not applicable.
F4D12 Accessible adult change facilities [2019: F2.9]			X		Not applicable.

Part F5 Room heights



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
F5D2 Height of rooms and other spaces [2019: F3.1]				X	<p>(1) The height of rooms and other spaces in a Class 2 or 3 building or Class 4 part of a building must be not less than—</p> <p>(a) for a kitchen, laundry, or the like — 2.1 m; and</p> <p>(b) for a corridor, passageway or the like — 2.1 m; and</p> <p>(c) for a habitable room excluding a kitchen — 2.4 m; and</p> <p>(2) For the purposes of (1), when calculating the floor area of a room or space, any part that has a ceiling height of less than 1.5 m is not included.</p> <p>(3) The height of rooms and other spaces in a Class 5 or 8 building must be not less than—</p> <p>(a) except as allowed in (b) and (4) — 2.4 m; and</p> <p>(b) a corridor, passageway, or the like — 2.1 m.</p> <p>(4) The height of rooms and other spaces in any building must be not less than—</p> <p>(a) for a bathroom, sanitary compartment, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and</p> <p>(b) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
Part F6 Light and Ventilation					
F6D2 Provision of natural light [2019: F4.1]			X		Not applicable.
F6D3 Methods and extent of natural light [2019: F4.2]			X		Not applicable.
F6D4 Natural light borrowed from adjoining room [2019: F4.3]			X		Not applicable.
F6D5 Artificial lighting [2019: F4.4]				X	<p>(1) Artificial lighting must be provided—</p> <p>(a) in required stairways and passageways; and</p> <p>(b) if natural light of a standard equivalent to that required by F6D3 is not available, and the periods of occupation or use of the room or space will create undue hazard to occupants seeking egress in an emergency, in—</p> <p>(iii) Class 5 and 8 buildings — to all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress.</p> <p>(2) The artificial lighting system must comply with AS/NZS 1680.0.</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
NSW F6D6 Ventilation of rooms [2019: F4.5]				X	<p>A habitable room, office, factory, workroom, sanitary compartment, bathroom and any other room occupied by a person for any purpose must have—</p> <p>(a) natural ventilation complying with F6D7; or</p> <p>(b) a mechanical ventilation or air-conditioning system complying with AS 1668.2.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F6D7 Natural ventilation [2019: F4.6]				X	<p>(1) Natural ventilation provided in accordance with F6D6(a) must consist of openings, windows, doors or other devices which can be opened—</p> <p>(a) with a ventilating area not less than 5% of the floor area of the room required to be ventilated; and</p> <p>(b) open to—</p> <p>(i) a suitably sized court, or space open to the sky; or</p> <p>(ii) an open verandah, carport, or the like; or</p> <p>(iii) an adjoining room in accordance with F6D8.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F6D8 Ventilation borrowed from adjoining room [2019: F4.7]				X	<p>Natural ventilation to a room may come through a window, opening, door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same sole-occupancy unit or the enclosed verandah is common property, and—</p> <p>(b) in a Class 5 or 8 building—</p> <p>(i) the window, opening, door or other device has a ventilating area of not less than 10% of the floor area of the room to be ventilated, measured not more than 3.6 m above the floor; and</p> <p>(ii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 10% of the combined floor areas of both rooms; and</p> <p>(c) the ventilating areas specified in (a) and (b) may be reduced as appropriate if direct natural ventilation is provided from another source.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F6D9 Restriction on location of sanitary compartments [2019: F4.8]				X	<p>A sanitary compartment must not open directly into—</p> <p>(a) a kitchen or pantry; or</p> <p>(b) a workplace normally occupied by more than one person.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F6D10 Airlocks [2019: F4.9]				X	<p>If a sanitary compartment is prohibited under F6D9 from opening directly to another room—</p> <p>(a) in a Class 5 or 8 building—</p> <p>(i) access must be by an airlock, hallway or other room with a floor area of not less than 1.1 m² and fitted with self-closing doors at all access doorways; or</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(ii) the sanitary compartment must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F6D11 Carparks [2019: F4.11]			X		Not applicable.
F6D12 Kitchen local exhaust ventilation [2019: F4.12]			X		Not applicable.
Part F7 Sound transmission and insulation – This part does not apply					
Part F8 Condensation management – This part does not apply					
Section G Ancillary Provisions					
Part G1 Minor structures and components – This part does not apply					
Part G2 Boilers, pressure vessels, heating appliances, fireplaces, chimneys and flues					
G2D2 Installation of appliances [2019: G2.2]				X	The installation of a stove, heater or similar appliance in a building must comply with: (a) Domestic solid-fuel burning appliances — installation: AS/NZS 2918. (b) For boilers and pressure vessels: Specification 30. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
G2D3 Open fireplaces [2019: G2.3]			X		Not applicable.
G2D4 Incinerator rooms [2019: G2.4]			X		Not applicable.
Part G3 Atrium Construction – This part does not apply					
Part G4 Construction in alpine areas – This part does not apply					
Part G5 Construction in bushfire prone areas – This part does not apply					
Part G6 Occupiable outdoor areas – This part does not apply					
National Construction Code BCA 2022 (Volume 2)					
BCA Volume 2 Provisions – Prior to the Construction Certificate stage a standard residential dwelling specification is to be provided to the Principal Certifier to confirm BCA compliance for the class 10a undercroft parking area.					



5.0 CONCLUSION

This report provides a Building Code of Australia 2022 (BCA) assessment of the proposed proposed industrial warehouse, for the purposes of DA submission.

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

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

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

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6.0 ATTACHMENT A - INSPECTION & MAINTENANCE

6.1 Fire Safety Measures

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

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

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

6.2 Good Housekeeping

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

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

7.0 APPENDIX A – TYPE C CONSTRUCTION REQUIREMENTS

This Appendix contains requirements for the fire-resisting construction of building elements in a building of Type C Construction.

S5C2 Exposure to fire-source features	<p>(1) A part of a building element is exposed to a fire-source feature if any of the horizontal straight 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—</p> <ul style="list-style-type: none"> (a) has an FRL of not less than 30/–/–; and (b) is neither transparent nor translucent. <p>(2) A part of a building element is not exposed to a fire-source feature if the fire-source feature is—</p> <ul style="list-style-type: none"> (a) an external wall of another building that stands on the allotment and the part concerned is more than 15 m above the highest part of that external wall; or (b) a side or rear boundary of the allotment and the part concerned is below the level of the finished ground at every relevant part of the boundary concerned. <p>(3) If various distances apply for different parts of a building element—</p> <ul style="list-style-type: none"> (a) the entire element must have the FRL applicable to that part having the least distance between itself and the relevant fire-source feature; or (b) each part of the element must have the FRL applicable according to its individual distance from the relevant fire source feature. <p>(4) The requirements of (3) do not override or permit any exemption from S5C3.</p>
S5C3 Fire protection for a support of another part	<p>(1) 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, subject to (2), must—</p> <ul style="list-style-type: none"> (a) have an FRL not less than that required by other provisions of this Specification; and (b) if located within the same fire compartment as the part it supports have an FRL in respect of structural adequacy the greater of that required— <ul style="list-style-type: none"> (i) for the supporting part itself; and (ii) for the part it supports; and (c) be non-combustible— <ul style="list-style-type: none"> (i) if required by other provisions of this Specification; or (ii) if the part it supports is required to be non-combustible. <p>(2) The following building elements need not comply with (1)(b) and (1)(c)(ii):</p> <ul style="list-style-type: none"> (a) An element providing lateral support to an external wall complying with S524(1)(b) or C2D12. (b) An element providing support within a carpark and complying with S5C25. (c) A roof providing lateral support in a building— <ul style="list-style-type: none"> (ii) of Type C construction. (d) A column providing lateral support to a wall where the column complies with S5C6(1) and (2). (e) An element providing lateral support to a fire wall or fire-resisting wall, provided the wall is supported on both sides and failure of the element on one side does not affect the fire performance of the wall.
S5C4 Lintels	<p>(1) A lintel must have the FRL required for the part of the building in which it is situated.</p> <p>(2) A lintel need not comply with (1) if it does not contribute to the support of a fire door, fire window or fire shutter, and—</p> <ul style="list-style-type: none"> (a) it spans an opening in— <ul style="list-style-type: none"> (i) a wall of a building containing only one storey; or (ii) a non-loadbearing wall of a Class 2 or 3 building; or (b) it spans an opening in masonry which is not more than 150 mm thick and— <ul style="list-style-type: none"> (i) not more than 3m wide if the masonry is non-loadbearing; or

	(ii) not more than 1.8 m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall.
S5C5 Method of attachment not to reduce the fire-resistance of building elements	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 to below that required.
S5C6 General concessions	<p>(1) Steel columns — A steel column, other than one in a fire wall or common wall, need not have an FRL in a building that contains—</p> <ul style="list-style-type: none"> (a) only 1 storey; or (b) 2 storeys in some of its parts and 1 storey only in its remaining parts if the sum of the floor areas of the upper storeys of its 2 storey parts does not exceed the lesser of— <ul style="list-style-type: none"> (i) 1/8 of the sum of the floor areas of the 1 storey parts; or (ii) in the case of a building to which one of the maximum floor areas specified in Table C3D3 is applicable — 1/10 of that area; or (iii) in the case of a building to which two or more of the maximum floor area specified in Table C3D3 is applicable — 1/10 of the lesser of those areas. <p>(2) Timber columns — A timber column may be used in a single storey building if—</p> <ul style="list-style-type: none"> (a) in a fire wall or common wall the column has an FRL not less than that listed in the appropriate Tables S5C24a to S5C24e; and (b) in any other case where the column is required to have an FRL in accordance with Tables S5C24a to S5C24e, it has an FRL of not less than 30/—/—. <p>(3) Structures on roofs — A non-combustible structure situated on a roof need not comply with the other provisions of this Specification if it only contains—</p> <ul style="list-style-type: none"> (a) lift motor equipment; or (b) one or more of the following: <ul style="list-style-type: none"> (i) Hot water or other water tanks. (ii) Ventilating ductwork, ventilating fans and their motors. (iii) Air-conditioning chillers. (iv) Window cleaning equipment. (v) Other service units that are non-combustible and do not contain flammable or combustible liquids or gases. <p>(4) Curtain walls and panel walls — A requirement for an external wall to have an FRL does not apply to a curtain wall or panel wall which is of non-combustible construction and fully protected by automatic external wall-wetting sprinklers.</p> <p>(5) Balconies and verandahs — A balcony, verandah or the like and any incorporated supporting part, which is attached to or forms part of a building, need not comply with Tables S5C24a to S5C24e, if—</p> <ul style="list-style-type: none"> (a) it does not form part of the only path of travel to a required exit from the building.
S5C7 Mezzanine floors: Concession	<p>(1) This Clause does not apply to a Class 9b building that is a spectator stand or audience viewing area accommodating more than 100 persons as calculated according to D2D18.</p> <p>(2) A mezzanine and its supports need not have an FRL or be non-combustible provided—</p> <ul style="list-style-type: none"> (a) the total floor area of all the mezzanines in the same room does not exceed 1/3 of the floor area of the room or 200 m², whichever is the lesser; and (b) the FRL of each wall and column that supports any other part of the building within 6 m of the mezzanine is increased by the amount listed in Table S5C7.
S5C8 Enclosure of shafts	<p>(1) Shafts required to have an FRL must be enclosed at the top and bottom by construction having an FRL not less than that required for the walls of a non-loadbearing shaft in the same building.</p> <p>(2) The provisions of (1) need not apply to—</p>

	<p>(a) the top of a shaft extending beyond the roof covering, other than one enclosing a fire-isolated stairway or ramp; or</p> <p>(b) the bottom of a shaft if it is non-combustible and laid directly on the ground</p>
S5C9 Carparks in Class 2 and 3 buildings	<p>(1) If a Class 2 building contains not more than 4 storeys of which—</p> <p>(a) one storey is Class 7 used solely for the purpose of parking motor vehicles or for some other purpose that is ancillary to a Class 2; and</p> <p>(b) the remaining storeys are of Class 2, the carpark storey is regarded as Class 2 only for the purpose of determining the relevant fire-resisting requirements of this Specification.</p> <p>(2) If a Class 3 building or a building of Class 2 and 3 contains not more than 3 storeys of which—</p> <p>(a) one storey is Class 7 used solely for the purpose of parking motor vehicles or for some other purpose that is ancillary to the other storeys; and</p> <p>(b) the remaining storeys are of Class 2 or 3, the carpark storey is regarded as Class 2 or 3 only for the purpose of determining the relevant fire-resisting requirements of this Specification.</p>
S5C10 Residential care building: Concession	<p>(1) In a Class 3 building protected with a sprinkler system complying with Specification 17 and used as a residential care building, any FRL criterion prescribed in Tables S5C24a to S5C24e—</p> <p>(a) for any floor and any loadbearing wall, may be reduced to 60, except any FRL criterion of 90 for an external wall must be maintained when tested from the outside; and</p> <p>(b) for any non-loadbearing internal wall, need not apply if—</p> <p>(i) it is lined on each side with standard grade plasterboard not less than 13 mm thick or similar non-combustible material; and</p> <p>(ii) it extends—</p> <p>(A) to the underside of the floor next above; or</p> <p>(B) to the underside of a ceiling lined with standard grade plasterboard not less than 13 mm thick or a material with at least an equivalent level of fire protection; or</p> <p>(C) to the underside of a non-combustible roof covering; and</p> <p>(iii) any insulation installed in the cavity of the wall is non-combustible; and</p> <p>(iv) any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material.</p> <p>(2) The concession described at (1) does not apply to fire-protected timber building elements.</p>
S5C24 Type C fire-resisting construction — fire-resistance of building elements	<p>(1) In a building required to be of Type C construction—</p> <p>(a) a building element listed in Tables S5C24a to S5C24e and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and</p> <p>(b) an external wall that is required by Tables S5C24a to S5C24e to have an FRL need only be tested from the outside to satisfy the requirement; and</p> <p>(c) a fire wall or an internal wall bounding a sole-occupancy unit or separating adjoining units must comply with Specification 6 if it is of lightweight construction and is required to have an FRL; and</p> <p>(d) in a Class 2 or 3 building, an internal wall which is required by Tables S5C24a to S5C24e to have an FRL must extend—</p> <p>(i) to the underside of the floor next above if that floor has an FRL of at least 30/30/30 or a fire-protective covering on the underside of the floor; or</p> <p>(ii) to the underside of a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or</p> <p>(iii) to the underside of the roof covering if it is non-combustible, and except for roof battens with dimensions of 75 mm x 50mm or less or sarking-type</p>

material, must not be crossed by timber or other combustible building elements; or

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

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

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

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

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

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

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

(2) For the purposes of Table S5C24a and Table S5C24b, *external wall* includes any column and other building element incorporated within it or other external building element.

Table S5C24a: Type C construction: FRL of parts of external walls

Distance from a fire-source feature	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	90/90/90	90/90/90	90/90/90	90/90/90
1.5 to less than 3 m	-/-/-	60/60/60	60/60/60	60/60/60
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-

Table S5C24b: Type C construction: FRL of external columns not incorporated into an external wall

Distance from a fire-source feature	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	90/-/-	90/-/-	90/-/-	90/-/-
1.5 to less than 3 m	-/-/-	60/-/-	60/-/-	60/-/-
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-

Table S5C24c: Type C construction: FRL of common walls and fire walls

Distance from a fire-source feature	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Non-loadbearing column	90/90/90	90/90/90	90/90/90	90/90/90

Table S5C24d: Type C construction: FRL of internal walls

Location	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Bounding public corridors, public lobbies and the like	60/60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy units	60/60/60	-/-/-	-/-/-	-/-/-
Bounding a stair if required to be rated	60/60/60	60/60/60	60/60/60	60/60/60

Table S5C24e: Type C construction: FRL to roof

Location	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Roofs	-/-/-	-/-/-	-/-/-	-/-/-

S5C25

Type C fire-resisting construction — carparks

(1) Notwithstanding S5C24, a carpark may comply with this clause if it is an open-deck carpark or is protected with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 and is—

- a separate building; or
- a part of a building, and if occupying only part of a storey, is separated from the remaining part by a fire wall.

(2) For the purposes of this clause, a carpark—

- includes—
 - (i) an administration area associated with the functioning of the carpark; and
 - (ii) where the carpark is sprinklered, is associated with a Class 2 or 3 building and provides carparking for separate sole- occupancy units, each carparking area with an area not greater than 10% of its floor area for purposes ancillary to the sole-occupancy units; but
- excludes—
 - (i) except for (a), any area of another classification, or other part of a Class 7 building not used for carparking; and
 - (ii) a building or part of a building specifically intended for the parking of trucks, buses, vans and the like.

(3) For building elements in a carpark as described in (1) and (2), the following minimum FRLs are applicable:

- External walls:
 - (i) Less than 1.5 m from a fire-source feature to which it is exposed:
 - (A) Loadbearing: 60/60/60.
 - (B) Non-loadbearing: -/60/60.
 - (ii) 1.5 m or more from a fire-source feature to which it is exposed: -/-/-.
- Internal walls: -/-/-.
- Fire walls:
 - (i) From the direction used as a carpark: 60/60/60.
 - (ii) From the direction not used as a carpark: 90/90/90.
- Columns:
 - (i) Steel column less than 1.5 m from a fire-source feature—
 - (A) 60/-/-; or
 - (B) ESA/M not greater than 26 m²/tonne.
 - (ii) Any other column not less than 1.5 m from a fire-source feature: 60/-/-.
 - (iii) Any other column not covered by (i) or (ii): -/-/-.
- Beams:
 - (i) Steel floor beam, less than 1.5 m from a fire-source feature, in continuous contact with a concrete floor slab—
 - (A) 60/-/-; or an ESA/M of not greater than 30 m²
 - (B) /tonne.
 - (ii) any other beam: 60/-/-.
 - (iii) more than 1.5 m from a fire-source feature: -/-/-.
- Roof, floor slab and vehicle ramp: -/-/-.