

BCA & DDA Capability Statement

IRT Woonona Seniors Living Development
ILU Buildings A-E, Flame Tree RCF &
Glue Gum Sanctuary Building
6-8 Popes Road Woonona NSW 2517

Prepared for:

IRT Group

Revision 3

17 November 2025

Reference: 230230



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BCA & DDA Capability Statement

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+ Project No.	230230
+ Revision	3
+ Date	17 November 2025
+ Pages	79

This statement has been prepared to verify that Blackett Maguire + Goldsmith Pty Ltd have undertaken a review of the architectural documentation that will accompany the Development Application (DA) against the Building Code of Australia 2022 (Amdt. 2) (BCA).

This SSDA Stage BCA Capability Statement will be provided to the Department of Planning, Housing and Infrastructure for the proposed Seniors Living development.

+ Revision History

+ Revision	0	+ Date	31/07/2024
+ Status	Preliminary SSDA Review - ILU Buildings A-E & Flame Tree RCF		

+ Revision	1	+ Date	13/06/2025
+ Status	Updated SSDA Review - ILU Buildings A-E & Flame Tree RCF		

+ Revision	2	+ Date	10/10/2025
+ Status	Updated SSDA Review - Including 50% DD Woonona Church Restaurant package		

+ Revision	3	+ Date	17/11/2025
+ Status	Updated SSDA Review - ILU Buildings A-E & Flame Tree RCF & Woonona Church Restaurant		

1.0 Proposed Development

The proposed development is for the redevelopment of the existing IRT Woonona Seniors Housing site located at 4-6 Popes Road, Woonona NSW 2517.

The development includes,

1. Construction of five seniors housing apartment buildings comprising a total of 94 Independent Living Units (ILUs) with the following:
 - + 48 x two (2) bedroom ILUs,
 - + 46 x three (3) bedroom ILUs,
 - + Clubhouse,
 - + Social Wellness Centre.
2. New basement-level car parking below existing and new at-grade parking spaces.
3. Additions to the existing Flametree Residential Care Facilities (RCF) and connection to the new basement car park.
4. Retention of the existing Heritage Church known as Blue Gum Sanctuary and repurposing as a restaurant/café to be known as Woonona Church Restaurant.
5. Retention of existing Camelia Lodge Independent Living Units.
6. Landscaping and vegetation management in riparian corridor.

On 24 April 2024, Wollongong City Council approved DA-2023/808 for the Staged demolition of existing buildings on site (excluding Flametree Residential Aged Care Facility, Camelia Lodge and the Church), including some hardstand demolition and tree removal in two stages.

This is a State Significant Development due to the development being outside the Greater Sydney region with a Capital Investment Value (CIV) of more than \$20 million and works are proposed to the existing Residential Care Facility (RCF).

An application to the Development of Planning, Housing and Industry (DPHI) was made to request the required Planning Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) and submission of the SSDA.

On 5 August 2024 DPHI issued SEARs that are required to be addressed through the EIS and before lodgement of the SSDA to DPHI.



Figure 1: Masterplan SSDA Drawing



Figure 2: Masterplan SSDA Drawing



Figure 3: Masterplan SSDA Drawing



Figure 4: Masterplan SSDA Drawing – Woonona Church Restaurant

1.2 Capability Statement Objectives

The objectives of this statement are to:

- + Confirm that the DA architectural documentation has been reviewed by an appropriately qualified Building Surveyor and Accredited Certifier.
- + Confirm that the proposed new building works can readily achieve compliance with the BCA pursuant to section 19 of the *Environmental Planning & Assessment (Development Certification & Fire Safety) Regulation 2021*.

- + Accompany the Development Application submission to enable the Consent Authority to be satisfied that subsequent compliance with the fire & life safety and health & amenity requirements of the BCA, will not necessarily give rise to design changes to the building which may necessitate the submission of an application under Section 4.55 of the *Environmental Planning and Assessment Act 1979*.

It should be noted that it is not the intent of this statement to identify all BCA provisions that apply to the subject development. The development will be subject further assessment following receipt of more detailed documentation at Construction Certificate stage.

This statement has been prepared pursuant to clause 18 of the *Building Professionals Regulation 2007*.

1.3 Relevant Version of the BCA

Pursuant to Section 19 of the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021* the proposed building is subject to compliance with the relevant requirements of the BCA as in force at the day on which the application for the Construction Certificate is made.

The current version of the BCA is BCA 2022 (Amdt. 2), with the next revision of the BCA 2025 available to industry in public comment draft. Adoption of BCA 2025 was intended for 1 May 2025 however this adoption date has been deferred by ABCB.

On the 4.06.2025 the ABCB provided the below direction to industry regarding the status of BCA 2025:

- + In past cycles, we have published a 'Preview' version of the NCC in February and a final version for commencement in May. We will not be following that pattern in 2025.
- + While some practitioners are familiar with the changes we proposed in the Public Comment Draft (May 2024), we have not yet provided our final advice to Ministers and, therefore, no decision has been made about the content, publication or commencement of any future edition.
- + Practitioners should continue working in accordance with the NCC version, and adoption timeline, currently in place in the jurisdiction relevant to their work

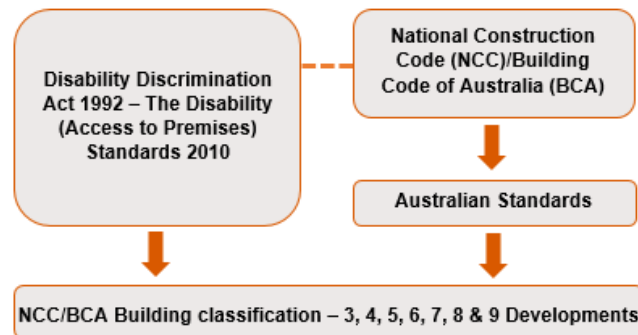
In this regard, this SSDA BCA report assesses the design against compliance with the requirements of BCA 2022 (Amdt. 2) however does acknowledge key BCA 2025 design items in *italicised text*. As BCA 2025 is currently in public comment draft version at this stage and may evolve before it is finalised and adopted by all states and territories.

Where the building is a multi-storey building and multiple Construction Certificates will be issued under the same development consent, the relevant version of the BCA may be 'locked in' based on the day in which the application is made for the Construction Certificate which involves the **entrance floor**.

1.4 Regulatory Framework

New building works are to achieve compliance with the BCA pursuant to section 19 of the *Environmental Planning & Assessment (Development Certification & Fire Safety) Regulation 2021*.

The below figure represents the statutory framework addressing accessibility as noted in the below Act, Code and Standards.



The Disability Discrimination Act 1992 (DDA) is Commonwealth legislation enacted in 1993 that seeks to ensure that all new building infrastructure, refurbishments, services and transport projects provide independent and equitable access. The DDA is a complaints based legislation administered by the Australian Human Rights Commission (AHRC).

Subordinate to the DDA are the Disability Standards, which include; Disability (Access to Premises – Buildings) Standards 2010, Disability Standards for Education 2005, and the Disability Standards for Accessible Public Transport 2002. These Disability standards refer back to the AS 1428 suite of standards and Building Code of Australia.

Since 2011, the Building Code of Australia has adopted the key accessibility provisions of the Disability (Access to Premises – Buildings) Standards 2010, with compliance with AS 1428.1 – 2021, AS 1428.4.1 – 2009, and AS 2890.6 – 2009 becoming mandatory. As such, compliance with the relevant sections of the BCA ensures compliance with the Disability (Access to Premises – Buildings) Standards 2010 and vicariously the DDA.

With respect to existing works, there are statutory upgrade requirements within the Disability (Access to Premises – Buildings) Standards 2010 that apply to all building works which require consent (including Crown building work). This relates to the upgrade of any ‘affected part’ of the building, which includes;

- + The principal pedestrian entry (i.e. entry door and ramp), and
- + The pathway / corridor / lift / ramp which form an accessible path of travel to any area of new work (note: only one accessible path of travel is required to any new part under this requirement).

Section 23 of the Disability Discrimination Act DDA 1992 states;

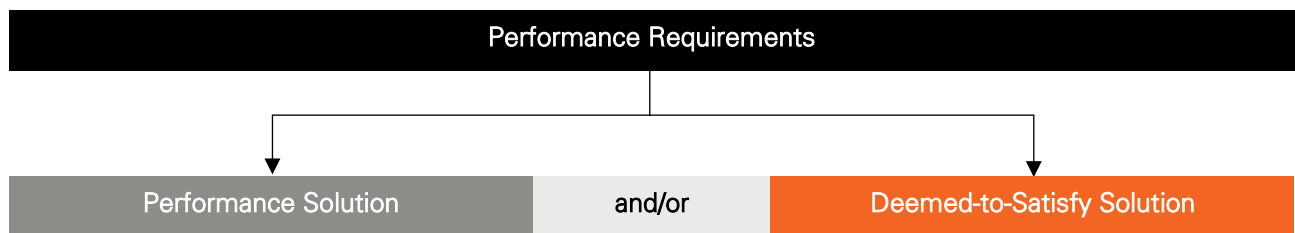
It is unlawful for a person to discriminate against another person on the ground of the other person’s disability:

- *By refusing to allow the other person access to, or the use of, any premises that the public or a section of the public is entitled or allowed to enter or use (whether for payment or not); or*
- *In the terms or conditions on which the first-mentioned person is prepared to allow the other person access to, or the use of, any such premises; or*
- *In relation to the provision of means of access to such premises.*

The DDA Act 1992 is a complaints-based legislation whilst compliance with The Disability (Access to Premises) Standards 2010 affords some certainty regarding the minimum compliance requirements it does not prevent a claim being made under the DDA Act 1992. Whilst implementing the minimum compliance requirements under the Disability (Access to Premises) Standards 2010 and BCA will satisfy the minimum compliance requirements there is nothing preventing a greater degree of access than those minimum requirements specified.

Note: The below report also includes recommendations for best practice/non mandatory items for consideration by the project team stakeholders and as applicable have been identified in the below report in *italics*.

1.5 Compliance with the National Construction Code



Compliance with the NCC is achieved by complying with:

- + the Governing Requirements of the NCC; and
- + the Performance Requirements.

Performance Requirements are satisfied by one of the following, as shown in the Figure below:

- + A Performance Solution.
- + A Deemed-to-Satisfy Solution.
- + A combination of the above two options.

Where a *Performance Requirement* is proposed to be satisfied by a *Performance Solution*, the following steps must be undertaken:

- + Prepare a performance-based design brief in consultation with relevant stakeholders.
- + Carry out analysis, using one or more of the Assessment Methods listed in A2G2(2), as proposed by the performance-based design brief.
- + Evaluation the results against the acceptance criteria in the performance-based design brief.
- + Prepare a final report that includes:
 - All Performance Requirements and/or Deemed-to-Satisfy provisions identified through A2G2(3) or A2G4(3) as applicable; and
 - Identification of all Assessment Methods used; and
 - Details of steps (a) to (c); and
 - Confirmation that the Performance Requirement has been met; and
 - Details of conditions or limitations, if any exist, regarding the Performance Solution.

1.6 Referenced Documentation

This report has been prepared based on a review of the final DA architectural plans prepared by Caulder Flower Architects:

+ Drawing No.	+ Revision	+ Date
A000	F	21/10/2025
A001	F	21/10/2025

+ Drawing No.	+ Revision	+ Date
A006	F	21/10/2025
A009	F	21/10/2025
A100	F	21/10/2025
A101	F	21/10/2025
A102	F	21/10/2025
A103	F	21/10/2025
A104	F	21/10/2025
A110	F	21/10/2025
A200	F	21/10/2025
A201	F	21/10/2025
A202	F	21/10/2025
A210	F	21/10/2025
A211	F	21/10/2025
A212	F	21/10/2025
A213	F	21/10/2025
A214	F	21/10/2025
A215	F	21/10/2025
A216	F	21/10/2025
A300.1	F	21/10/2025
A300.2	F	21/10/2025
A300.7	F	21/10/2025
A300.8	F	21/10/2025
A310.2	F	21/10/2025
A320.2	F	21/10/2025
A340.1	F	21/10/2025
A340.2	F	21/10/2025
A340.3	F	21/10/2025
A350.2	F	21/10/2025
A400	F	21/10/2025
A401.1	A	21/10/2025
A401	F	21/10/2025
A407	D	21/10/2025
A507	D	21/10/2025
A700.1	C	21/10/2025
A701	F	21/10/2025
A702	F	21/10/2025
A703	D	21/10/2025

+ Drawing No.	+ Revision	+ Date
A704	D	21/10/2025
A705	D	21/10/2025
A706	D	21/10/2025
A707	D	21/10/2025
A708	D	21/10/2025
A709	D	21/10/2025
A710	D	21/10/2025
A800	F	21/10/2025

This report has been prepared based on a review of the final DA architectural plans prepared by Breathe Architects:

+ Drawing No.	+ Revision	+ Date
A000	C6	13/11/2025
A003	C6	13/11/2025
A010	C6	13/11/2025
A100	C6	13/11/2025
A101	C6	13/11/2025
A102	C6	13/11/2025
A200	C6	13/11/2025
A250	C6	13/11/2025
A251	C6	13/11/2025
A252	C6	13/11/2025
A253	C6	13/11/2025
A300	C6	13/11/2025
A301	C6	13/11/2025
A302	C6	13/11/2025

1.7 Building Classification

The new building works have been classified as follows:

+ BCA Classification Refer to Note 1	+ Class 2 – Building A-E Residential Flat Building (Independent Living Units Apartments/SOU's); + Class 5 – Existing Flame Tree RCF Admin portions and Building E consult/offices; + Class 6 - Existing Woonona Church Restaurant/Café; + Class 7a – Basement Enclosed Carpark/Services Corridor/Ancillary Storage Cages; + Class 7b/8 – Basement Enclosed Storage/Automated Vehicle Holding & Charging Bays/Workshop/Laundry/Waste/Storage and first floor storage building located on podium;
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	+ Class 9b: - Building C Community/clubhouse part assumed to be dedicated for independent living residents - Building E Wellness Centre + Class 9c: - Flame Tree existing RCF internal alterations and new wing containing entry/air lock, waiting area, managers office, meeting area, consult areas and circulation lifts. - Building E Community areas/gym/hydrotherapy pool + Class 10a – BBQ Pavilion (Open non-habitable structure) + Class 10b – Open-to-the-sky Carpark/Roadways/open-to-the-sky Pedestrian Hardstand/Retaining Walls/OSD etc
+ Rise in Storeys Refer to Note 2	Building A/B/C/D/E – Rise in storeys of four (4) Existing Woonona Church Restaurant – Rise in storeys of one (1) Existing Flame Tree RCF – Rise in storeys of four (4) based on a roof above the lift landing or stair landing serving the roof-top plant area
+ Storeys Contained	Building A/B/C/D/E – Storeys of five (5) Existing Woonona Church Restaurant – Storeys of one (1) Existing Flame Tree RCF – Storeys of five (5)
+ Type of Construction Refer to Note 3	Existing Woonona Church Restaurant/café building – Type C Construction All Buildings (located on podium) – Type A Construction
+ Importance Level (Structural) Refer to Note 4	Class 2 & 3 – ILU & ALU/apartments/SOU's – Importance Level 2 Class 6, 7a, 7b, 8, 9b & 9c – RCF / Club House / Community Building – Importance Level 3
+ Sprinkler Protected Throughout	Yes – all buildings situated on the podium excluding the heritage building on the basis that it contains no Class 9c RCF uses.
+ Effective Height	Building A – Less than 12m (circa 10.55m) Building B/C/D/E – Less than 12m (circa 9.3m) Existing Woonona Church Restaurant Community Building – Less than 12m Existing Flame Tree RCF – Less than 12m (circa 6.21m)
+ Total Floor Area	TBCm² <i>Architect to confirm</i>
+ Largest Fire Compartment Size	Car park Fire Compartment circa 7,800m²
+ Max. Fire Compartment Size	Class 2 & 3 Residential Dwellings/SOU's – N/A Class 6 – <5,000m² & <30,000m³ Class 7a – N/A for basement carpark fire compartments which are sprinkler protected to BCA Spec. 17, Spec. 20 Class 7b/8 – <5,000m² & <30,000m³ Class 9b – <8,000m² & <48,000m³ Class 9c – <8,000m² & <48,000m³ Note: <i>Maximum fire compartment sizes do not apply to levels containing only Class 2 SOUs or sprinkler protected enclosed Class 7a carpark compartments in accordance with spec. 17 & 18.</i>
+ Climate Zone	Zone 5

Note 1: *It is assumed that there is no care models such as assisted care / low care (Class 3) or Residential Care (Class 9c) proposed within the residential flat buildings A-E; on this basis the use is Independent Living (Class 2).*

Note 2: Whilst further assessment is required with the detailed design review the following commentary is made with regards to Rise in Storeys and Effective Height:

- + NCC/BCA Cl. C2D3(2)(a) does allow concessions to disregard the top most storey from the Rise in Storeys assessment where that storey is situated at the top of the building and contains only heating, ventilating or lift equipment, water tanks, or similar service units or equipment.
- + We have assumed that the basement storey is substantially below ground and has not been included in Rise in Storeys and Effective Height assessment as permitted under NCC/BCA Cl. C2D3(2)(b).

As the design develops, further information / RL 's/ sections are to be provided to determine the Effective Height of each building, and determine whether the basement carpark storey is situated substantially 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.

Note 3: All buildings are connected by virtue of the podium level and single storey containing Carpark and Services Corridor, as such all buildings are united with regards to NCC/BCA characteristics and assessment, in accordance with Part A7 of the NCC/BCA. In this regard the following commentary is made:

- + Where buildings are deemed united i.e. connected and used as one building, the buildings need to comply with the requirements of the BCA as though they are a single building. This includes buildings (or parts of a building) which sit on the podium e.g. Woonona Church Restaurant which extends on to the podium; where fire services are not to be extended into the restaurant (e.g. sprinklers) then this needs to be assessed on a Performance-basis because it sits on a podium/carpark which is sprinkler protected.
- + Rationalisation of Type of Construction is possible where the buildings are design in accordance with NCC Clause C3D8 and/or under a Fire Engineered Performance Solution (approved with the Construction Certificate application).

This includes buildings (or parts of a building) which sit on the podium e.g. Woonona Church Restaurant which extends on to the podium; treating this a Type C Construction needs to be assessed on a Performance-basis because it sits on a podium/carpark associated with a building of Type A Construction.

Note 4: Importance levels to be certified by the Project DEP/NER/MIE Structural Engineer at Construction Certificate Stage.

1.8 Distance to Fire Source Features

The distances from the nearest Fire Source Features (boundaries and/or buildings situated on the same allotments which are not a Class 10 Structure) are noted as follows:

+ Elevation	+ Fire Source Feature	+ Distance
North	Side/rear boundary	>3m (Building E to Boundary)
East	Side/rear boundary	>6m (Building D to opposite road Boundary)
West	Side/rear boundary	>3m (Building A/B to Boundary)
South	Side/rear boundary	>3m (Building D to Boundary)

Note 1: Fire Source Feature (FSF) – The far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.

2.0 BCA Assessment – Key Issues

We note the following BCA compliance matters with relation to proposed building works are capable of complying with the BCA. Please note that this is not a full list of BCA clauses, they are the key requirements that relate to the proposed work and the below should be read in conjunction with the BCA.

2.1 Section B – Structure

Part B1

- + New building works are to comply with the structural provisions of the BCA 2022 (Amdt. 2) and referenced standards including AS 1170.
- + The Importance Level provisions of BCA (Section B) are to be acknowledged by the Structural Engineer and addressed to the degree necessary.
- + Any new glazing in association with walls/doors, which are acting as the barrier, are to satisfy AS1288-2021 Part 5.6 i.e. the glazing is to be certifiable as Grade A safety glass. Glazing used in the external walls are to satisfy AS 2047-2014 (Inc. Amdt.'s 1 and 2).
- + Consideration may be given to compliance with AS 3826-1998.
- + As the works relate to alterations to an existing building, the Structural Engineer is to certify that the structural capacity of the existing building will not be reduced by the new works.
- + Any new/altered structural works must be certified as being compliant with BCA Part B1 for both Flametree and Woonona Church Restaurant Building. This includes the following which relates to the proposed new/altered works:
 - Part B1 Generally including Importance Levels identified under Table B1D3 for the proposed use for the building; we understand the NER Structural Engineer will be allowing for Importance Level 3 will apply to the RCF and Importance Level 2 will apply to Woonona Church Restaurant Building;
 - Structural certification is to confirm that the existing building is structurally capable of withstanding the newly proposed loads to be imposed as a result of the new building work or that the new works are completely independent from the existing structure;
 - Structural certification is to confirm that the whole of the existing structure is appropriate for any continued use as a RCF (Class 9c) use; and proposed Woonona Church Restaurant Building (Class 6) use; and
 - The Class 9c RCF is to satisfy the construction of building is flood hazard areas provisions to satisfy BCA Cl. B1D6 and ABCB Standard for Construction of Buildings in Flood Hazard Areas (where applicable).
- + Any existing glass in association with walls/doors, which are acting as the barrier, are to satisfy AS1288-2021 Part 5.6 i.e. the glazing is to be certifiable as Grade A safety glass.
Alternatively, AS1288-2021 Part 4.5 does allow for safety films and other organic coatings to glazing of heritage significance where it is to be impact resistant.
This requirement applies to glazing below 2m from FFL; specifically any glazing within Woonona Church Restaurant should be a key focus with the site redevelopment.

BCA 2025 Public Comment Draft adopts AS1170.2-2024 and AS1170.4-2024 as the minimum design standard.

2.2 Section C – Fire Resistance

C2D2	Type of Construction Required: The minimum type of fire-resisting construction of a building must be that specified in Table C2D2 and Specification C2D2 except as allowed for in this clause. Table C2D2 does not apply to Class 2, 3 or 9c buildings classified in Part C2D6 or open spectator stands/indoor sports stadiums. Comment: Type A Construction applies to the Residential Care Facility building and ILU Buildings A-E. Type C Construction applies to the Woonona Church restaurant. Refer to Spec 5 of the BCA & APPENDIX 1 of this Report for the applicable FRL's to the project to satisfy DtS requirements in the absence of a Fire Engineered Performance Solution rationalising FRL's. Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify a departure to BCA C2D2: + The Woonona Church restaurant is to be designated as Type C Construction whilst there is a portion of the new extension which sits directly on the podium / carpark which is otherwise designated Type A Construction.
C2D3	General Floor Area and Volume Limitations: The building is to achieve fire compartment sizes not in excess of the DtS requirements of this clause.
C2D10	Non-Combustible Building Elements: In a building of Type A or B construction, the following building elements and their components must be non-combustible. + External walls and common walls, including all components incorporated in them, including the façade covering, framing and insulation. + The flooring and floor framing of lift pits. + Non-loadbearing internal walls where they are required to be fire-resisting. This clause contains provisions for combustible materials that may be used wherever a non-combustible material is required under the BCA, including: + Combustible elements permitted within the external wall under C2D10(4). + Materials, where comprised entirely of itself, which are deemed non-combustible under C2D10(5). + Materials which are permitted for use where non-combustible materials are required under C2D10(6). Note: Sarking type materials that do not exceed 1mm in thickness and have a Flammability Index not greater than 5 are permitted to be installed with an external wall. Comment: All materials and or components incorporated in an external wall must be non-combustible in the absence of a Fire Engineered Performance Solution. This includes but not limited to: + Any external wall claddings. + Any framing or integral formwork systems. I.e. timber framing, sacrificial formwork, etc. + Any external linings or trims. I.e. external UPVC window linings, timber window blades, etc. + Any sarking or insulation contained within the wall assembly. This is not an exhaustive list, and any element incorporated within any external wall assembly must be identified and approved prior to the issue of a Construction Certificate. Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify: + To permit timber/plastic packers, timber noggings/blocking/supports within internal non-loadbearing fire-rated walls and external walls which exceed the non-combustibility requirements under BCA Clause C2D10(6). The installation of timber

noggings/blocking/supports varies from the tested wall system in accordance with AS 1530.4-2014.

C2D11 & Spec. 7

Fire Hazard Properties: A schedule of all wall, floor, and ceiling linings along with associated test reports are to be provided for review to ensure compliance with the fire hazard property requirements of the BCA noting:

- + Minimum Group Numbers apply to wall and ceiling linings. AS 5637 test reports must be provided to determine compliance.
- + Minimum Critical Radiant Flux values apply to floor linings. AS ISO 9239.1 test reports must be provided to determine compliance

TABLE S7C3 OF SPECIFICATION 7– CRITICAL RADIANT FLUX OF FLOOR LININGS AND FLOOR COVERINGS

+ Class of building	+ Building not fitted with a sprinkler system	+ Building fitted with a sprinkler system (other than a FPAA101D or FPAA101H system)	+ Fire-isolated exits and fire control rooms
Class 2, 3, 5, 6, 7, 8 or 9b	2.2 kW/m ²	1.2 kW/m ²	2.2 kW/m ²
Class 9b - Auditorium or audience seating area used mainly for other sports or multi-purpose functions.	2.2 kW/m ²	1.2 kW/m ²	2.2 kW/m ²
Class 9c - Resident Use Areas.	N/A	2.2 kW/m ²	4.5 kW/m ²
Class 9c - Areas other than resident use areas.	N/A	1.2 kW/m ²	4.5 kW/m ²

TABLE S7C4 OF SPECIFICATION 7 – WALL AND CEILING LINING MATERIALS (MATERIALS GROUPS PERMITTED)

+ Class of building	+ Fire-isolated exits and fire control rooms	+ Public corridors	+ Specific areas	+ Other areas
Class 2 or 3, Sprinklered Excluding accommodation for the aged, people with disabilities, and children	Walls: 1 Ceilings: 1	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 9b other than schools, Sprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 9c, Sprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3

C2D14

Ancillary Elements: An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible, unless it is in accordance with this clause.

C3D3

General Floor Area and Volume Limitations: Maximum fire compartment sizes are not to exceed those permitted under Clause D3D3.

Note this provision does not apply to levels containing only Class 2 SOUs or sprinkler protected enclosed Class 7a carpark compartments in accordance with spec. 17 & 18.

C3D6

Class 9c Buildings: A Class 9c building must be divided into areas not more than 500m² by smoke-proof walls complying with Specification 11.

Ancillary use areas containing equipment or materials that are a high potential fire hazard must be separated from the sole-occupancy units by smoke proof walls complying with Specification 11.

Provide smoke compartment plans based on the latest design with the relevant Construction Certificate application. Any departures with BCA C3D6 are to be addressed by a Fire Safety Engineer with a Performance Solution.

C3D7

Vertical Separation of Openings in External Walls: In a building of Type A construction, any part of a window or other opening in an external wall is above another opening in the storey next

below and its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by a fire-rated spandrel, or a horizontal fire-rated extension.

Comment: The building is to be sprinkler protected in accordance with BCA Spec. 17 and 18 (as per AS2118.1 OR AS2118.4) hence there is concession such that vertical separation of openings in the external wall is not required.

C3D8

Separation by Fire Walls:

Separation of buildings- A part of a building may be considered separate from the remainder of the building if separated by a fire wall in accordance with the following:

- + The fire wall extends through all storeys and is carried through to the underside of the roof covering.
 - Where roofs of separate buildings are at different heights, the fire wall must extend to the underside of:
 - The higher roof, or >6m above the lower roof.
 - The lower roof if it has an FRL not less than that of the fire wall and no openings closer than 3m to any wall above the lower roof.
 - The lower roof if its covering is non-combustible and the lower part is sprinkler protected.

Separation of fire compartments- A part of a building, separated from the remainder by a fire wall, may be treated as a separate fire compartment if the fire wall extends to the underside of:

- + A floor having an FRL required for a fire wall; or
- + The roof covering.

Comment: Required fire walls e.g. those separating the Class 7a carpark from the Class 2 Residential areas must satisfy BCA Clause C3D8 and achieve a minimum 120/120/120 FRL.

Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify rationalising fire ratings from 240/240/240 FRL to 120/120/120 FRL within areas designated Class 7b/8.

C3D9/ C3D10

Separation of Classifications: Separate classifications will either need to be separated by a fire wall achieving the higher FRL requirement between the two classes, or alternatively the higher FRL must apply to both areas subject to Spec 5.

Comment: With the Construction Certificate application design details will be required validating compliance with the following:

- + The fire wall separating the Class 7a carpark from the Class 2 Residential areas must achieve a minimum 120/120/120 FRL.
- + The slab separating the Class 7a carpark from the residential levels above must achieve a minimum 120/120/120 FRL.
- + The slabs associated with the Class 5/9c uses must achieve a minimum 120/120/120 FRL.
- + All remaining slabs within Class 2 uses (including recessed areas such as wet areas and balcony areas) are to achieve a minimum 90/90/90 FRL unless rationalise under a Fire Engineered Performance Solution.

Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify rationalising fire ratings from 240/240/240 FRL to 120/120/120 FRL within areas designated Class 7b/8.

C3D13

Separation of Equipment: Equipment as listed below must be separated from the remainder of the building with construction that achieves an FRL of 120/120/120 (or that required by Spec 5, whichever is greater) and doorways being self-closing -/120/30 fire doors:

- + Lift motors and lift control panels; or
- + A battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours.

	Comment: With the Construction Certificate application design details will be required validating compliance.
C3D15	Public Corridors in Class 2 Buildings: Public corridors must not exceed 40m in length, or otherwise be divided at 40m intervals with smoke-proof construction satisfying BCA S11C2. Comment: Where Public corridors are is >40m and must be divided at intervals of not more than 40m with smoke-proof walls complying with S11C2 in the absence of a Fire Engineered Performance Solution. Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify: + Any technical departure to BCA Clause C3D15 with longer corridors (>40m) e.g. Building C with portions that are substantially enclosed in the absence of smoke-proof construction satisfying BCA S11C2 can be addressed under a Fire Engineered Performance Solution with the relevant Construction Certificate application.
C4D3 & C4D5	Protection of Openings in External Walls: Openings are exposed where they are located within an external wall requiring an FRL and the external wall is exposed to a fire-source feature within 3 m from a side or rear boundary of the allotment; or within 6 m from the far boundary of a road, river, lake or the like adjoining the allotment; or within 6 m from another building on the allotment that is not Class 10. 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. Comment: We understand a Fire Engineered Performance Solution will be proposed to justify departures to BCA Clause C4D3 and C4D5. Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify departures to BCA Clause C4D3 and C4D5. The following buildings are within a 6m setback of one another and need to be protected or addressed under a Fire Engineered Performance Solution: + Existing Woonona Church Restaurant Cafe and existing Flame Tree RCF from stand-alone kiosk building. + Building E and Existing Flame Tree RCF from stand-alone kiosk building. + Building E from Existing Flame Tree RCF.
C4D6 & C4D8	Doorways in Fire Walls & Protection of Doorways in Horizontal Exits: Openings in fire walls, that are not part of a horizontal exit, must be protected in accordance with one of the methods set out in this clause. Doorways in fire walls, that are not part of a horizontal exit, must: + In aggregate door width, not exceed ½ of the length of the fire wall. + Be protected by fire doors achieving the FRL required for the wall in accordance with Spec 5 for Type A Construction. + Be self-closing or automatically close on the activation of a smoke detector and applicable sprinkler system. Comment: With the Construction Certificate application design details will be required validating compliance. Fire Engineered Solution: We understand a Fire Engineered Performance Solution is to be prepared to justify departures to BCA Clause C4D6 & C4D8: + Rationalisation of fire resisting elements within a fire wall requiring a 120/120/120 FRL i.e. doorset openings protected by glazing in lieu of -/120/30 FRL fire resistant construction.
C4D12	Bounding Construction: Class 2 buildings: A doorway in a Class 2 building must be protected if it provides access from a SOU to: + A public corridor, lobby, or the like; or + A room not within a SOU; or + A room not within a SOU; or

- + The landing of an internal non-fire-isolated required stairway; or
- + Another SOU.

If it provides access from a room not within a SOU to, the following doorways must be protected:

- + A public corridor, lobby, or the like; or
- + The landing of an internal non-fire-isolated required stairway.

Protection under this part refers to:

- + Type A Construction: a self-closing -/60/30 fire door satisfying AS1905.1-2015 and AS1530.4-2014.
- + In a Class 2 building where a path of travel does not offer a choice of travel in different directions to different exits and is located along an open balcony, landing, or the like and passes an external wall of another SOU or a room not within a SOU, then that external wall must-
 - + Be constructed of concrete or masonry, or lined internally with a fire-protective covering.
 - + Have any door fitted with a self-closing solid core door >35mm thick.
 - + Having any windows or other openings protected in accordance with C4D5 or located >1.5m above finished floor level.

Comment: Ensure compliance with BCA Clause C4D12(9) or Fire Engineered input may be required where strict DtS requirements cannot be satisfied.

C4D14

Openings in Shafts: In a building of Type A Construction, service shafts must be protected by:

- + A fire door, hopper or access panel achieving FRL -60/30.
- + If in a sanitary compartment - a non-combustible door and frame achieving an FRL of -/30/30.
- + If the shaft is a garbage shaft – a non-combustible door or hopper.

Comment: With the Construction Certificate application design details will be required validating compliance.

C4D15

Openings for services installations: When a service penetrates a building element that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, that penetration must:

- + Be identical to a tested prototype assembly, tested in accordance with AS4072.1 and AS1530.4.
- + In the case of ventilating or air-conditioning ducts/equipment, the installation must comply with AS1668.1.

Comment: Details to be included in the design documentation prior to issue of the Construction Certificate application.

Where service installations penetrate the walls, floors or fire-resistant ceiling system required to have an FRL with respect to integrity and insulation they are to be protected by fire seals (fire stopping system) having an FRL of the building element concerned.

Note: Where a fire resistant or incipient spread ceiling is provided and a sacrificial non-fire-rated ceiling next below this arrangement could minimise the number of fire seals to services. In the absence of a sacrificial non-fire-rated ceiling, which could be utilised to run services, all services which pass through the fire resisting ceiling element are to be treated in accordance with C4D15.

Fire Seals are to comply with the requirements of BCA Clause C4D15 and Specification 13 noting the following:

- + Fire seals needs to have been tested on the substrate it has been used on i.e. concrete, masonry, fire rated plasterboard, Hebel, shaftliner etc. – E.g. some tested fire stopping systems tested in masonry cannot be relied upon for use in Hebel.
- + The maximum size of the services and the penetrations cannot exceed those tested for the fire stopping system

	+ The fire stopping system needs to be used in the same orientation that it has been tested on i.e. floor or wall. A fire stopping system tested through a wall only cannot be relied upon when used for a service penetrating a floor. + The fire stopping system needs to have been tested on the service it is used to seal i.e., metal pipes, UPVC/PVC pipes, conduits, electrical cables etc. A fire stopping system tested on a PVC pipe cannot be relied upon for cables. + The test fire stopping system needs to include all elements specified to achieve the required FRL i.e. intumescent wraps are commonly required/used to achieve the insulation value (when required) for metal pipes, cable trays and large bundles of cables. Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify: + Rationalisation of fire stopping to internal fire resisting elements contrary to BCA Clause C4D15: - To permit water filled metal pipes (i.e. sprinkler and hydrant pipe penetrations) to be fire stopped in accordance with BCA Clause C4D15(1), with the exception of the insulation criteria of the required FRL where there is likely to be combustible materials (i.e. PVC pipes, PEX pipes, cables etc) located within 100 mm radius for a distance of 2 m of the fire rated penetration. - The wet area/bathroom tap fittings/hydraulic services that will penetrate through one side of the fire rated linings to the fire rated bounding walls to approximately opposite sides of the bounding wall separating SOU's, these tap fittings/hydraulic services will not be protected in accordance with a tested system. - To permit services (such as NBN cables) to located within conduits to not be fire stopped in accordance with a tested system, noting that they run horizontally through the slab and AS 1530.4-2014 does not include specific requirements for the testing of services are embedded and travel horizontally through a concrete floor. As a result, there is no compliant testing methodology for fire tests for cast-in conduits and hence no compliant tested systems for this application
C4D16	Construction Joints: Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner- + identical with a prototype tested in accordance with AS 1530.4 and AS 4072.1 to achieve the required FRL, or + that differs from a prototype in accordance with Section 4 of AS 4072.1 and achieves the required FRL. Comment: With the Construction Certificate application design details will be required validating compliance.
C4D17	Columns Protected with Lightweight Construction to Achieve an FRL: 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. The determination of the required FRL must be confirmed in a report from an Accredited Testing Laboratory in accordance with Specifications 1 and 2. The requirements of (1) do not apply where joints, spaces and the like between fire-protected timber elements are provided with cavity barriers in accordance with Specification 9. Comment: With the Construction Certificate application design details will be required validating compliance.
Spec. 5	Fire-Resisting Construction: The building is required to comply with BCA Spec. 5 as relevant to FRLs required for buildings of Type A Construction. Refer to Appendix 1 for the relevant fire-resistance levels associated with the proposed development.

With the Construction Certificate application details the following detailed documentation is required for review:

- + Details identifying the required FRL's achieved for each specific building elements (either loadbearing or non-loadbearing) are to be shown on the plans and commentary/ specification provided on how continuity of fire-resisting construction will be achieved where cavities/voids/roof space are concerned.
- + Further detail is to be provided of the fire resisting bounding walls or fire walls and how they interface with the non-combustible roof, insulation to the underside of the roof slab will need to be discontinued to ensure continuity of the fire-resisting wall.
Careful consideration required between NER Structural Engineer and Internal fire resisting wall design; Fire Engineered input may be required where roof elements penetrate internal fire resisting walls.
- + Details identifying the required FRL's achieved for each specific building elements (either loadbearing or non-loadbearing) are to be shown on the plans and commentary/ specification provided on how continuity of fire-resisting construction will be achieved where cavities/voids/roof space are concerned.
- + Internal fire resisting construction bounding Class 2 apartments (or SOU's) or rooms not within an SOU's are required to achieve 90/90/90 FRL (loadbearing) or -/60/60 FRL (non-loadbearing) unless rationalised under the Fire Engineered Report.
- + Ventilating, pipe, garbage, and like shafts (not used for the discharge of hot products of combustion) are required to achieve 90/90/90 FRL (loadbearing) or -/60/60 FRL (non-loadbearing) however BCA Spec. 5 Clause S5C8 is predicated on:
 - 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.
 - The above shaft FRL provisions need not apply to—
 - the top of a shaft extending beyond the roof covering, other than one enclosing a fire-isolated stairway or ramp;
 - or the bottom of a shaft if it is non-combustible and laid directly on the ground.

Where the strict requirements under BCA Spec. 5 Clause S5C8 is not possible then a Fire Engineered Performance Solution will be required.

- + All loadbearing elements/columns (including external columns) are to be fire rated to achieve 90/-/- within Class 2 areas, 120/-/- within Class 5/7a/9b/9c and 240/-/- within Class 7b/8 areas.
- + The fire wall separating SOU's/apartments from carpark is required to achieve a minimum 120/120/120 FRL. Likewise, fire walls within Class 5/9c areas are required to achieve a minimum 120/120/120 FRL and Class 7b/8 areas where captured under a Fire Engineered Performance Solution.
- + Where loadbearing walls are not concrete or masonry or fire protected timber *or fire protected steel* a Fire Engineered Solution will be required to permit impact resistant fire-resisting lightweight construction as a departure to BCA Spec. 5 Clause S5C11.

BCA 2025 Public Comment Draft makes provision for the following with regards to fire protected steel

- + *New provisions added to allow for the use of 'fire-protected steel'.*
- + *Conditions:*
 - *Effective height of <25m.*
 - *May be applied to the entirety of a Class 2 or 3 building - Only uppermost storey for any other Class.*
 - *Building must be sprinkler protected.*
 - *Insulation in the wall must be non-combustible.*
 - *Cavity barriers must be provided where the walls are continuous between levels.*

- + Ensure all internal fire-resisting walls / bounding construction walls extend to:
 - the underside of the floor next above or
 - a fire-protective(covering on the underside of the floor; or
 - 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
 - to the underside of the roof covering if it is non-combustible, and except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or
 - 450 mm above the roof covering if it is combustible.

Incomplete bounding construction OR roof elements (other than battens or exceeding 75mm x 50mm) will need to be rationalised/assessed under the Fire Engineered Report as a departure to BCA Spec. 5 Clause S5C11.

Steel roof penetrations through a lightweight internal fire-resisting wall will generally need to be assessed under a Fire Engineered Performance Solution as these types of penetrations are not strictly in line with the test literature for the lightweight wall system and depart with AS1530.4-2014.

- + Loadbearing columns which are not treated with a tested system for a column however are contained within a lightweight construction wall will need to be addressed as a Fire Engineered Solution as a departure to BCA Spec. 5 Clause S5C11.

Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify departures to BCA Clause C2D2 and Spec. 5:

- + Rationalise cavity barriers and gaps between slab and internal face of external walls where they are not in accordance with a tested system to achieve the required fire-resistance level in accordance with BCA Spec. 5 i.e. Fire Engineered Report to permit:
 - To provide smoke-proof cavity barrier / separation at the perimeter slab edge between storeys.
 - It is proposed to allow the lightweight fire-resisting bounding construction walls between the SOU's/apartments to be extended to smoke-proof cavity barrier / separation rather than through to the external wall or inside of the outer face of the external wall.
- + Non-continuity of fire-resistant vertical shafts not strictly satisfy BCA Spec. 5 Clause S5C8 and Clause C4D14 as the base to the shaft will not be fire rated, instead it will interface with a fire rated enclosure or separate fire compartment:
 - Garbage/laundry chutes, mechanical and hydraulic services risers/shafts etc.

Spec. 11

Fire Walls & Smoke Walls: Fire walls and smoke walls must comply with the requirements of this specification; including smoke reservoirs of 400 mm minimum between the top door frame of each required smoke doorsets and the underside of a roof covering; or the floor above; or imperforate false ceiling that will prevent the free passage of smoke.

Spec. 12

Fire Doors, Smoke Doors, Fire Windows and Shutters: Fire doors and smoke doors must comply with the requirements of this specification.

2.3 Section D – Provision for Escape and Construction of Exits

D2D3

Number of exits required: The building comprises an effective height of <25m. Therefore, a single exit from the Class 2 storeys is acceptable. Noting that the below ground basement car park.

Comment: Compliance readily achievable with exit locations to be clarified as the design develops; including provision of at least two exits from the Building C community part.

D2D4	When Fire-Isolated Stairways and Ramps are Required: This clause sets out the requirements for stairways and ramps to be fire-isolated in buildings. It is generally permitted for a required stair to connect up to 3 storeys in a sprinkler protected building, provided that the sprinkler system is not a FPAA101D system. Comment: The majority of exit stairway systems serving the ILU apartment buildings are not required fire-isolated stairway systems as they connect no more than four storeys within a building which is sprinkler protected throughout in accordance with BCA Spec. 17 and 18. It is noted that the basement rising exit stairways are completely fire separated from the descending residential exit stairways. Notwithstanding, we understand all stairways are to be delivered as fire-isolated exits to achieve superior exit travel distances.
D2D5	Exit Travel Distances: Exit travel distances within the building are required to be not more than 6m to a point of choice or single exit on the storeys above ground level and 20m to a single exit on the storeys above ground level from Class 2 areas. Exit travel distances within the building are required to be not more than 20m to a point of choice between alternative exits and 40m to the nearest one from Class 5 / 6 / 7 / 8 / 9 areas. Comment: The following occupant exit travel: are noted: + Class 2: - Distance to a POC or single exit 14 m (>6m) + Class 5/7a/8/9b/9c: - Distance to a POC or single exit 23m (>20m) from Class 9c areas - Distance to an exit when two are available 60m (>40m) from Class 9c areas - Distance to a POC or single exit 30m (>20m) from Class 7a areas - Distance to an exit when two are available 70m (>40m) from Class 7a areas Notwithstanding, in accordance with BCA S18C4 for Class 2 parts the following concessions apply: + Exit travel distances must be no more than 12m (in lieu of 6m) from a point of choice between two exits by virtue of a sprinkler system being implemented in accordance with Spec. 17 & 18. + On a storey at the level of egress, this may be increased to 30m (in lieu of 20m) to a single exit by virtue of a sprinkler system being implemented in accordance with BCA Spec. 17 & 18. Comment: Departures to BCA Clause D2D5 regarding exit travel distances can be readily addressed as the design develops and can be explored under a Fire Engineered Performance Solution. Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify departures to BCA Clause D2D5 regarding exit travel distances. Including the following travel distances are to be addressed through a Performance Solution within Flametree L1 and L2 central external balcony area: + 59m (>40m) distance to an exit when two are available; + 79m (>60m) distance between alternative exits when measured via the point of choice
D2D6	Distance between Alternative Exits: Exits that are required as alternative means of egress must be: + 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 + not less than 9 m apart; and + not more than - in a Class 2 or 3 building — 45 m apart; or

- in a Class 9a health-care building, if such required exit serves a patient care area — 45 m apart; or
- in all other cases — 60 m apart; and
- + located so that alternative paths of travel do not converge such that they become less than 6 m apart.

Comment: The following occupant exit travel distances: are noted:

- + Class 5/7a/8/9b/9c:
 - Distance between alternative exits 117m (>60m) when measured via the POC from Class 7a areas.
 - Distance between alternative exits 81m (>60m) when measured via the POC from Class 9c areas.

Notwithstanding, in accordance with BCA S18C4 for Class 2 parts:

- + Exit travel distances between alternative exits must be no more than 60m (in lieu of 45m) by virtue of a sprinkler system being implemented in accordance with BCA Spec. 17 & 18.

Comment: Departures to BCA Clause D2D6 regarding distance between alternative exits and convergence of exits/egress pathways can be readily addressed as the design develops and can be explored under a Fire Engineered Performance Solution.

Note: convergence occurs quite frequently on podium / courtyard areas however this can be permitted under Fire Engineering where there is still opportunity for two egress pathways in approximately opposite directions within podium / courtyard areas.

Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify departures to BCA Clause D2D6 regarding distance between alternative exits and convergence of exits/egress pathways.

**D2D7/
D2D8/
D2D9/
D2D10/
D2D11**

Dimensions of Paths of Travel to an Exit:

- + 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 1,980 mm (this width dimension is measured clear of any obstructions such as handrails and joinery).
- + 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—
 - 1m
- + In a required exit or path of travel to an exit, the unobstructed width of a doorway must be not less than—
 - the unobstructed width of each exit provided to comply with D2D8(1), (2), (3) or (4), minus 250 mm; or
 - in any other case except where it opens to a sanitary compartment or bathroom — 750 mm wide.
- + The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(i).

Comment: To satisfy BCA Clause D2D8, 1m clear widths are to be documented throughout all common areas including within storage areas, waste room areas and within egress passageways/stairways.

1m is a minimum egress requirement under BCA Clause D2D8 however BCA Part D4 makes provision for 1,540mm wide x 2,070mm long circulation to facilitate turning/circulation zone to the ends of corridors (in the absence of a DDA Performance Solution).

Concession applies that 1m egress is not required within Class 2 SOU's/apartments however SEPP Housing 2021 makes provision for 1m clear width throughout SOU's/apartments and other enhancements to improve equitable access for persons with a disability.

To satisfy Clause D2D9 it is recommended that all doors (including within SOU's) are specified as AS1428.1-2021 compliant doorsets i.e. 920mm door leaves which will achieve 850mm clear width.

D2D12

Travel by fire-isolated stairways or ramps:

- + Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway:
 - to a road or open space; or
 - to a point—
 - in a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least $\frac{2}{3}$ of its perimeter; and
 - from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or
 - into a covered area that—
 - adjoins a road or open space; and
 - is open for at least $\frac{1}{3}$ of its perimeter; and
 - has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and
 - provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m.

- + Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, the following applies:

- That part of the wall must have—
 - an FRL of not less than 60/60/60; and
 - any openings protected internally in accordance with C4D5; and

Note: The protection required must extend for a distance of 3 m above or below, as appropriate, the level of the (b)path of travel, or for the height of the wall, whichever is the lesser.

- + If more than 2 access doorways, not from a sanitary compartment or the like, open to a required fire-isolated exit in the same storey— a smoke lobby in accordance with D3D7 must be provided; or the exit must be pressurised in accordance with AS 1668.1.

Comment: Each building is provided with exits in the form of fire-isolated exits; discharge of required fire-isolated exits require occupants to pass within 6m of openings associated with each building. This includes the existing Flame Tree RCF fire-isolated exit stairways.

Fire Engineered Solution: A Fire Engineered Performance Solution is required to address the following:

- + Each building is provided with exits in the form of fire-isolated exits; discharge of required fire-isolated exits require occupants to pass within 6m of exposed openings associated with each building contrary to BCA Clause D2D12(3). This includes the existing Flame Tree RCF fire-isolated exit stairways.
- + A non-required stairway is provided that connects three resident care storeys contrary to BCA Clause D2D17; this stairway is utilised for occupant egress from the roof-top plant level and is fire-isolated however discharges within the building and the discharge doorset swings inward contrary to BCA Clause D2D12(2) and D3D25(b).

D2D14

Travel by non-fire-isolated stairways or ramps:

- + A non-fire-isolated stairway or non-fire-isolated ramp serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided.

- + In a Class 2, 3 or 4 building, the distance between the doorway of a room or sole-occupancy unit and the point of egress to a road or open space by way of a stairway or ramp that is not fire-isolated and is required to serve that room or sole-occupancy unit must not exceed—
 - 60 m of Type A construction.
- + In a Class 5, 6, 7, 8 or 9 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.
- + In a Class 2, 3 or 9a building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than—
 - 15 m from a doorway providing egress to a road or open space or from a fire-isolated passageway leading to a road or open space; or
 - 30 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions.

Comment: A non-required stairway is provided that connects three resident care storeys however this stairway is utilised for occupant egress from the roof-top plant level and is fire-isolated on this basis. This stairway will be assessed under the Fire Engineered Performance Solution report which will likely not require compliance with BCA Clause D2D14.

D2D15

Discharge from Exits: The path of travel to the road from a required exit leading to open space must have an unobstructed exit width of that of the required exit, or if larger, 1m.

If the discharge point of the exit is at a different level from the road, a stairway or ramp achieving no more than 1:14 must be provided, except for a Class 9a where a ramp must be provided.

The discharge point of alternative exits must be located as far apart as practical and be suitably protected from vehicles potentially blocking the exit.

Comment: 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. In this regard, bollards will be required particularly outside of exit stairs on ground level.

Ensure 1m clear width hardstand connects the egress stairway with the road; this also applies to the circulation stairways from the carpark.

Handstand pathways intersect with the vehicular carriageway; it is recommended that a delineated handstand of 1m is provided for egress (or 1.5m egress pathways serving the RCF).

D2D17

Non-required stairways, ramps or escalators: An escalator, moving walkway or non-required non fire-isolated stairway or pedestrian ramp must not be used between storeys in a resident use area in a Class 9c building.

Comment: A non-required stairway is provided that connects three resident care storeys contrary to BCA Clause D2D17.

Fire Engineered Solution: A non-required stairway is provided that connects three resident care storeys contrary to BCA Clause D2D17; this stairway is utilised for occupant egress from the roof-top plant level and is fire-isolated however discharges within the building and the discharge doorset swings inward contrary to BCA Clause D2D12(2) and D2D25(b).

This stairway connects multiple storeys within a four storey Class 9c Residential Care Facility however only serves the roof-top level for occupant egress therefore is not intended to be provided with automatic stairway pressurisation which is a technical departure to BCA Clause E2D4.

D3D4

Non-fire-isolated stairways and ramps: In a building having a rise in storeys of more than 2, required stairs and ramps (including landings and any supporting building elements) which are not required to be within a fire-resisting shaft, must be constructed according to D3D3, or only of—

- + reinforced or prestressed concrete; or
- + steel in no part less than 6 mm thick; or

	+ timber that— - has a finished thickness of not less than 44 mm; and - has an average density of not less than 800 kg/m³ at a moisture content of 12%; - has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde (iii) or resorcinol phenol formaldehyde glue Comment: Construction Certification documentation to verify compliance with this requirement.
D3D5	Rising and descending stairway systems: If a stairway serving as an exit is required to be fire-isolated: + There must be no direct connection between: - A flight rising from a storey below the lowest level of access to a road or open space; and - A flight descending from a storey above that level; and + Any construction that separates or is common to the rising and descending flights must be: - Non-combustible; and - Smoke proof in accordance with S11C2. Comment: We have been advised that all rising (basement) and descending (ILU) exit stair are completely fire separated from one another at ground level.
D3D13	Roof as open space: If an exit discharges to a roof of a building, the roof must have an FRL of not less than 120/120/120; and not have any roof lights or other openings within 3 m of the path of travel of persons using the exit to reach a road or open space. Comment: Podium slab is deemed roof-as-open-space; ensure any roof lights or other openings are setback 3m from the path of travel of persons using the exit in the absence of a Fire Engineered Performance Solution. This occurs in a number of instances.
D3D14/ D3D15/ D3D16/ D3D22	Stairways, Balustrades, and Handrails: Stairways, balustrades and handrails are to implemented to achieve compliance with the current provisions of the BCA and AS 1428.1-2021. Floor finishes will be required to achieve the correct slip resistance in accordance with AS 4586, and associated handbooks HB197 and HB198. Comment: Compliance with D3D14/ D3D15/ D3D16/ D3D22 to be documented with the relevant Construction Certificate application and certified with the relevant Occupation Certificate.
D3D25	Swinging Doors: A swinging door in a required exit or forming part of a required exit must not encroach (a) at any part of its swing by more than 500 mm on the required width (including any landings) of a required stairway, ramp or passageway if it is likely to impede the path of travel of the people already using the exit; and when fully open, by more than 100 mm on the required width of the required exit. A swinging door in a required exit or forming part of a required exit must not swing against the direction of egress unless: + it serves a building or part with a <i>floor area</i> not more than 200m², it is the only <i>required exit</i> from the building or part and it is fitted with a device for holding it in the open position; or + it serves a <i>sanitary compartment</i> or airlock (in which case it may swing in either direction); A swinging door in a required exit or forming part of a required exit must not otherwise impede the path or direction of egress. The measurement of encroachment referred to above in each case is to include door handles or other furniture or attachments to the door.

Comment: Ensure all discharge doorsets swing outward to be conducive to occupant egress; this includes discharge doors from Building A, D and E which are required to swing in the direction of occupant egress or be addressed under a Fire Engineered Performance Solution.

Fire Engineered Solution: Any departures within BCA Clause D3D25 regarding door swings against occupant egress (e.g. lobby entry doorsets of ILU buildings and Woonona Church restaurant).

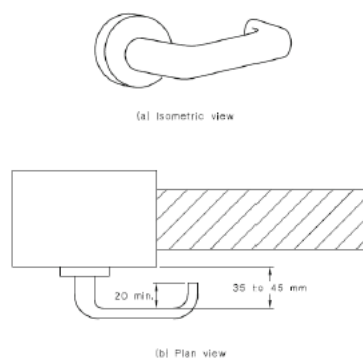
A non-required stairway is provided that connects three resident care storeys contrary to BCA Clause D2D17; this stairway is utilised for occupant egress from the roof-top plant level and is fire-isolated however discharges within the building and the discharge doorset swings inward contrary to BCA Clause D2D12(2) and D2D25(b).

This stairway connects multiple storeys within a four storey Class 9c Residential Care Facility however only serves the roof-top level for occupant egress therefore is not intended to be provided with automatic stairway pressurisation which is a technical departure to BCA Clause E2D4.

D3D26

Doors and Latching: All egress doorways must swing in the direction of egress and must be readily openable without a key from the side that faces a person seeking egress, by a single handed downward or pushing action on a single device which is located between 900mm and 1,100mm from the floor.

AS1428.1-2021 Clause 13.5 also makes provision for D lever type door controls which can be utilised occupant egress and access:



Comment: Construction Certification documentation to verify compliance with this requirement.

D4D2

General building access requirements: Buildings and parts of buildings must be accessible as required by this clause, unless exempted by D4D5.

- + For a Class 2 building, common areas are to be accessible as follows:
 - From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level.
 - To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area, or the like.
 - Where a ramp complying with AS 1428.1 or a passenger lift is installed— (i) to the entrance doorway of each sole-occupancy unit; and
 - to and within rooms or spaces for use in common by the residents.
 - The requirements of (c) only apply where the space referred to in (c)(i) or (ii) is located on the levels served by the lift or ramp.
- + For a Class 7a building, access must be provided to and within any level containing accessible carparking spaces.

Comment: Access is provided to all required areas (including common areas and ancillary areas such as waste enclosures within the carpark). Each level within the site is accessed via a passenger lift or ramp.

We understand that the development will also satisfy SEPP Housing 2021 and Council DCP requirements relating to AS4299-1995. Reference is made to Appendix 2 of this report which contains a review of SEPP Housing 2021 Schedule 4.

Documentation verifying compliance with SEPP Housing 2021 and Council DCP / AS4299-1995 requirements to be provided with the relevant Construction Certificate application demonstrating compliance.

D4D3

Access to buildings: Accessways must be provided to accessible buildings from the main points of pedestrian entry at the allotment boundary and any accessible car parking space or accessible associated buildings connected by a pedestrian link.

An accessway must be provided to a building required to be accessible-

- + From the main points of a pedestrian entry at the allotment boundary; and
- + From another accessible building connected by a pedestrian link; and
- + From any required accessible car parking space on the allotment.

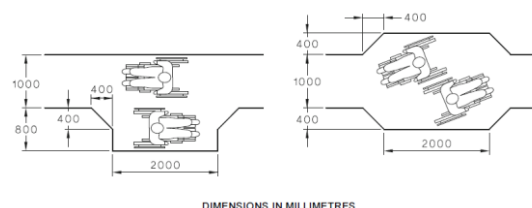
In a building required to be accessible, an accessway must be provided through the principal pedestrian entrance and through not less than 50% of all pedestrian entrances including the principal pedestrian entry.

Comment: An accessway is provided to all buildings on the site from the main points of a pedestrian entry at the allotment boundary; and from any required accessible car parking space on the allotment.

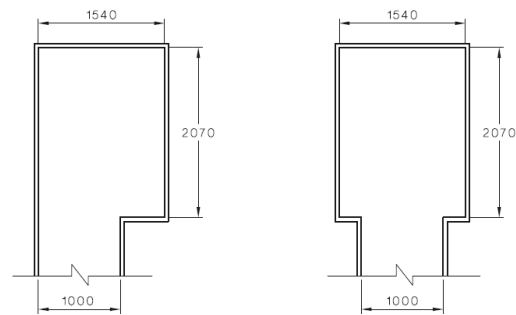
D4D4

Parts of Buildings to be accessible: The works are required to comply with the requirements of AS 1428.1-2021:

- + **AS1428.1 Cl. 6.1 General** - A continuous accessible path of travel shall not include a step, stairway, turnstile, revolving door, escalator, moving walk or other impediment.
- + **AS1428.1 Cl. 6.2 Height of paths** - The minimum unobstructed height of a continuous accessible path of travel shall be 2,000 mm or 1,980 mm at doorways
- + **AS1428.1 Cl. 6.3 Widths of paths** – Unless otherwise specified (such as at doors, curved ramps and similar), the minimum unobstructed width of a continuous accessible path of travel shall be 1000 mm and the following shall not intrude into the minimum unobstructed width of a continuous accessible path of travel:
 - Fixtures and fittings such as lights, awnings, windows that, when open, intrude into the circulation space, telephones, skirtings and similar objects.
 - Essential fixtures and fittings such as fire hose reels, fire extinguishers and switchboards.
 - Door handles less than 900 mm above the finished floor level.
- + **AS1428.1 Cl. 6.4 Passing Space** - Accessways must have passing spaces complying with AS 1428.1 at maximum 20m intervals on those parts of an accessway where a direct line of sign is not available.



- + **AS1428.1 Cl. 6.5 Turning Space** - Turning spaces must comply with AS1428.1 and located within 2m of the end of accessways where it is not possible to continue travelling along the accessway, and at maximum 20m intervals along the accessway.



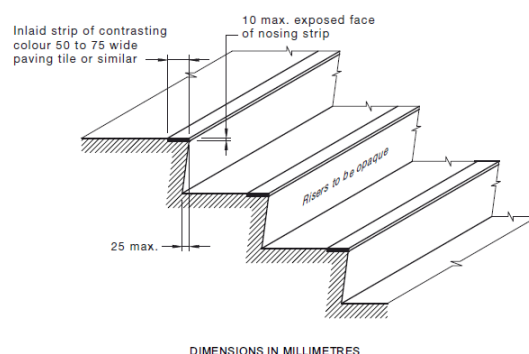
(a) Space required in corridor

(b) Space required in corridor

+ AS1428.1 Cl. 11.1 Stairway Construction:

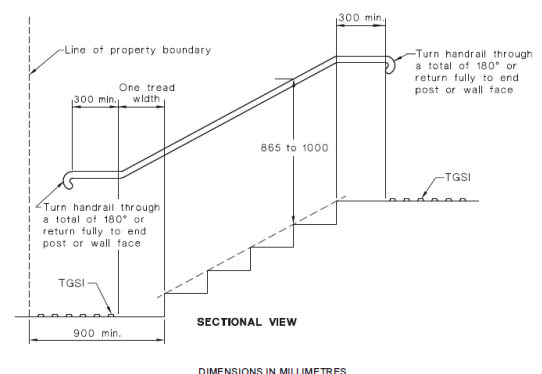
- Where the intersection is at the property boundary, the stair shall be set back by a minimum of 900 mm so that the handrail (complying with Clause 12) and TGSIs do not protrude into the transverse path of travel.
- Where the intersection is at an internal corridor, the stair shall be set back so that handrails or TGSIs do not protrude in to the path of travel.
- Stairs shall have opaque risers.
- Stair nosings shall not project beyond the face of the riser and the riser may be vertical or have a splay backwards up to a maximum 25 mm.
- Stair nosing profiles shall—
 - have a sharp intersection;
 - be rounded up to 5 mm radius; or
 - be chamfered up to 5 mm × 5 mm.
- At the nosing, each tread shall have a strip not less than 50 mm and not more than 75 mm deep across the full width of the path of travel. The strip may be set back a maximum of 15 mm from the front of the nosing.
- The strip shall have a minimum luminance contrast of 30% to the background. Where the luminous contrasting strip is affixed to the surface of the tread, any change in level shall comply with Clause 7.2 and Clause 7.3.
- Where the luminance contrasting strip is not set back from the front of the nosing then any area of luminance contrast shall not extend down the riser more than 10 mm.

TGSIs shall be installed in accordance with AS 1428.4.1:



DIMENSIONS IN MILLIMETRES

Example of Compliant Nosing Strip Detail



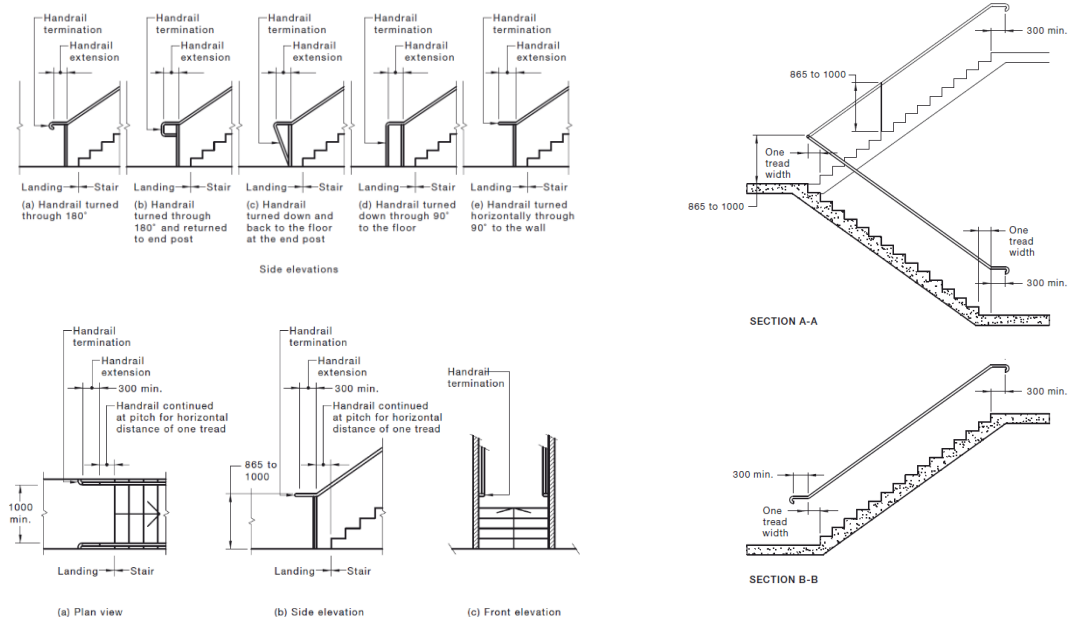
DIMENSIONS IN MILLIMETRES

Example of Compliant Stairway Design

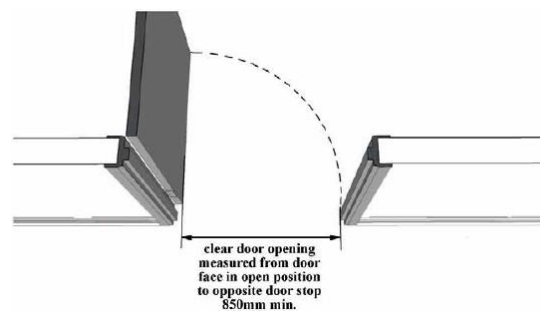
+ AS1428.1 Cl. 11.2 Stairway Handrails - Handrails shall be continuous throughout the stair flight and, where practicable, around landings and have no obstruction on or above up to a height of 600 mm and as follows:

- The design and construction of handrails shall comply with Clause 12 of AS 1428.1 – 2021.
- Handrails shall be installed on both sides of the stairs.
- Handrails shall have no vertical sections and shall follow the angle of the stairway nosing's.

- Where a handrail terminates at the bottom of a flight of stairs, the handrail shall extend at least one tread depth parallel to the line of nosing's plus minimum of 300 mm horizontally from the last riser.
- The handrail shall extend a minimum of 300 mm horizontally past the nosing on the top riser.
- Where the handrail is continuous, the 300 mm extension is not required in the inner handrail at intermediate landings.
- The dimensions indicating the heights of handrails shall be taken vertically from the nosing of the tread to the top of the handrail or from the landing to the top of the handrail.

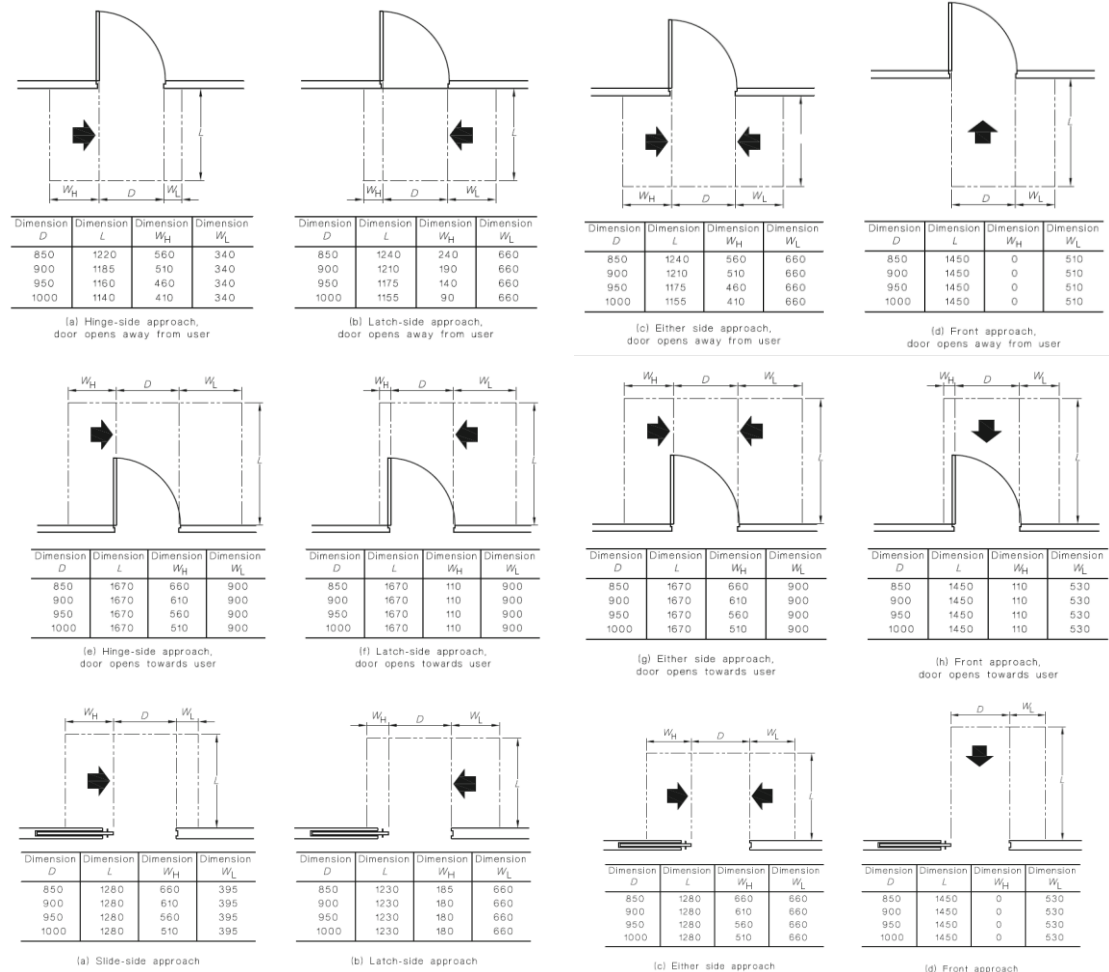


- + AS1428.1 Cl. 13.2 / 13.3 Doorways** - The minimum width of an accessible doorway must have a *clear opening* width of not less than 850mm in accordance with AS1428.1. Where double doors are provided, at least one leaf must have a clear unobstructed width of 850mm.



Clear Unobstructed Width of Doorway

Circulation space is required to all doorways throughout the building that are required to be accessible in accordance with Section 13 of AS 1428.1 – 2021 (see diagrams below). See below required doorway circulation space for swinging and sliding doors.



Comment: Construction Certification documentation to verify compliance with this requirement. Also note the following requirements which exceed minimum BCA requirements:

- + All walkways shall have a barrier or continue for a further 600mm in a different material on each side of the walkway.
- + Ensure 1,000mm clear width for occupant access/circulation; this includes the carpark external egress/circulation stairways.
- + Ensure 1,540mm wide x 2,070mm long turning/circulation zone to the ends of all corridors.
- + Circulation stairways requirements:
 - Handrails/extensions/turn-downs, colour contrasting nosing's and TGSI's to be documented with Construction Certification documentation.
 - Handrails are required on both sides on circulation stairway systems; this includes the carpark external egress/circulation stairways.
- + Door circulation and colour contrast transoms/mullions to be documented with Construction Certification documentation.

Note: AS1428.1-2021 requires 30% colour contrast between door vs wall, door vs frame, or frame vs wall to accessible doorsets hence frameless glazing will not satisfy AS 1428.1-2021 unless colour contrasting strips are provided to 30% colour contrast the door frame which are minimum 50mm wide.

BCA 2022 (Amdt. 2) adopts AS1428.1-2021 as the minimum design standard.

Performance Solution:

- + Access Performance Solution will be required to permit access widths less than 1,000mm within Woonona Church restaurant contrary to BCA D4D4.

D4D5	Exemptions: The following areas, and any path of travel providing access <u>only</u> to these areas, are not required to be accessible: + An area deemed inappropriate to access due to the areas particular use; and/or + An area that would pose a health or safety risk for people with a disability. Comment: Access/circulation space is not required to be provided to rooms/areas where access for a person with a disability is not required i.e. dirty utility / clean utility rooms, plant rooms, comms rooms etc.
D4D6	Accessible Parking: Accessible carparking spaces – + Must be provided in accordance with the ratios set out in this clause. + Must comply with AS 2890.6-2009 Comment: There are no carparking requirements for a Class 2 under the BCA. Where adaptable housing has been mandated by the Council, carparking spaces will be required under the requirements of AS4299-1995 Adaptable housing. Parking requirements for SEPP Housing 2021 Schedule 4 have been addressed under Appendix 2 of this report. Class 5, 6, 7a, 7b, 8, 9b and 9c uses to be assessed for compliance with D4D6. Also note the following requirements to supplement SEPP Housing 2021 / AS4299-1995 requirements: + Carpark area clear head heights: 2.3m generally with the exception of 2.5m above an accessible carparking space/shared spaces from the FFL to any obstruction next above + The pavement marking shall have the appropriate slip resistance of P3/R10 within undercover accessible carparking spaces and shared zones. This requirement is to be added to the project specifications to ensure compliance. Construction Certification documentation to verify compliance with this requirement. <i>BCA 2025 Public Comment Draft adopts AS2890.6-2022 as the minimum design standard.</i>
D4D7	Signage: In a building required to be accessible, braille and tactile signage must be provided to all: + Required accessible sanitary facilities; + Spaces with hearing augmentation; + Ambulant sanitary facilities; + Non-accessible pedestrian entrances; and + Each door required to be provided with an exit sign. Braille and tactile signage is to comply with sub-clause (a) and Specification 15. Comment: Construction Certification documentation to verify compliance with this requirement. Also note the following requirements which exceed minimum BCA requirements.
D4D9	Tactile Indicators: Tactile ground surface indicators must be provided to: + A stairway, other than a fire-isolated stairway; and + An escalator or passenger conveyor; and + A ramp other than a fire-isolated ramp; and + In the absence of a suitable barrier- - An overhead obstruction <2m above floor level; and - An accessway meeting a vehicular way adjacent to any pedestrian entrance to a building including a pedestrian entrance serving an area referred to in D4D5, if there is no kerb or kerb ramp at that point. Tactile indicators are required to be designed in accordance with AS 1428.4.1-2009. Comment: Construction Certification documentation to verify compliance with this requirement.

Note 1: Only fire-isolated exits have concession to omit DDA features, where stairways are open stairways (and therefore circulation stairways) a Performance Solution is documented at Construction Certificate stage.

Note 2: A blanket Performance Solution to omit TGSI's throughout in favour of dome buttons will require a Performance Solution.

D4D12

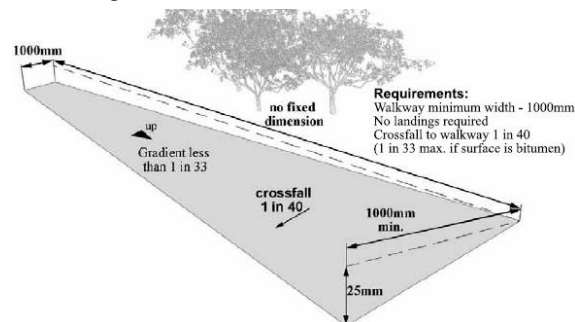
Ramps: Clause D4D12 requires makes provisions for accessway to consist of ramps based on limitations such as:

- + A series of connected ramps must not have a combined vertical rise of more than 3.6 m; and
- + A landing for a step ramp must not overlap a landing for another step ramp or ramp.

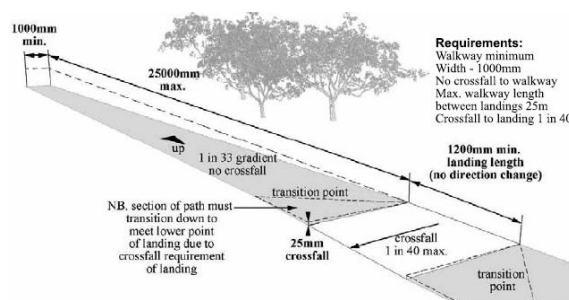
Ramps may be used as part of an accessway where there is a change of level and must comply with the requirements set out in AS1428.1-2021 including:

- + **AS1428.1 Cl 10.1 Walkways, Ramps, and Landings – Generally** - Walkways, ramps and landings that are provided on a continuous accessible path of travel shall be as follows:
 - Sharp transitions shall be provided between the planes of landings and ramps.
 - Landings shall be provided at all changes in direction in accordance with Clause 10.8.
 - Landing or circulation space shall be provided at every doorway, gate, or similar opening.
 - For walkways and landings having gradients in the direction of travel shallower than 1 in 33, a camber or crossfall shall be provided for shedding of water and shall be no steeper than 1 in 40, except that bitumen surfaces shall have a camber or crossfall no steeper than 1 in 33.

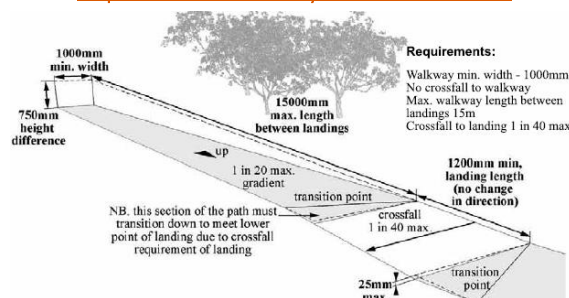
NOTE: For requirements for ground surfaces, see Clause 7.



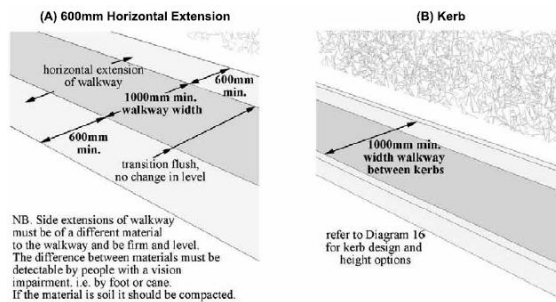
Requirements for a Walkway with a Gradient Less Than 1 in 33



Requirements for a Walkway with a 1 in 33 Gradient

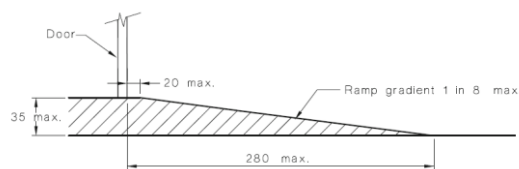


Requirements for a Walkway with a 1 in 20 Gradient



Requirements for Edges of Walkways

- + **AS1428.1 Cl. 10.3 Ramps** - Ramps to comply with the following:
 - Maximum gradient of a ramp exceeding 1900mm shall be 1 in 14.
 - The gradient of a ramp shall be constant throughout its length.
 - Ramps shall be provided with landings:
 - For ramp gradients of 1 in 14, at intervals not greater than 9m.
 - For ramp gradients steeper than 1 in 20, at intervals not greater than 15m.
 - For ramp gradients between 1 in 14 and steeper than 1 in 20, at interpolated intervals.
 - Handrails must be provided on either side complying with Clause 12.
 - TGSIs shall be installed in accordance with AS 1428.4.1.
 - Ramps shall be set-back at internal corridors so that handrail extensions do not protrude into paths of travel.
 - Ramps and intermediate landings shall have kerbs or kerb rails on either side.
- + **AS1428.1 Cl. 10.4 Curved Walkways, Ramps, and Landings** - Curved ramps, walkways, and landings shall comply with the following:
 - Curved walkways shall have a width not less than 1500mm.
 - Any cross-fall shall be towards the centre of curvature.
 - The gradient of curved ramps and walkways shall comply with the graph in Figure 20 within AS 1428.1 – 2021.
- + **AS1428.1 Cl. 10.5 Threshold Ramps** - Threshold ramps at doorways on a continuous path of travel shall have—
 - a maximum rise of 35 mm;
 - a maximum length of 280 mm;
 - a maximum gradient of 1:8; and
 - be located within 20 mm of the door leaf which it serves.

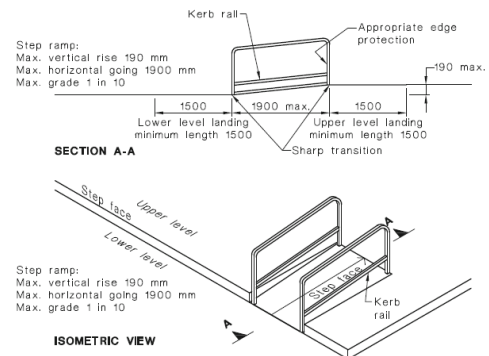
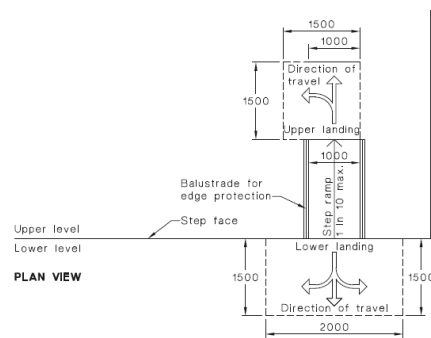


- + **AS1428.1 Cl. 10.6 Step Ramps** - Step ramps shall have—
 - a maximum rise of 190 mm;
 - a length not greater than 1900 mm; and
 - a gradient not steeper than 1 in 10.

The edges of step ramp shall have a 45° splay where there is pedestrian cross traffic. Otherwise, it shall be protected by a suitable barrier, such as—

- a wall or suitable barrier with a minimum height of 450 mm; or

- where an open balustrade is provided a kerb or kerb rail shall be provided.



+ AS1428.1 Cl. 10.8 Landings

- Walkways and ramps
 - The length of landings at walkways (up to a gradient of 1 in 33) and ramps shall comply with one of the following:
 - Where there is no change in direction, the length shall be not less than 1200 mm, as shown in **Figure 25(A)**.
 - Where there is a change of direction not exceeding 90°, the landing shall be not less than 1500 mm. The internal corner shall be truncated for a minimum of 500 mm in both directions, as shown in **Figure 25(B)**.
 - For a 180° turn, the landing shall be as shown in **Figure 25(C)**.
- Step ramps
 - The length of landings at step ramps shall be not less than 1200 mm in the direction of travel, as shown in **Figures 22(A)** and **22(B)**.
 - Where a change in direction is required, the length of step ramp landings shall be a minimum of 1500 mm, as shown in **Figure 22(A)**.
 - Where doorways are at landings, the dimensions of the landings shall be in accordance with the requirements of Clause 13.3 for circulation spaces at doorways shown in **Figure 25(D)**.
- Kerb ramps
 - The length of landings at kerb ramps shall be not less than 1200 mm in the direction of travel.
 - Where a 'T' junction occurs, the kerb ramp landing shall be a minimum of 1500 x 2000 mm, as shown in **Figure 24(B)**.
 - Where a single change in direction is required, the ramp landings shall be a minimum of 1500 mm x 1500 mm.
 - See Below for Figures 25A, 25B & 25C:

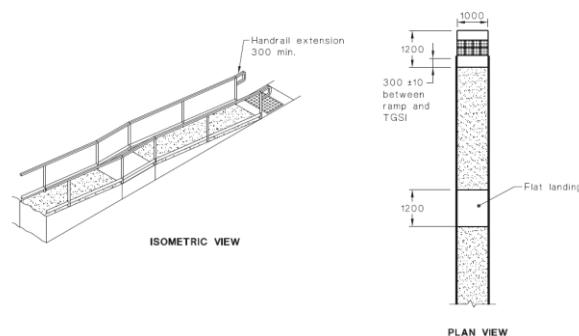


Figure 25A

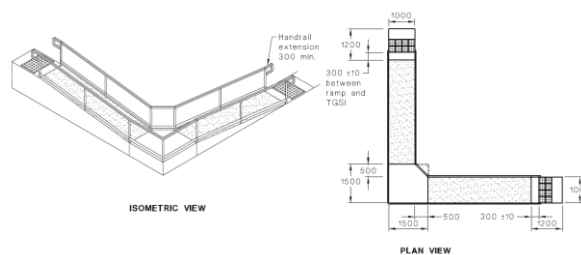


Figure 25B

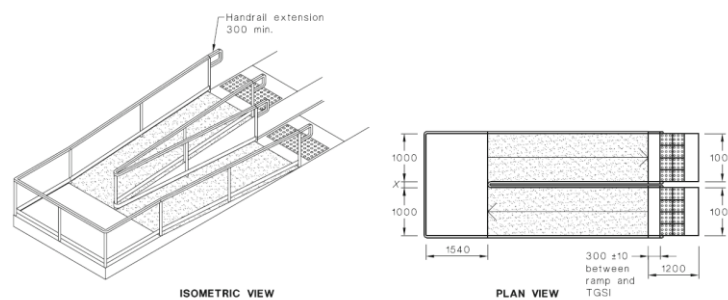


Figure 25C

Comment: The series of connecting ramps do not exceed a vertical height of 3.6m. Construction Certification documentation to verify compliance with this requirement to satisfy AS1428.1-2021.

D4D13

Glazing along an Accessway: Where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights, including any glazing capable of being mistaken for a doorway or opening, shall be clearly marked for their full width with a solid and non-transparent contrasting line.

Comment: Construction Certification documentation to verify compliance with this requirement. Note the strip must achieve 30% luminance contrast with the floor surface on each side and must be a solid, not translucent, strip with no other graphical representation or cut-outs.

2.4 Section E – Services and Equipment

E1D2

Fire Hydrants: Fire hydrant coverage is required to be provided to the building in accordance with satisfy NCC E1D2 and AS2419.1 – 2021.

Note: external hydrants within 10m of sprinkler protected buildings is permissible under AS2419.1-2021

Comment: For any new fire hydrants, FPAS Practitioner / Fire Services Design consultant to certify compliance at the Construction Certificate stage.

The following comments are also made with regards to onsite hydrant system design matters:

- + APFS has provided written direction verifying that NCC E1D2 and AS2419.1 – 2021 compliance is achieved with regards to residual pressures and flows in the absence of fire services pumpsets and/or fire water storage / break-tank.
- + Where non-fire-isolated exits are concerned, internal hydrants within 4m from the nearest required exit e.g. the top riser to each required non-fire-isolated egress stairway or the discharge doorset / exit on ground floor.
- + Where fire-isolated exits are concerned, internal hydrants within required exit. Ensure hydrant locations will not be obstructed by in-swinging doorsets especially where landings are narrow; refer to AS2419.1-2021 FRNSW operational appendix.
- + Where horizontal exits are concerned, internal hydrants within 4m from the nearest required exit

	+ Any external hydrants on ground level courtyard/podium areas are to be shown as FRNSW prefer external hydrants for low-rise parts of facilities so they can enter the facility under the protection of a charged hose. + Ensure appropriate handstand is implemented directly in front of the booster. + FPAS Practitioner to review the effects of external hydrants when considering pumpsets/break-tanks. + FPAS practitioner to determine whether existing infrastructure for both hydrants and sprinkler are appropriate for the site wide development or whether the booster need augmentation to accommodate the new works (in particular large bore suction associated with fire water storage) to ensure the measures are certifiable to BCA 2022 (Amdt. 2), AS2419.1-2021 and AS2118.1-2017. + Woonona Church Restaurant is Class 6 building with a total floor area of circa 365sqm (<500sqm) hence does not require hydrant coverage under BCA E1D2 if this building is assessed in isolation. Notwithstanding there is a portion of the new Woonona Church Restaurant which extends over the podium/carpark hence will require hydrant coverage i.e. it is a building part located over a podium and therefore is a united building with the remainder of the podium/carpark. United buildings are to be assessed as one building therefore the fire services associated with the carpark apply to any building (or part) located on the podium. Rationalisation of podium hydrants will need to be considered under the Fire Engineered Performance Solution where strict compliance with AS2419.1-2021 is not achieved. Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify departures to hydrant design requirements under BCA Clause E1D2 and AS2419.1-2021: + Booster not located at vehicular entry or visible from each building on the site contrary to AS2419.1-2021 Cl. 7.3.1.
E1D3	Fire Hose Reels: A required fire hose reel system must satisfy NCC E1D3 and AS2441 – 2005; Comment: The following comments are also made with regards fire hose reel system design matters: + Concession applies to Class 2 and Class 9c residential areas due to these areas being provided with Portable Fire Extinguishers in favour of Fire Hose Reels. + In this regard only the Class 5, 6, 7a, 7b, 8, 9b carpark fire compartment is required to be provided with fire hose reel coverage in accordance with NCC E1D3 and AS2441 – 2005.
E1D4	Sprinklers: An automatic fire sprinkler system is required to be provided to the building. Depending on the rise in storeys, there are a number of options available. Comment: FPAS Practitioner / Fire Services Design consultant to certify compliance at the Construction Certificate stage in accordance with NCC E1D4, Spec. 17, Spec. 18 and AS2118.1 – 2017 (Amdts 1 and 2). The following comments are also made with regards to sprinkler system design matters: + Sprinkler booster to be identified on the design plans; ensuring they are 10m or more from electrical kiosks, EV charging stations etc. + APFS has provided written direction verifying that NCC E1D4, Spec. 17, Spec. 18 and AS2118.1 – 2017 (Amdts 1 and 2) compliance is achieved with regards to residual pressures and flows in the absence of fire services pumpsets and/or fire water storage / break-tank. + Ensure appropriate handstand is implemented directly in front of the booster. + FPAS practitioner to determine whether existing infrastructure for both hydrants and sprinkler are appropriate for the site wide development or whether the booster need augmentation to accommodate the new works (in particular large bore suction associated with fire water storage) to ensure the measures are certifiable to BCA 2022 (Amdt. 2), AS2419.1-2021 and AS2118.1-2017.

Fire Engineered Solution: We understand a Fire Engineered Performance Solution will be proposed to justify departures to sprinkler design requirements under BCA Clause E1D4 and AS2118.4-2012 (ILU apartment buildings) and AS2118.1-2017 (Residential Care Facility):

- + Booster not located at vehicular entry or visible from each building on the site contrary to AS2419.1-2021 Cl. 7.3.1.
- + ILU Apartment buildings will be provided with an AS2118.4-2012 residential sprinkler system throughout. Implementation of a residential sprinkler system throughout areas which are not Class 2 e.g. Class 5 and 9b areas.
- + Omission of sprinklers from smaller laundry areas under Fire Engineered Performance Solution noting that stacking of dryers/washers will affect sprinkler head locations.
- + Omission of sprinklers from all low voltage electrical cupboards (e.g. communications cupboards) and MSB enclosures.
- + The sprinkler protected Residential Care Facility and nearest ILU apartment building are to be located within 6m (circa 3.3m-4.2m) of the non-sprinkler protected kiosk. A Performance Solution is to permit physical separation/setback between the sprinkler protected buildings and non-sprinkler protected kiosk in lieu of providing fire-resisting construction of 30mins contrary to Spec. 17 and AS2118.1-2017 Clause 3.2.1.
- + There is a portion of the new the Woonona Church restaurant extension which sits directly on the podium / carpark and there for these buildings are united. It is proposed to omit sprinklers from Woonona Church restaurant extension because the buildings are separated by a podium slab.

**E1D4 /
E1D5 &
Spec 17
CI S17C6
& S17C7**

Comment: Direction has been provided by the wet fire FPAS verifying that a Pumpset enclosure and fire water storage is not required based on their design and residual pressures and flows associated with the site.

**E2D4/
E2D9/
E2D11/
E2D12/
E2D13**

Smoke Hazard Management: Required smoke hazard management measures must satisfy NCC Clause E2D2/E2D3; including:

- + Class 2 areas:
 - A smoke alarm system complying with S20C3; or
 - A smoke detection system complying with S20C4; or
 - A combination of a smoke alarm system and a smoke detection system complying with S20C5; or
 - Any Fire Engineered or operator requirements.
- + Class 5, 6, 7a, 7b, 8, 9b, 9c areas:
 - A smoke detection system complying with S20C4; and
 - Automatic shut-down of mechanical air handling systems upon fire trip in accordance with Section 5 and 6 of AS 1668.1.
 - Any Fire Engineered or operator requirements (including rationalisation of auto stair pressurisation systems to required stairways serving Class 9c areas which would otherwise need to be implemented as per AS 1668.1 – 2015).
- + Class 7a areas:
 - A smoke detection system complying with S20C4; and
 - Smoke extraction/exhaust where mechanical ventilation is provided to satisfy AS1668.2-2012; and
 - Automatic shut-down of mechanical air handling systems upon fire trip in accordance with Section 5 and 6 of AS 1668.1.
 - Any Fire Engineered or operator requirements.

Comment: The following comments are also made with regards to smoke detection and alarm system design matters:

- + Identify the location of the FDCIE / Main FIP in the building closest to the booster and FRNSW entry to the site; FPAS Practitioner to verify whether a Sub-FIP's are required within the other buildings associated with the site.
- + Where multiple buildings are networked to a main FDCIE monitored in accordance with AS1670.3 at least one Designated Site Entry Point (DSEP) shall be provided on a site. At the DSEP the building(s) an alarm shall be indicated by at least one of the following means in accordance with AS1670.1-2018 Cl. 2.2.2:
 - A Fire Brigade Panel; OR
 - A fire alarm mimic panel which does not provide any control functions and identifies the building in fire alarm without exiting the fire appliance; OR
 - An external alarm indication in accordance with Clause 3.8 on each protected building within the segregated area. Such an indication shall be clearly visible from the DSEP without exiting the fire appliance.
- + Ensure that smoke alarms are provided within each Class 2 SOU/apartment on each level between the bedroom entry doorset and the remainder of the apartment. Where more than one smoke alarm is required they must be interconnected.
- + A smoke detection and alarm system is required through all other uses. In a Class 9c building provided with a smoke detection system, the following applies:
 - remote automatic indication of each zone must be given in each smoke compartment by means of mimic panels with an illuminated display; or annunciator panels with alpha numeric display; and
 - Manual call points must be installed in paths of travel so that no point on a floor is more than 30 m from a manual call point.
- + Fire Engineer may require enhancements to the smoke alarm system or smoke detection system in response to any Fire Engineered Performance Solutions.

Fire Engineered Solution: A non-required stairway is provided that connects three resident care storeys contrary to BCA Clause D2D17; this stairway is utilised for occupant egress from the roof-top plant level and is fire-isolated however discharges within the building and the discharge doorset swings inward contrary to BCA Clause D2D12(2) and D2D25(b).

This stairway connects multiple storeys within a four storey Class 9c Residential Care Facility however only serves the roof-top level for occupant egress therefore is not intended to be provided with automatic stairway pressurisation which is a technical departure to BCA Clause E2D4.

BCA 2025 Public Comment Draft adopts AS1670.1-2024 (Incl. Amdt. 1) and AS1670.3-2024 (Incl. Amdt. 1) as the minimum design standards.

E1D14

Fire Extinguishers: Required Portable Fire Extinguishers must satisfy NCC Clause E1D14 & AS 2444-2001.

- + In a Class 2 or 3 building, 2.5 kg ABE type fire extinguishers must be located within 10m of each SOU/apartment entry doorway.
- + To cover Class AE or E fire risks Dry Chemical Powder Extinguisher(s) are to be implemented within emergency services switchboards (i.e. a switchboard which sustains emergency equipment operating in the emergency mode).
- + To cover Class F fire risks Wet Chemical Extinguisher(s) are to be implemented within kitchens within cooking oils and fats associated with their function and use.
- + Note: Wet chemical to be provided within the kitchen whilst serveries and kitchens must be provided with a extinguisher and blanket in accordance with AS2444.
- + To cover Class B fire risks Dry Chemical Powder Extinguisher(s) are to be implemented within locations where flammable liquids in excess of 50 litres are stored or used (not including that held in fuel tanks of vehicles).

	+ To cover Class A and E fire risks throughout the building a combination of both Carbon Dioxide CO2 Fire Extinguisher and Water H2O Fire Extinguisher(s) are to be installed in every smoke compartment or where required for coverage. + Note: Although deemed suitable for Class A fire hazards ABE extinguishers are not permitted in Class 9c areas as they pose respiratory issues. + To cover Class E fire risks Carbon Dioxide CO2 Fire Extinguisher(s) are to be implemented within nurse/staff/supervisor's stations. Comment: For any new installations/alterations, FPAS Practitioner / Fire Services Design consultant to certify compliance at the Construction Certificate stage in accordance with NCC E1D14 and AS2441-2001.
E2D17 & E2D21	Provisions for Special Hazards: FRNSW deem EV charging stations as a special hazard for the purposes of fire and life safety and brigade intervention. Where EV charging stations are proposed they are to be assessed in the trial design or separate fire safety assessment by the Fire Safety Engineer's Report with the Construction Certificate application.
E3D3 / E3D10	Stretcher Facilities in Lifts: Stretcher facilities, complying with this clause, must be provided in lifts in at least one emergency lift as required by E3D5 or in building where lifts serve any storey above an effective height of 12m. A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600mm wide x 2,000mm long x 1,400mm high above the floor level. Where residents in a Class 9c residential care building are on levels which do not have direct access to a road or open space, the building must be provided with either: + At least one lift to accommodate a stretcher in accordance with E3D3(2); or + A ramp in accordance with AS 1428.1. The required lift or ramp must discharge at a level providing direct access to a road or open space. Comment: Details to be included in the design statement at Construction Certificate stage.
E3D7	Passenger Lifts: All passenger lifts provided exceed the minimum dimensions required to comply as accessible lifts. In this regard, access to every floor in the development is achieved in the design. Note: Lift call button to be located 500mm or more from an internal corner to satisfy NCC/BCA Cl. E3D7 & AS 1735.12-1999 Clause 7.3.3 in the absence of a DDA Performance Solution.
E4D2 - E4D8	Emergency Lighting and Exits Signs: Emergency lighting and exit signage to be provided in accordance with E4D2-E4D5 complying with AS 2293.1 – 2018.

2.5 Section F – Health and Amenity

Part F1	Damp and Weatherproofing: Damp and weatherproofing to comply with the prescriptive requirements as follows (as applicable): + Stormwater drainage must comply with F1D3. + Exposed joints must comply with F1D4. + External waterproofing membranes must comply with F1D5. + Damp-proofing must comply with F1D6. + Damp-proofing of floors on the ground must comply with F1D7. + Subfloor ventilation must comply with F1D8.
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Comment: Compliance readily achievable; architectural design documents with the Construction Certificate application to verify compliance with this requirement.

Where the door entrance needs to be flush between non-permeable external and internal areas, and the sub-sill is recessed, then AS4654 requires that a grate is to be provided before the sub-sill to mitigate water ingress into the building.

Compliance in design and completion to be certified by the registered Façade Consultant and/or Architect and Hydraulic Consultant.

Performance Solution: A Performance Solution is required to be obtained in relation to the departures from Part F1 with damp and waterproofing with respect to wall cladding systems. A Façade Engineer is required to prepare the Performance Based Design Brief (PBDB) and Performance Solution Report.

BCA 2025 Public Comment Draft makes provision for the following with regards to External Substrates – Concrete Roofs, Balconies, Podiums, or Similar:

- + *Structural Substrate definition clarified as: The surface of a structural member to be waterproofed as required by Part F1 or F2D2(2)(a).*
Note: A tile bed / screed can only be considered a structural substrate within planter boxes
- + *Waterproof membranes must be applied directly to the structural substrate.*
- + *Structural substrate must have minimum 1:80 falls as such falls must be inherent in the slab therefore the depth of the slab will be larger to accommodate the fall.*
- + *The structural design of concrete roofs, balconies, or similar parts of the building will now need to account for the expected 10-year deflection of structural substrates*
- + *Must not result in non-compliant falls with respect to the external waterproofing provisions (overall falls, creating of ponding, etc.).*

BCA 2025 Public Comment Draft makes provision for the following with regards to External set downs, hobs and hobs:

- + *A concrete roof, balcony, or similar part of a building must have a:*
 - o *70 mm step down from the internal floor level to the external structural substrate.*
 - o *70 mm high integral hob around its perimeter.*
- + *An exemption is provided where the external substrate abuts an external wall or door.*
- + *Exposed joints in concrete roofs, balconies, podiums or similar, must be located:*
 - o *On the ridge line or the highest point of the structural substrate, and*
 - o *Have a hob with a minimum height of 50mm formed within the structural substrate for the full length of both sides of the exposed joint*

BCA 2025 Public Comment Draft makes provision for the following with regards to External Substrates – Membranes and surface finishes:

- + *Self Draining definition clarified as: A surface finish allowing water to be conveyed by gravity from the finished surface level to the membrane on the top surface of the structural substrate. An external waterproof membrane must be installed directly on a structural substrate.*
- + *A surface finish must be self-draining or directly fixed to a waterproof membrane*

Part F2

Wet Areas and Overflow Protection: Wet areas and overflow protection is to comply with the prescriptive requirements as follows (as applicable):

- + Wet area construction must comply with F2D2.
- + Rooms containing urinals must comply with F2D3.
- + Floor wastes must comply with F2D4.

Comment: Compliance readily achievable; architectural design documents with the Construction Certificate application to verify compliance with this requirement.

Where a floor waste is required, F2D4 requires that the floor must be graded at a minimum continuous fall of 1:80 to a floor waste and the floor must be graded at a maximum continuous fall of 1:50 to a floor waste.

This solution will likely lead to a Performance Solution for DDA compliant sanitary facilities where a minimum continuous fall of 1:100 is adopted in favour of 1:80 permitted under F2D4.

	Compliance in design and completion to be certified by the registered Façade Consultant and/or Architect and Hydraulic Consultant.
Part F3	Roof and Wall Cladding: This section contains DtS provisions for the weatherproofing of certain external wall and roof designs as follows (as applicable): + Roof coverings must comply with F3D2. + Sarking must comply with F3D3. + Glazed assemblies must comply with F3D4. + Wall cladding must comply with F3D5. Performance Solution: Where required, a Performance Solution is to be obtained in relation to the departures from F3D5 with respect to wall cladding systems. Should a Performance Solution be required a Façade Engineer is required to prepare the Performance Based Design Brief (PBDB) and Performance Solution Report.
Part F4	Sanitary Facilities: Sanitary and other facilities must be provided to comply with the relevant requirements of this part, as applicable to the building's classification and use. Provide employee numbers throughout and patron numbers within assembly/café/activity areas for further review with the Construction Certificate application. Any new/altered works to laundries, slop hoppers, etc are to satisfy Clause F4D11. Note: For every 60 beds or part thereof on each storey containing resident use areas the following are to be provided: + One slop-hopper or other device (other than a water closet pan or urinal for the safe handling and disposal of liquid and solid wastes with a flushing apparatus, tap and grating); and + An appliance for the disinfection of pans or an adequate means to dispose of receptacles. Performance Solution: + The size and handrail locations within the Woonona Church restaurant will need to be permitted on a performance-basis; and + Permitting unisex facilities within the Woonona Church restaurant, where separate male and female facilities are required, will also need to be permitted on a performance-basis.
F5D2	Ceiling Heights: The floor to ceiling heights must be as follows: <i>The ceiling minimum heights for a Class 2 building are as follows:</i> + Kitchen, laundry or the like – 2.1m + Corridor or passageway – 2.1m + A habitable room, excluding kitchen – 2.4m <i>The minimum ceiling heights in a Class 7 building are as follows:</i> + Generally - 2.4m. + Corridor, passageways, or the like - 2.1m. <i>In any building:</i> + Bathrooms, sanitary compartments, tea preparations rooms, pantries, store rooms or the like – 2.1m, + A commercial kitchen – 2.4m, Above a stairway, ramp, landing or the like – 2m. Comment: Construction Certification documentation to verify compliance with this requirement. Also note the following requirements which exceed minimum BCA requirements: + A habitable rooms: to satisfy SEPP 65 / ADG requirements 2.7m clear ceiling heights are to be provided between FFL and the underside of ceilings, this must be achieved to all habitable rooms/areas regardless of structure and services above the ceiling. + Carpark areas: 2.3m generally with the exception of 2.5m above an accessible carparking space/shared spaces from the FFL to any obstruction next above.

	+ NSW requirements for porte-cochere may be applicable; verify if porte-cochere heights need to be considered as NSW may require 3.7m clear heights.
Part F6	Light and Ventilation: In accordance with BCA Clause F6D2/F6D3 natural lighting must be provided within: + Class 2 buildings or parts — to all habitable rooms (including study areas within apartments). + Class 9c buildings or parts — all rooms used for sleeping purposes; A required window that faces a wall of the same building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill. In a Class 9c aged care building, a required window must be transparent and located— in an external wall with the window sill not more than 1 m above the floor level; and where the window faces an adjoining allotment, another building or another wall of the same building, it must not be less than a horizontal distance of 3 m from the adjoining allotment, other building or wall. Artificial lighting systems are required to comply with BCA Clause F6D4 and AS 1680-2009. All mechanical or air-conditioning installations must be undertaken in accordance with Clauses F6D6 and AS 1668.2-2012. Comment: Construction Certificate design details to demonstrate that: + All resident rooms are provided with window must be transparent and located in an external wall with the window sill not more than 1 m above the floor level in accordance with Clause F6D3; + All Class 2 bedrooms (including study areas) are provided with natural light in accordance with BCA Clause F6D2/F6D3 and natural ventilation in accordance with Clause F6D7. Artificial lighting is to be provided to in accordance with AS 1680.0 and air conditioning/ventilation to be proposed in accordance with 1668.2-2012. <i>BCA 2025 Public Comment Draft makes provision for the following with regards to ventilation:</i> + <i>New additional option to provide natural ventilation via compliance with AS 1668.4 – as opposed to the previous 5% of floor area in openable windows / doors method.</i> <i>BCA 2025 Public Comment Draft adopts AS1668.2-2024 (Incl. Amdt. 's 1 and 2) as the minimum design standard.</i>
Part F7	Sound Transmission and Insulation: Floors and walls bounding Class 2 or 9c parts are required to comply with the prescriptive provisions of Part F7 as related to sound transmission and insulation. Comment: Provide a copy of the Acoustic Assessment Report and Design Statement in accordance with Part F7 at Construction Certificate application. NCC Clause F7D4 requires discontinuous construction for internal wall systems; Construction Certification documentation to verify compliance with this requirement.
Part F8	Condensation Management: Condensation management to comply with the prescriptive requirements as follows (as applicable): + External wall construction must comply with F8D3. + Exhaust systems must comply with F8D4. + Ventilation of roof spaces must comply with F8D5. Comment: Details and certification by the Architect to be provided verifying compliance with the condensation management requirements under F8 for each Class 2 building. It is understood that the mechanical exhaust has been detailed by the Mechanical Consultant to meet these requirements with regards to bathrooms and kitchen areas. Exhaust from a kitchen, kitchen range hood, bathroom, sanitary compartment or laundry must discharge directly or via a shaft or duct to outdoor air in accordance with BCA Cl. F8D4. <i>BCA 2025 Public Comment Draft makes provision for the following with regards to condensation management:</i>

- + *Expansion of Condensation Management requirements to now require compliance for Class 3 (short term accommodation) and Class 9c (residential care buildings).*
- + *New changes include: Additional requirements to external walls in climate zones 1-8. Extension of roof space ventilation requirements to Climate zones 4 and 5.*

2.6 Section G – Ancillary Provisions

G1D5 NSW Amdt

Safe Cleaning of Windows: A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level.

Comment: New glazing proposed as part of the development. In this regard, measures must be implemented (where they do not already) enabling the windows to be cleaned wholly from within the building; or provision is to be made (where not already) for the cleaning of the windows by a method complying with the Work Health and Safety Act 2011 and regulations made under that Act.

Part G3

Atrium Construction: The BCA defines an atrium as a space within a building that connects 2 or more storeys and—

- a. Is enclosed at the top by a floor or roof (including glazed roof structure); and
- b. Includes any adjacent part of the building not separated by an appropriate barrier to fire; but
- c. Does not include a stairwell, rampwell or the space within a shaft; and
- d. For the purposes of a. a space is considered enclosed if the area of the enclosing floor or roof is greater than 50% of the area of the space, measured in plan, of any of the storeys connected by the space.

Atrium construction needs to satisfy BCA Part G3 however BCA Clause G3D1 permits the following concessions where the atrium provisions under Part G3 do not need to be complied with:

- + Where the atrium only connects 2-stories; OR
- + Where the atrium only connects 3-stories; and each storey is provided with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 throughout; and one of those storeys is situated at a level at which there is direct egress to a road or open space.

Comment: There are no atriums apparent in the design documentation.

Part G5

Construction in Bushfire Prone Areas: The Deemed-to-Satisfy Provisions of this Part apply in a designated bushfire prone area for a Class 2/3/4 building must comply with AS 3959 – 2018 (Amdt 1 & 2).

Where applicable, any Class 9 vulnerable occupancy building must comply with BCA Spec. 43, AS 3959 – 2018 (Amdt 1 & 2) or a Performance Solution which must be accepted by all key stakeholders (including NSW RFS).

Part G6

Occupiable Outdoor Areas: Occupiable Outdoor Areas (such as the communal rooftop space) are required to comply with the fire hazard property, provision for escape, construction of exits, firefighting equipment, lift installations, visibility in an emergency, exit signs and warning systems, and light and ventilation provisions of the BCA (as specifically prescribed under this part) as if it were an internal building part.

2.7 Section J – Energy Efficiency

Part J

Energy Efficiency: The new building works subject to compliance with the Energy Efficiency Provisions of BCA 2022 (Amdt. 2) Section J relating to:

- + J1: Energy Efficiency Performance Requirements
- + J2: Energy Efficiency
- + J3: Elemental Provisions
- + J4: Building Fabric
- + J5: Building Sealing
- + J6: Air-Conditioning and Ventilation
- + J7: Artificial Lighting and Power
- + J8: Heated Water Supply and Swimming Pool and Spa Pool Plant
- + J9: Energy Monitoring and On-Site Distributed Energy Resources

The Construction Certificate documentation from the architect, mechanical, electrical, and hydraulic engineers are to incorporate details demonstrating compliance with the above provisions (as applicable to their respective disciplines).

BCA 2025 Public Comment Draft makes provision for the following with regards to energy efficiency (although the project ESD Consultant will be required to provide a comprehensive gap analysis for this development):

- + *Significant changes proposed – benchmark for DtS and Performance Requirement compliance is significantly raised.*
- + *Includes a requirement to facilitate near zero operational energy and Green House Gas (GHG) emissions appropriate to the use of the building and the required level of human comfort*
- + *Measures included to support broader government initiatives to transition towards a renewable electricity grid. E.g. enable gas-powered equipment to be easily changed to an electric replacement in the future (electrification).*
- + *Where varying from DtS building fabric via a JV3 Performance Solution – Removal of ability to offset energy consumption (e.g. via reduced building fabric performance) via reliance on energy production. I.e. cannot rely on solar PV in energy modelling.*
- + *Modelling undertaken via JV3 must now achieve at least 10% better annual GHG emissions than the reference building (DtS design). Previously simply had to demonstrate equivalence (no worse than).*
- + *Includes requirements for EV chargers for a specified number of spaces in carparking areas associated with a Class 3, 5, 6, 7b, 8 and 9 buildings. Previously only required provision for future installation of chargers.*
- + *Updates require on-site PV panels to be installed. Noting:*
 - o *Capacity depends on the available roof space, climate zone and building classification.*
 - o *Additional PV is specified where gas is used to balance the emissions from gas appliances.*
 - o *PV must be installed to cover 100% of roof space, excluding certain shaded areas, plant zones, and trafficable zones.*

2.8 Access & Disability (Access to Premises Building) Standards 2010

DDA	The Disability (Access to Premises-Buildings) Standards 2010 (the Access to Premises Standards) requires the building to comply with the Access Code (BCA Part D4 & AS 1428.1-2021). With respect to the proposed new building, compliance with the Access Code is achieved if the building complies with: + BCA clauses D4D1 to D4D13; + BCA clauses E3D7 & E3D8; + BCA clauses F4D3, F4D5 to F4D7 and F4D12. Detailed documentation demonstrating compliance with the above BCA provisions and AS 1428.1-2021 will be required for assessment at Construction Certificate stage. In the event that DtS compliance is not achieved, a redesign will be required or a Performance Solution will need to be documented by an appropriately qualified Access Consultant. Refer to DDA Consultants report regarding Affected Part considerations.
D4D2	General Building Access Requirements + Access is provided to and within all areas of the Class 5 / 6 / 7 / 8 / 9 part unless exempted under D4D5 + Ensure all existing and new doorsets within the existing facility along an accessway are provided with a 30% colour contrast between door vs wall; or door vs frame; or wall vs frame.
D4D3	General Building Access Requirements + Access is provided to and within all areas of the Class 5 / 6 / 7 / 8 / 9 part unless exempted under D4D5
D4D4	Parts of Buildings to be Accessible: + Every ramp and stairway (except for fire-isolated stairways) are required to comply with AS 1428.1 – 2021. + Accessways must have turning and passing space complying with AS 1428.1 – 2021. Compliance is readily achievable with the requirements of AS 1428.1 – 2021 as required by this part.
D4D6	Accessible Parking: Accessible car parking spaces are to be shown to be provided on plan to satisfy D4D6.
D4D7	Signage: Exit braille signage is to be provided above all doors which are located in fire walls or discharge doors into stairway or open space. Signage is to comply with Spec. 15 and be located between 1,250-1,350mm above FFL, measured to the braille line. Where possible, the signs should also be placed on the latch side wall of the door between 50-300mm of the door architrave or on the doorset where there is no latch side.
D4D12	Ramps: Ramps are readily able to meet compliance with AS 1428.1 – 2021.
D4D13	Glazing on an accessway: On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1 – 2021. Existing decals along an accessway are to be upgraded and provided with colour contrasting 75mm thick vision strips located between 900-1,000mm from FFL as per AS 1428.1 – 2021. All vision strips are to be colour contrasting with the floor finish 2m either side of the strip.
E3D7	Passenger Lifts: All passenger lifts provided exceed the minimum dimensions required to comply as accessible lifts. In this regard, access to every floor in the development is achieved in the design.

F4D5

Accessible Sanitary Facilities: The provision of Unisex Accessible Sanitary Facilities and facilities suitable for use for persons with an ambulant disability satisfy the requirements of this clause.

3.0 Statutory Upgrade Requirements

EPA Act & Reg.

The following statutory upgrade triggers apply to the existing Flame Tree RCF and Woonona Church Restaurant/cafe building:

- + Pursuant to Clause 143 of the Environmental Planning and Assessment Regulation 2000, a certifier must not issue a construction certificate for building work that authorises a change of building use unless; the fire protection and structural capacity of the building will be appropriate to its new use, and the building will comply with such off the Category 1 fire safety provisions as are applicable to the new use.
- + Pursuant to Clause 143 of the Environmental Planning and Assessment Regulation 2000, a certifier must not issue a construction certificate for building work that authorises the alteration, enlargement, or extension of an existing building (where no change of use is proposed), unless on completion of the building work, the fire protection and structural capacity of the building will not be reduced.
- + Pursuant to Clause 93 of the Environmental Planning and Assessment Regulation 2000, the consent authority (Council) must take into consideration whether the fire protection and structural capacity of the building will be appropriate to its proposed use. Furthermore, consent must not be granted unless the building complies (or will comply when completed) with such of the Category 1 fire safety provisions as applicable to the building's proposed use.
- + Pursuant to Clause 94 of the Environmental Planning and Assessment Regulation 2000, the consent authority (Council) may require the building to be brought into total or partial conformity with the Building Code of Australia. In relation to the subject project, this upgrade provision is triggered by the proposed building works representing more than half the total volume of the building.
- + Pursuant to Cl. 162D of the Environmental Planning and Assessment Regulation 2000, If a Certifier becomes aware of any significant fire safety issues in the process of determining a CC, OC there are two options:
- + Address the significant fire safety issue in the proposed development, or
- + Notify Council of the significant fire safety issue (noting Council may then issue a Fire Safety Order on the building compelling the building owner to rectify the issue).

Note: Category 1 fire safety measures mean the following:

+ Fire Hydrants	+ Fire Detection and Alarm System	+ Safe Evacuation Routes
+ Sprinkler System	+ Fire Control Centre	+ Emergency Lifts

In relation to the above two statutory upgrade triggers, the following upgrade works are required to existing elements of the building where proposed to be retained either in full or in part:

Flametree Residential Care Facility

Fire Compartmentation and Separation:

- + Any new/altered structural works must be certified as being compliant with BCA Part B1 for both Flametree Building. This includes the following which relates to the proposed new/altered works:
 - Part B1 Generally including Importance Levels identified under Table B1D3 for the proposed use for the building; we understand the NER Structural Engineer will be allowing for Importance Level 3 will apply to the RCF;

- Structural certification is to confirm that the existing building is structurally capable of withstanding the newly proposed loads to be imposed as a result of the new building work or that the new works are completely independent from the existing structure;
- Structural certification is to confirm that the whole of the existing structure is appropriate for any continued use as a RCF (Class 9c) use; and
- The Class 9c RCF is to satisfy the construction of building is flood hazard areas provisions to satisfy BCA Cl. B1D6 and ABCB Standard for Construction of Buildings in Flood Hazard Areas (where applicable).
- + Any smoke-proof walls (including within concealed areas/voids etc) are to be validated by a passive fire safety specialist as achieving compliance with BCA C3D6 & Spec. 11 noting:
 - Various services penetrations have occurred, and not been treated, or penetrations have deteriorated over time need to be re-treated with appropriate smoke stopping products.
 - Any incomplete smoke-proof barriers are to be upgraded to ensure they are continuous.
 - All smoke seals (including drop seals) are to be reviewed by a specialist fire service contractor and replaced where these have deteriorated over time or affect the operational capabilities of the doorset to act as a passive smoke-proof element.
- + Existing wall wetting drenchers are not compatible with the existing openings they protect (including mullions) to satisfy BCA C4D3. In response to the compliance matters observed regarding internal fire walls/horizontal exits and associated drenchers to external openings the following comments are provided:
 - Regarding the drenchers along the L2 western elevation nearest to the previous linkway area and internal fire wall; A Performance-based solution can be explored with the proposed alterations and additions scope and extended travel distances can readily be addressed. On this basis there is opportunity to delete the current internal fire wall and the drenchers can be removed. Also, the fire door can be converted to a standard doorset with fire tags and self-closer removed.
 - Regarding the drenchers along the L1 northern and eastern elevations and internal fire wall; A Performance-based solution can be explored with the proposed alterations and additions scope and extended travel distances can readily be addressed. On this basis there is opportunity to convert the current internal fire wall into a smoke-proof wall only and the drenchers (e.g. associated with bedroom S1.13, S1.17 and House A common area) can be removed.

Occupant Egress / Barriers:

- + Various self-closing fire doorsets did not return to the closed position; passive fire safety specialist / door contractor to review self-closing fire doorsets to ensure they return to the closed position.
- + Passive fire safety specialist to review fire-isolated exit stairway entry doorsets and validate compliance with AS1905.1 and AS1530.4 i.e. retrofitting seals to fire doors to achieve the gap clearance requirements noting various doorsets are currently provided with a gap of circa 25-30mm under the door.
- + Two fire-isolated stairways (stair 1 & 3) appear to contain electrical wiring/services contrary to BCA D3D8 passing into the exit. To avoid relocating the services out of the stairway the services which depart from D3D8 can be segregated (or boxed out) of the fire-isolated stairway.
- + All existing stairway systems are provided with risers without nosing's. All stairway risers are to be provided with colour contrasting slip-resistant nosing's in accordance with BCA D3D14.
- + Where rationalisation or omission of handrails within resident area public corridors is required as a departure to BCA D3D22 we can explore this under a Performance Solution. This Performance-based Solution is predicated on specific rest stops along resident corridors (generally around 10-12m) and also staff management policies such as advocating walking frames and relying on 24hr up-right-staff and/or CCTV to monitor resident corridors.

- + The Level 2 BOH fire-separated central circulation stairway landing requires a balustrade with a height of 1,000mm (currently circa 997mm); the required balustrade is to be upgraded accordingly.
- + All statutory signage or illegible offenses signage which departs from BCA D3D28 and EPA Reg.'s are to be replaced with compliant signage.
- + Openable windows on the upper floors present a direct risk for resident fall and should be addressed e.g. being fixed or at least restricted so that they do not open more than 100mm.

Fire Services:

- + A new fire hydrant system complying fully with BCA E1D2 and AS 2419.1 – 2021 is to be provided to serve the entire building.
- + The existing sprinkler system to be verified as being certifiable to the standards nominated under the current AFSS; where compliance is not achieved then upgrades are required. Should any component of the sprinkler system be altered/new then it must comply with BCA E1D4 and Specification 18.

FPAS wet fire to undertake a due diligence review of hydrant and sprinkler wet fire systems and specify any residual upgrade requirements to meet current FRNSW requirements noting:

- Sprinkler coverage is not apparent to ground floor external walkway structure or to the underside of the level 1 Linkway structure or to the balcony roof/overhang areas; any existing areas which are being retained as part of the site redevelopment without sprinklers are to be upgraded accordingly (in the absence of a DtS or Fire Engineered concession to omit them).
- Ensure all sprinkler heads are appropriate located to ensure coverage as per AS2118.1 including escutcheon plates located perpendicular to the ceiling and bulbs which may not be warranted due to paint on them.
- Detector locations in relation to supply air mechanical ventilation grills; the base building standard would have likely adopted 450mm setbacks between detectors and supply air grills and this has likely not been achieved:
- Note: AS1670.1-2018 (latest standard) requires 900mm minimum setbacks.

- + The existing smoke detection and alarm system to be verified as being certifiable to the standards nominated under the current AFSS; where compliance is not achieved then upgrades are required. Should any component of the smoke detection and alarm system be altered/new then it must comply with BCA E2D3/E2D11 and Specification 20.

FPAS wet fire to undertake a due diligence review of hydrant and sprinkler wet fire systems and specify any residual upgrade requirements to meet current FRNSW requirements noting:

- Dry fire FPAS/CFSP to verify areas within the building which are designated spurious alarm environments; where the area is not a spurious alarm environment in specific areas then smoke detector may be more appropriate. Areas in question are common areas, offices, bathrooms without showers, kitchen areas where there are no sterilising equipment or commercial kitchen fixtures/fittings etc.
- Dry fire FPAS/CFSP to verify whether smoke detector to be dropped down and fixed to the underside of the ceiling linings within the entry reception area.
- Various detector locations appear to be <500mm to obstructions below; this includes within the L1 kitchen areas and gym/physio space.
- + H2O Portable Fire Extinguisher coverage to be assessed for each smoke compartment in accordance with BCA E1D14 and AS 2444 – 2001.
- + FPAS/CFSP to ensure that all exit signage is illuminated and exit signage (required to be directional) is provided within the common areas identified within this audit report.

Woonona Church Restaurant (Heritage Building)

Fire Compartmentation and Separation:

- + Any new/altered structural works must be certified as being compliant with BCA Part B1 for Woonona Church Restaurant Building. This includes the following which relates to the proposed new/altered works:
 - Part B1 Generally including Importance Levels identified under Table B1D3 for the proposed use for the building; we understand the NER Structural Engineer will be allowing for Importance Level 2 will apply to Woonona Church Restaurant Building;
 - Structural certification is to confirm that the existing building is structurally capable of withstanding the newly proposed loads to be imposed as a result of the new building work or that the new works are completely independent from the existing structure;
 - Structural certification is to confirm that the whole of the existing structure is appropriate for any continued use as a Woonona Church Restaurant Building (Class 6) use; and
- + Any existing glass in association with walls/doors, which are acting as the barrier, are to satisfy AS1288-2021 Part 5.6 i.e. the glazing is to be certifiable as Grade A safety glass.
Alternatively, AS1288-2021 Part 4.5 does allow for safety films and other organic coatings to glazing of heritage significance where it is to be impact resistant.
This requirement applies to glazing below 2m from FFL; specifically any glazing within Woonona Church Restaurant should be a key focus with the site redevelopment.

Occupant Egress / Barriers:

- + Fire Engineered Performance Solution will be required to permit egress widths less than 1,000mm within Woonona Church restaurant contrary to BCA D2D8.
- + All altered Comm.'s and EDB enclosures are to be provided with non-combustible construction and smoke seals to doorsets or a non-combustible backing to the doorsets to ensure compliance with BCA D3D8.
- + Within Woonona Church Restaurant ensure to replace all lockable door hardware (including dead bolts, locks, latches and snib locks) with compatible lever type hardware which does not obstruct occupant egress to the doorsets to ensure compliance with BCA D3D24 and D3D26.
- + Storage was observed in egress pathways/exit discharges within Blue Gum Sanctuary (which will be known as Woonona Church Restaurant when the project is complete) which will need to be consolidated and stored elsewhere within the site in agreed locations. Management of storage will be an ongoing matter now and as part of any future use or site redevelopment.

Fire Services:

- + A new fire hydrant system complying fully with BCA E1D2 and AS 2419.1 – 2021 is to be provided to serve the entire site.
- + This assessment assumes that the Woonona Church building does not contain any Class 9c use therefore sprinklers will need to be extended throughout this building.

Note: All new works must comply with the BCA. The above list is to be read in addition to Section 2.0 which relates to all new works proposed.

4.0 Preliminary Summary of Fire Engineered Solutions

The following summary contains a list of preliminary Fire Engineered Solutions proposed based on our understanding of the DA stage design. This list may be subject to further change pending the outcomes of the final Fire Safety Engineering Review and further design development:

- + We understand a Fire Engineered Performance Solution will be proposed to justify a departure to BCA C2D2:
 - The Woonona Church restaurant is to be designated as Type C Construction whilst there is a portion of the new extension which sits directly on the podium / carpark which is otherwise designated Type A Construction.
- + A Fire Engineered Performance Solution is to be prepared to justify departures to BCA Clause C2D2 and Spec. 5 Clause S5C11:
 - Rationalise fire ratings from 240/240/240 FRL to 120/120/120 FRL within areas designated Class 7b/8.
 - Rationalise cavity barriers and gaps between slab and internal face of external walls where they are not in accordance with a tested system to achieve the required fire-resistance level in accordance with BCA Spec. 5 i.e. Fire Engineered Report to permit:
 - To provide smoke-proof cavity barrier / separation at the perimeter slab edge between storeys.

It is proposed to allow the lightweight fire-resisting bounding construction walls between the SOU's/apartments to be extended to smoke-proof cavity barrier / separation rather than through to the external wall or inside of the outer face of the external wall.

- + Incomplete bounding construction OR roof elements (other than battens or exceeding 75mm x 50mm) will need to be rationalised/assessed under the Fire Engineered Report as a departure to BCA Spec. 5 Clause S5C11.

Steel roof penetrations through a lightweight internal fire-resisting wall will generally need to be assessed under a Fire Engineered Performance Solution as these types of penetrations are not strictly in line with the test literature for the lightweight wall system and depart with AS1530.4-2014.

- + Loadbearing columns which are not treated with a tested system for a column however are contained within a lightweight construction wall will need to be addressed as a Fire Engineered Solution as a departure to BCA Spec. 5 Clause S5C11.
- + Non-continuity of fire-resistant vertical shafts not strictly satisfy BCA Spec. 5 Clause S5C8 and Clause C4D14 as the base to the shaft will not be fire rated, instead it will interface with a fire rated enclosure or separate fire compartment:
 - Garbage/laundry chutes, mechanical and hydraulic services risers/shafts etc.
- + To permit timber/plastic packers, timber noggings/blocking/supports within internal non-loadbearing fire-rated walls and external walls which exceed the non-combustibility requirements under BCA Clause C2D10(6). The installation of timber noggings/blocking/supports varies from the tested wall system in accordance with AS 1530.4-2014.
- + We understand a Fire Engineered Performance Solution will be proposed to justify departures to BCA Clause C4D3 and C4D5. The following buildings are within a 6m setback of one another and need to be protected or addressed under a Fire Engineered Performance Solution:
 - Existing Woonona Church Restaurant Cafe and existing Flame Tree RCF from stand-alone kiosk building.

- Building E and Existing Flame Tree RCF from stand-alone kiosk building.
- Building E from Existing Flame Tree RCF.
- + Podium slab is deemed roof-as-open-space; ensure any roof lights or other openings are setback 3m from the path of travel of persons using the exit in the absence of a Fire Engineered Performance Solution. This occurs in a number of instances.
- + Technical departure to BCA Clause C3D15 with longer corridors (>40m) with portions that are substantially enclosed within Building C in the absence of smoke-proof construction satisfying BCA S11C2.
- + We understand a Fire Engineered Performance Solution is to be prepared to justify departures to BCA Clause C4D6 & C4D8:
 - Rationalisation of fire resisting elements within a fire wall requiring a 120/120/120 FRL i.e. doorset openings protected by glazing in lieu of -/120/30 FRL fire resistant construction.
- + Fire Engineered Performance Solution will be required to permit egress widths less than 1,000mm within Woonona Church restaurant contrary to BCA D2D8.
- + Each building is provided with exits in the form of fire-isolated exits; discharge of required fire-isolated exits require occupants to pass within 6m of exposed openings associated with each building contrary to BCA Clause D2D12(3). This includes the existing Flame Tree RCF fire-isolated exit stairways.
- + A non-required stairway is provided that connects three resident care storeys contrary to BCA Clause D2D17; this stairway is utilised for occupant egress from the roof-top plant level and is fire-isolated however discharges within the building and the discharge doorset swings inward contrary to BCA Clause D2D12(2) and D2D25(b).

This stairway connects multiple storeys within a four storey Class 9c Residential Care Facility however only serves the roof-top level for occupant egress therefore is not intended to be provided with automatic stairway pressurisation which is a technical departure to BCA Clause E2D4.

- + A Fire Engineered Performance Solution is to be prepared to justify fire stopping to internal fire resisting elements contrary to BCA Clause C4D15:
 - To permit water filled metal pipes (i.e. sprinkler and hydrant pipe penetrations) to be fire stopped in accordance with BCA Clause C4D15(1), with the exception of the insulation criteria of the required FRL where there is likely to be combustible materials (i.e. PVC pipes, PEX pipes, cables etc) located within 100 mm radius for a distance of 2 m of the fire rated penetration.
 - The wet area/bathroom tap fittings/hydraulic services that will penetrate through one side of the fire rated linings to the fire rated bounding walls to approximately opposite sides of the bounding wall separating SOU's, these tap fittings/hydraulic services will not be protected in accordance with a tested system.
 - To permit services (such as NBN cables) to located within conduits to not be fire stopped in accordance with a tested system, noting that they run horizontally through the slab and AS 1530.4-2014 does not include specific requirements for the testing of services are embedded and travel horizontally through a concrete floor. As a result, there is no compliant testing methodology for fire tests for cast-in conduits and hence no compliant tested systems for this application.
- + A Fire Engineered Performance Solution will be proposed to justify departures to BCA Clause D2D5 regarding exit travel distances. Including the following travel distances are to be addressed through a Performance Solution within Flametree L1 and L2 central external balcony area:
 - 59m (>40m) distance to an exit when two are available;
 - 79m (>60m) distance between alternative exits when measured via the point of choice

- + A Fire Engineered Performance Solution will be proposed to justify departures to BCA Clause D2D6 regarding distance between alternative exits and convergence of exits/egress pathways.
- + Any departures within BCA Clause D3D25 regarding door swings against occupant egress (e.g. lobby entry doorsets of ILU buildings and Woonona Church restaurant) are to be addressed with the relevant Construction Certificate application.
- + A Fire Engineered Performance Solution will be proposed to justify departures to hydrant design requirements under BCA Clause E1D2 and AS2419.1-2021:
 - Booster not located at vehicular entry or visible from each building on the site contrary to AS2419.1-2021 Cl. 7.3.1.
- + We understand a Fire Engineered Performance Solution will be proposed to justify departures to sprinkler design requirements under BCA Clause E1D4 and AS2118.4-2012 (ILU apartment buildings) and AS2118.1-2017 (Residential Care Facility):
 - Booster not located at vehicular entry or visible from each building on the site contrary to AS2419.1-2021 Cl. 7.3.1.
 - ILU Apartment buildings will be provided with an AS2118.4-2012 residential sprinkler system throughout. Implementation of a residential sprinkler system throughout areas which are not Class 2 e.g. Class 5 and 9b areas.
 - Omission of sprinklers from smaller laundry areas under Fire Engineered Performance Solution noting that stacking of dryers/washers will affect sprinkler head locations.
 - Omission of sprinklers from all low voltage electrical cupboards (e.g. communications cupboards) and MSB enclosures.
 - The sprinkler protected Residential Care Facility and nearest ILU apartment building are to be located within 6m (circa 3.3m-4.2m) of the non-sprinkler protected kiosk. A Performance Solution is to permit physical separation/setback between the sprinkler protected buildings and non-sprinkler protected kiosk in lieu of providing fire-resisting construction of 30mins contrary to Spec. 17 and AS2118.1-2017 Clause 3.2.1.
 - There is a portion of the new the Woonona Church restaurant extension which sits directly on the podium / carpark and there for these buildings are united. It is proposed to omit sprinklers from Woonona Church restaurant extension because the buildings are separated by a podium slab.
- + A Fire Engineered Solution will be required for the proposed Electric Vehicle (EV) stations with Lithium-Ion battery chargers noting:
 - BCA Clause E1D17 requires that additional provision must be made if special fire hazards or where difficulties in fighting fire could arise because of the nature or quantity of materials stored, displayed or used in a building.
 - BCA Clause E2D21 notes that additional smoke hazard management measures may be necessary due to the special characteristics, function or materials stored within a building or fire compartment.

5.0 Preliminary Fire Safety Schedule

The following table is a list of the required fire safety measures within the building. These measures may be subject to further change pending the outcomes of the final Fire Safety Engineering Review and further design development.

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Residential Care Facility (Class 9c)			
Access Panels, Doors & Hoppers	BCA 2022 Clause C4D14 & AS 1530.4 – 2014 and Manufacturer's Specifications		✓
Alarm Signalling Equipment (<i>Site Wide ASE</i>)	Existing: BCA 2005 Clause E2.2, Spec. E2.2a Clause 7 & AS1670.3 – 2004 Proposed: NSW BCA 2022 Spec. 20 Clause S20C8 & AS 1670.3 – 2018	✓	✓
Automatic Fail-Safe Devices (<i>Automated Doors & Gates</i>)	Existing: BCA 2005 Spec C3.4 & Clause D2.21 Proposed: BCA 2022 Clause D3D26	✓	✓
Automatic Fire Detection & Alarm System (<i>throughout</i>) (<i>Interfaced with other buildings onsite</i>)	Existing: BCA 2005 Clause E2.2, Spec. E2.2a & AS 1670.1 – 2004 & AS 1670.1 – 2015 Proposed: BCA 2022 Clause E2D3, Spec. 20 & BCA Spec. 23 & AS 1670.1 – 2018	✓	✓
Automatic Fire Suppression Systems (<i>throughout</i>)	Existing: BCA 2005 Clause E1.5, Spec. E1.5 & AS 2118.1 – 1999 Proposed: BCA 2022 Clause E1D4, Spec. 17 & BCA Spec. 18, AS 2118.1 – 2017	✓	✓
Building Occupant Warning System activated by the Sprinkler System and Smoke Detection	Existing: BCA 2005 Clause E1.5, Spec E1.5 Clause 8 and/or Clause 3.22 of AS 1670.1 – 2004 Proposed: BCA 2022 Clause E2D3 and BCA Spec. 17, Spec. 20 & Clause 8 and / or Clause 3.22 of AS 1670.1 – 2018	✓	✓
Emergency Lighting	Existing: BCA 2005 Clause E4.2, E4.4, AS/NZS 2293.1 – 1998 & AS/NZS 2293.1 – 2005 Proposed: BCA 2022 Clause E4D2 & E4D4 AS 2293.1 – 2018	✓	✓
Emergency Evacuation Plan	Existing: AS 3745 – 2002 Proposed: AS 3745 – 2010	✓	✓
Emergency Warning & Intercommunications System	BCA 2005 Clause E4.9 & AS 1670.4 – 2004 & AS 4428.4 - 2004	✓	

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Residential Care Facility (Class 9c)			
Exit Signs	Existing: BCA 2005 Clauses E4.5, E4.6 & E4.8 AS/NZS 2293.1 – 1998 & AS/NZS 2293.1 – 2005 Proposed: BCA 2022 Clauses E4D5, NSW E4D6 & E4D8 & AS 2293.1 – 2018	✓	✓
Fire Blankets	Existing: BCA 2005 Clause E1.6, AS 2444 – 2001 & AS 3504 – 1995 Proposed: BCA 2022 Clause E1D14 AS 3504 – 2006 & AS2444 – 2001	✓	✓
Fire Dampers	Existing: BCA 2005 Clause C3.15, AS 1668.1 – 1998, AS 1682.1 & 2 - 1990 & manufacturer's specification Proposed: BCA 2022 Clause C4D15 & Spec. 11, AS 1668.1 – 2015 & AS 1682.1 & 2 – 2015 and Manufacturer's Specification	✓	✓
Fire Doors (Self-closing) (Including Lift Landing Doorsets)	Existing: BCA 2005 Clause C3.2, C3.4, Spec. C3.4, C3.5, C3.8, AS 1905.1 – 1997 & manufacturer's specification Proposed: BCA 2022 Clause C3D13, C3D14, C4D3, C4D5, C4D6, C4D7, C4D8, C4D9, AS 1905.1 – 2015 and Manufacturer's Specification	✓	✓
Fire Hose Reels (Class 7a, 7b, 8 areas only)	Existing: BCA 2005 Clause E1.4 & AS 2441 – 1988 Proposed: BCA 2022 Clause E1D3 AS 2441 – 2005	✓	✓
Fire Hydrant Systems (Site Wide Hydrants)	Existing: BCA 2005 Clause E1.3 & AS2419.1 – 2005 Proposed: BCA 2022 Clause E1D2 AS 2419.1 – 2021	✓	✓
Fire Seals	Existing: BCA 2005 Clause C3.15, Spec. C3.15, AS 1530.4 - 1997 & manufacturer's specification Proposed: BCA 2022 Clause C4D15, AS 1530.4 – 2014 & AS 4072.1 – 2005 and Manufacturer's Specification	✓	✓
Fire-resisting Building Elements (Walls, Floors & Shafts)	BCA 2022 Section C & Spec. 5 Cl. S5C11		✓
Lightweight Construction	Existing: BCA 2005 Clause C1.8, Spec. C1.8, AS 1530.3 – 1999, AS 1530.4 – 1997, manufacturer's specification & Fire Engineering Alternative solution report no. SY070263 – R1.3 prepared by Defire (NSW) Pty Ltd Dated 11 June 2008 Proposed: BCA 2022 Clause C2D9, AS 1530.4 – 2014 and Manufacturer's Specification	✓	✓
Loadbearing Internal Walls (Concrete or Masonry)	BCA 2022 Section C & Spec. 5 Cl. S5C11(1)		✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Residential Care Facility (Class 9c)			
Manual Call Points (BGA's)	BCA 2022 Section E & Spec. 20 Cl. S20C4(3)		✓
Mechanical Air Handling Systems (Automatic Shutdown Class 9c areas)	Existing: BCA 2005 Clause E2.2, AS/NZS 1668.1 - 1998 & AS 1668.2 - 1991 Proposed: BCA 2022 Part E2 Clause E2D11, AS/NZS 1668.1 - 2015 & AS 1668.2 - 2012	✓	✓
Mimic and/or Annunciator Panels	Existing: BCA 2005 Clause E2.2, Spec. E2.2a Clause 4 Proposed: BCA 2022 Section E & Spec. 20 Cl. S20C4(4)	✓	✓
Paths of Travel	EP&A (DC&FS) Reg. 2021 Clause 109	✓	✓
Portable Fire Extinguishers	Existing: BCA 2005 Clause E1.6 & AS 2444 - 2001 Proposed: BCA 2022 Clause E1D14 AS 2444 - 2001	✓	✓
Required Exit Doors (Power Operated)	Existing: BCA 2005 Clause D2.19(b) Proposed: BCA 2022 Clause D3D24(2)	✓	✓
Self-Closing Fire Hoppers	BCA 2022 Clause C4D14 AS 1530.4 - 2014		✓
Smoke Hazard Management Systems: + Class 9c Auto Stair Pressurisation	Existing: BCA 2005 Clause E2.2, Spec. E2.2a & AS/NZS 1668.1 - 1998	✓	
Smoke Hazard Management Systems: + Class 7a Carpark exhaust/extraction system	BCA 2022 Part E2, Spec. 20 Clause S20C6, Spec. 21, AS/NZS 1668.1 - 2015		✓
Smoke Dampers	Existing: BCA 2005 Spec. C2.5, AS/NZS 1668.1 - 1998 & manufacturer's specification Proposed: BCA 2022 Spec. 11, AS/NZS 1668.1 - 2015 & AS 1682.1 & 2 - 2015 and Manufacturer's Specification	✓	✓
Smoke Doors & Smoke-proof Walls	Existing: BCA 2005 Clause C2.5 & Spec. C2.5, C3.4, Spec. C3.4 & manufacturer's specification Proposed: BCA 2022 Clause C3D6, Spec. 11 & 12	✓	✓
Smoke Seals	BCA 2022 Clause C3D6, Spec. 11		✓
Wall-Wetting Sprinklers	Existing: BCA 2005 Clause C3.4 & AS 2118.2 - 1995 Proposed: BCA 2022 Clause C4D5 AS 2118.2 - 2010	✓	✓
Warning & Operational Signs	Existing: EP&A (DC&FS) Regulation 2021 Clause 108, AS 1905.1 - 1997, BCA 2005 Clause D2.23, & E3.3	✓	✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Residential Care Facility (Class 9c)			
	Proposed: EP&A (DC&FS) Reg. 2021 Clause 108 BCA 2022 Clause D3D28, D4D7, E3D4 AS 1905.1 – 2015		
Fire Engineered Alternative Solution Report permitting: 1. The fire wall separating the existing aged care building from the new link is not proposed to be carried to the underside of the existing roof; and 2. The fire isolated stair shaft walls to Stairs 1, 2, 3 & 4 extend to the underside of the roof covering however the stair shaft is not enclosed at the top with fire resisting construction.	BCA 2005 Performance Requirements CP2 & Fire Engineering Alternative solution report no. SY070263 – R1.3 prepared by Defire (NSW) Pty Ltd Dated 11 June 2008	✓	
Fire Engineered Performance Solutions relating to: TBC with CC Application	TBC with CC Application - BCA 2022 Performance Requirements ... Fire Safety Engineering Report prepared by Report No. Revision dated		✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Existing Blue Gum Sanctuary / Woonona Church Restaurant/Café (Class 6)			
Alarm Signalling Equipment (<i>Site Wide ASE</i>)	NSW BCA 2022 Spec. 20 Clause S20C8 & AS 1670.3 – 2018		✓
Automatic Fail-Safe Devices (<i>Automated Doors & Gates</i>)	Existing: BCA 2008 Clause D2.21 Proposed: BCA 2022 Clause D3D26	✓	✓
Automatic Fire Detection & Alarm System (<i>Throughout</i>) (<i>Interfaced with other buildings onsite</i>)	Existing: BCA 2008 Clause E2.2, Spec. E2.2a & AS 1670.1 – 2004 & AS 1670.1 – 2015 Proposed: BCA 2022 Clause E2D3, Spec. 20 & BCA Spec. 23 & AS 1670.1 – 2018	✓	✓
Building Occupant Warning System activated by the Sprinkler System and Smoke Detection	Existing: BCA 2008 Clause 3.22 of AS 1670.1 – 2004 Proposed: BCA 2022 Clause E2D3 and BCA Spec. 17, Spec. 20 & Clause 8 and / or Clause 3.22 of AS 1670.1 – 2018	✓	✓
Emergency Lighting	Existing: BCA 2008 Clause E4.2, E4.4 and AS/NZS 2293.1 – 2005 Proposed: BCA 2022 Clause E4D2 & E4D4 AS 2293.1 – 2018	✓	✓
Emergency Evacuation Plan	AS 3745 – 2010	✓	✓
Exit Signs	Existing: BCA 2008 Clauses E4.5, E4.6 & E4.8 & AS/NZS 2293.1 – 2005	✓	✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Existing Blue Gum Sanctuary / Woonona Church Restaurant/Café (Class 6)			
	Proposed: BCA 2022 Clauses E4D5, NSW E4D6 & E4D8 & AS 2293.1 – 2018		
Fire Blankets	BCA 2022 Clause E1D14, AS 3504 – 2006 & AS2444 – 2001		✓
Fire Hose Reels (Class 6, 9b areas only)	Existing: BCA 2008 Clause E1.4 & AS 2441 - 2005 Proposed: BCA 2022 Clause E1D3 & AS 2441 – 2005	✓	✓
Fire Hydrant Systems (Site Wide Hydrants)	Existing: BCA 2008 Clause E1.3 & AS 2419.1 – 2005 Proposed: BCA 2022 Clause E1D2 & AS 2419.1 – 2021	✓	✓
Mechanical Air Handling Systems (Automatic Shutdown)	Existing: BCA 2008 Clause E2.2, AS/NZS 1668.1 - 1998 & AS 1668.2 – 1991 Proposed: BCA 2022 Part E2, AS/NZS 1668.1 – 2015 & AS 1668.2 – 2012	✓	✓
Paths of Travel	EP&A (DC&FS) Reg. 2021 Clause 109		✓
Portable Fire Extinguishers	Existing: BCA 2008 Clause E1.6 & AS 2444 – 2001 Proposed: BCA 2022 Clause E1D14 & AS 2444 – 2001	✓	✓
Required Exit Doors (Power Operated)	BCA 2022 Clause D3D24(2)		✓
Warning & Operational Signs	EP&A (DC&FS) Reg. 2021 Clause 108 BCA 2022 Clause D3D28, D4D7, E3D4 AS 1905.1 – 2015		✓
Fire Engineered Performance Solutions relating to: TBC with CC Application	TBC with CC Application - BCA 2022 Performance Requirements ... Fire Safety Engineering Report prepared by Report No. Revision dated		✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
ILU Apartments (Class 2 & 7a)			
Access Panels, Doors & Hoppers	BCA Clause C4D14 & AS 1530.4 – 2014 and Manufacturer's Specifications		✓
Alarm Signalling Equipment (<i>Site Wide ASE</i>)	NSW BCA 2022 Spec. 20 Clause S20C8 & AS 1670.3 – 2018		✓
Automatic Fail-Safe Devices (<i>Automated Doors & Gates</i>)	BCA 2022 Clause D3D26		✓
Automatic Fire Detection & Alarm System (<i>common areas and areas not within an Class 2 ILU</i>)	BCA 2022 Clause E2D3, Spec. 20 & BCA Spec. 23 AS 1670.1 – 2018		✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
ILU Apartments (Class 2 & 7a)			
<i>apartments/SOU's) (Interfaced with other buildings onsite)</i>			
Automatic Fire Suppression Systems (throughout basement)	BCA 2022 Clause E1D4, Spec. 17 & BCA Spec. 18, AS 2118.1 – 2017		✓
Automatic Fire Suppression Systems (Residential)	BCA 2022 Clause E1D4, BCA Spec. 18, AS 2118.4 – 2012		✓
Building Occupant Warning System activated by the Sprinkler System and Smoke Detection	BCA 2022 Clause E2D3 and BCA Spec. 17, Spec. 20 & Clause 8 and / or Clause 3.22 of AS 1670.1 – 2018		✓
Emergency Lighting	BCA 2022 Clause E4D2 & E4D4 AS 2293.1 – 2018		✓
Emergency Evacuation Plan	AS 3745 – 2010		✓
Exit Signs	BCA 2022 Clauses E4D5, NSW E4D6 & E4D8 AS 2293.1 – 2018		✓
Fire Blankets	BCA 2022 Clause E1D14 AS 3504 – 2006 & AS2444 – 2001		✓
Fire Dampers	BCA 2022 Clause C4D15 & Spec. 11 AS 1668.1 – 2015 & AS 1682.1 & 2 – 2015 and Manufacturer's Specification		✓
Fire Doors (Self-closing) (Including Lift Landing Doorsets)	BCA 2022 Clause C3D13, C3D14, C4D3, C4D5, C4D6, C4D7, C4D8, C4D9 & C4D12 AS 1905.1 – 2015 and Manufacturer's Specification		✓
Fire Hose Reels (Class 7a, 7b, 8 areas only)	BCA 2022 Clause E1D3 AS 2441 – 2005		✓
Fire Hydrant Systems (Site Wide Hydrants)	BCA 2022 Clause E1D2 AS 2419.1 – 2021		✓
Fire Seals	BCA 2022 Clause C4D15, AS 1530.4 – 2014 & AS 4072.1 – 2005 and Manufacturer's Specification		✓
Fire-resisting Building Elements (Walls, Floors & Shafts)	BCA 2022 Section C & Spec. 5 Cl. S5C11		✓
Lightweight Construction	BCA 2022 Clause C2D9 AS 1530.4 – 2014 and Manufacturer's Specification		✓
Loadbearing Internal Walls (Concrete or Masonry)	BCA 2022 Section C & Spec. 5 Cl. S5C11(1)		✓
Mechanical Air Handling Systems + (Automatic Shutdown)	BCA 2022 Part E2 AS/NZS 1668.1 – 2015 & AS 1668.2 – 2012		✓
Paths of Travel	EP&A (DC&FS) Reg. 2021 Clause 109		✓
Portable Fire Extinguishers	BCA 2022 Clause E1D14 AS 2444 – 2001		✓
Required Exit Doors	BCA 2022 Clause D3D24(2)		✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
ILU Apartments (Class 2 & 7a)			
(Power Operated)			
Fire Engineered Performance Solutions relating to: TBC with CC Application	TBC with CC Application - BCA 2022 Performance Requirements ... Fire Safety Engineering Report prepared by Report No. Revision dated		✓

NOTE:

- + *The existing Flame Tree RCF and Woonona Church Restaurant (formerly Blue Gum Sanctuary) Fire Safety Schedules are under review and the above preliminary schedules will be informed by our review which will be circulated for stakeholder comment under a separate report.*
- + *The measures included and the standards of performances nominated above may vary as a result of any proposed Fire Engineered Performance Solutions and formal adoption of BCA 2025. By virtue of the fact BCA 2025 is in public comment draft the above schedule is based on the latest adopted BCA (BCA 2022 Amdt .2)*
- + *The above list is a schedule of fire safety measures required under Section E of the NCC/BCA only and does not take into consideration any other measures that may be required in the building as a result of other requirements of the NCC/BCA or other statutory standards.*

6.0 Conclusion

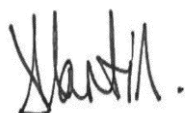
This report contains an assessment of the referenced architectural documentation for the proposed Seniors Living development located at 4-6 Popes Rd, Woonona NSW 2517, against the Deemed-to-Satisfy provisions and Performance Requirements of the National Construction Code Series (Volume 1) Building Code of Australia 2022 (Amdt. 2) and the Disability (Access to Premises – Buildings) Standards 2010.

Arising from our review and comments above, it is considered that the proposed development can readily achieve compliance with the relevant provisions of the BCA subject to the above measures being appropriately addressed by the project design team. Compliance with the BCA is to be demonstrated by a combination of DtS solutions and/or Performance Solutions prepared by appropriately qualified Registered/Accredited Consultants.

It is our experience that such compliance matters raised are not uncommon for a development of this nature and that they can be readily addressed with the Construction Certificate application. We are of the opinion that any amendments thereafter required to the design documentation in order to comply with the BCA can be addressed in the preparation of the detailed documentation with Construction Certificate application without giving rise to significant changes to the proposal as submitted for DA.

Should you require further assistance or clarification please do not hesitate to contact the undersigned on 02 9211 7777.

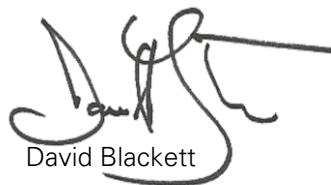
Prepared by:



David Martin
Senior Building Surveyor

BM + G Pty Ltd

Reviewed by:



David Blackett
Director

BM + G Pty Ltd



Appendices

+ Appendix 1 – Fire Resisting Construction Requirements

Table 1: Fire-Resisting Construction – Type C Construction (Woonona Church Building)

+ Building Element	+ Class of Building - FRL: (in minutes) Structural adequacy/integrity/insulation			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL – (Including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is:				
For loadbearing parts:				
Less than 1.5m	90/90/90	90/90/90	90/90/90	90/90/90
1.5 to less than 3m	-/-/-	60/60/60	60/60/60	60/60/60
3m or more	-/-/-	-/-/-	-/-/-	-/-/-
EXTERNAL COLUMN - Not incorporated in an external wall				
Less than 1.5m	90/-/-	90/-/-	90/-/-	90/-/-
1.5 to less than 3m	-/-/-	60/-/-	60/-/-	60/-/-
3m or more	-/-/-	-/-/-	-/-/-	-/-/-
COMMON WALLS and FIRE WALLS	90/90/90	90/90/90	90/90/90	90/90/90
INTERNAL WALLS				
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
ROOFS	-/-/-	-/-/-	-/-/-	-/-/-

Notes:

1. New external walls that are located 3m or more from an allotment boundary/fire source feature require no FRLs.
2. Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must typically achieve the same FRL. Where that part is also required to be non-combustible, the supporting part must also be non-combustible.
3. An external wall required to have an FRL is only required from the outside.
4. Any lightweight construction in a fire wall or an internal wall required to have an FRL is to comply with Specification 6.
5. The method of attaching or installing a finish, lining, ancillary element, or service installation to a building must not reduce the fire-resistance of that element to below that required.
6. No structural elements are permitted to pass through fire-rated walls.

Table 2: Fire-Resisting Construction – Type A Construction (Flametree RAC Facility & Building A-E)

TYPE A CONSTRUCTION: FRL OF BUILDING ELEMENTS				
+ Building Element	+ Class of Building - FRL: (in minutes) Structural adequacy/integrity/insulation			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL – (Including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is:				
For loadbearing parts:				
Less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3m	90/60/60	120/90/90	180/180/120	240/240/180
3m or more	90/60/30	120/60/30	180/120/90	240/180/90
For non-loadbearing parts:				
less than 1.5m	–/90/90	–/120/120	–/180/180	–/240/240
1.5 to less than 3m	–/60/60	–/90/90	–/180/120	–/240/180
3m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN - Not incorporated in an external wall				
For loadbearing columns	90/–/–	120/–/–	180/–/–	240/–/–
For non-loadbearing columns	–/–/–	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS				
Fire-resisting lift and stair shafts				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120s
Non-loadbearing	–/90/90	–/120/120	–/120/120	–/120/120
Bounding public corridors, public lobbies and the like:				
Loadbearing	90/90/90	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/60/60	–/–/–	–/–/–	–/–/–
Between or bounding sole-occupancy units:				
Loadbearing	90/90/90	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/60/60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and the like shafts not used for the discharge of hot products of combustion:				
Loadbearing	90/90/90	120/90/90	180/120/120	240/120/120
Non-loadbearing	–/90/90	–/90/90	–/120/120	–/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES, AND:				
COLUMNS	90/–/–	120/–/–	180/–/–	240/–/–
FLOORS	90/90/90	120/120/120	180/180/180	240/240/240
ROOFS	90/60/30	120/60/30	180/60/30	240/90/60

Notes:

1. Any lightweight construction in a fire wall or an internal wall required to have an FRL is to comply with Specification 11.
2. Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must typically achieve the same FRL. Where that part is also required to be non-combustible, the supporting part must also be non-combustible.
3. A loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be constructed from; concrete or masonry.
4. The method of attaching or installing a finish, lining, ancillary element, or service installation to a building must not reduce the fire-resistance of that element to below that required.
5. Fire rated shafts are required to be enclosed at the top and bottom by construction having an FRL of not less than what the shaft requires (in both directions)
6. The concession granted under S5C15 results in the roof of the building not being required to be fire rated (the building is provided throughout with sprinklers). Notwithstanding, the Atrium provisions override this general concession in BCA Specification 5.
7. Lift shafts are required to be enclosed at the top of the shaft with fire rated construction having an FRL of 120/120/120.
8. Fire isolated exits are to be provided with a fire rated "lid" that achieves an FRL of 120/120/120.
9. Where roof lights are proposed they are required to be located not less than 3 metres from a roof light in an adjoining fire separated part; and must not be more than 20% of the area of the roof.
10. External walls must be non-combustible construction. Non-loadbearing parts of an external wall that are more than 3m from a fire source feature need not be fire rated.

+ Appendix 2 – SEPP Housing 2021 Requirements

+ Clause	+ Reference	+ Comment
Schedule 4	Standards concerning accessibility and usability for hostels and independent living units	
Part 1	Standards applying to hostels and independent living units	
1 Application of standard in this Part	The standards set out in this Part apply to any seniors housing that consists of hostels or independent living units.	Noted.
2 Siting Standards	+ Wheelchair access If the whole of the site has a gradient of less than 1:10, 100% of the dwellings must have wheelchair access by a continuous accessible path of travel (within the meaning of AS 1428.1) to an adjoining public road. + If the whole of the site does not have a gradient of less than 1:10— - the percentage of dwellings that must have wheelchair access must equal the proportion of the site that has a gradient of less than 1:10, or 50%, whichever is the greater, and - the wheelchair access provided must be by a continuous accessible path of travel (within the meaning of AS 1428.1) to an adjoining public road or an internal road or a driveway that is accessible to all residents. Note— For example, if 70% of the site has a gradient of less than 1:10, then 70% of the dwellings must have wheelchair access as required by this subsection. If more than 50% of the site has a gradient greater than 1:10, development for the purposes of seniors housing is likely to be unable to meet these requirements. + Common areas Access must be provided in accordance with AS 1428.1 so that a person using a wheelchair can use common areas and common facilities associated with the development.	Further Information Required We understand the whole of the site is to be accessible due to the gradients proposed being less than 1:10. Documentation verifying compliance to be provided with the relevant Construction Certificate application.
3 Letterboxes	Letterboxes— + must be situated on a hard standing area, and + must have wheelchair access by a continuous accessible path of travel (within the meaning of AS 1428.1) from the letterbox to the relevant dwelling, and	Further Information Required Documentation verifying compliance to be provided with the relevant Construction Certificate application.

+ Clause	+ Reference	+ Comment
	+ must be lockable by a lock that faces a wheelchair accessible path. + If a structure contains multiple letterboxes, the structure must be in a prominent location. + At least 20% of the letterboxes on the site must be more than 600mm and less than 1,200mm above ground level (finished).	
4 Private car accommodation	If parking spaces attached to or integrated with a class 1 building under the Building Code of Australia are provided for use by occupants who are seniors or people with a disability, at least 1 parking space must: + Be at least 3.2m wide, and + be at least 2.5m high, and + have a level surface with a maximum gradient of 1:40 in any direction, and + be capable of being widened to 3.8m without requiring structural modifications to a building. + If parking spaces associated with a class 1, 2 or 3 building under the Building Code of Australia are provided in a common area for use by occupants who are seniors or people with a disability, the following applies: - o for a parking space not in a group—the parking space must comply with AS/NZS 2890.6, - o for a group of 2–7 parking spaces: ▪ at least 1 of the parking spaces must comply with AS/NZS 2890.6, and ▪ 50% of the parking spaces must: – comply with AS/NZS 2890.6, or – be at least 3.2m wide and have a level surface with a maximum gradient of 1:40 in any direction, - o for a group of 8 or more parking spaces: ▪ at least 15% of the parking spaces must comply with AS/NZS 2890.6, and ▪ at least 50% of the parking spaces must: – comply with AS/NZS 2890.6, or	Further Information Required Documentation verifying compliance to be provided with the relevant Construction Certificate application. Note 1: concessions for Social Housing Providers can apply for carparking numbers where the ground floor is provided with accessible apartments / SOU's. Note 2: We do recommend the DA stage design consider this requirement to alleviate replanning of the carpark to satisfy SEPP Housing 2021.

+ Clause	+ Reference	+ Comment
	- be at least 3.2m wide and have a level surface with a maximum gradient of 1:40 in any direction. To avoid doubt, a parking space that complies with AS/NZS 2890.6 is only counted toward 1 of the requirements in subsection above. + At least 5% of any visitor parking spaces must comply with AS/NZS 2890.6. + A parking space required by this section to comply with AS/NZS 2890.6, other than a visitor parking space, is not required to include the international symbol of access. + If multiple parking spaces are accessible by a common access point, the access point must be secured by a power-operated garage door, vehicle gate, vehicle barrier or similar device. + A parking space, other than a parking space under subsection above, must be: - o secured by a power-operated door, or - o capable of accommodating the installation of a power-operated door, including by having: ▪ access to a power point, and ▪ an area for motor or control rods for a power-operated door. + A requirement in this section for a parking space to comply with AS/NZS 2890.6 extends to the associated shared area within the meaning of AS/NZS 2890.6. + In this section, a parking space is in a common area if it is not attached to or integrated with a hostel or independent living unit.	
5 Accessible entry	The main entrance to a dwelling must have: + a clear opening that complies with AS 1428.1, and + a circulation space in front of the door and behind the door that complies with AS 1428.1. This section does not apply to an entry for employees.	Further Information Required Typical compliance matter; ensure circulation zones are accurate to demonstrate AS1428.1-2021 Cl. 13.3.2. Circulation on the inside of the doorset (when the door swings toward the user) should be 530mm. Documentation verifying compliance to be provided with the relevant Construction Certificate application.

+ Clause	+ Reference	+ Comment
6 Interior: General	+ An internal doorway must have an unobstructed opening that complies with AS 1428.1. + An internal corridor must have an unobstructed width of at least 1,000mm throughout. + The circulation spaces in front of and behind an internal doorway in the following areas must comply with AS 1428.1: - o a kitchen, - o a laundry, - o a bathroom, - o a toilet, - o a bedroom, - o a living area, - o the main area of private open space. + To avoid doubt, the above subsection regarding laundry areas does not apply to laundry facilities in a cupboard.	Further Information Required The following comments are made: + Circulation space in front of and behind an internal doorway is to comply with AS 1428.1 i.e. to the main area of private open space. Note: where access is via bedroom B2 then this would require AS1428.1 circulation to the doorset leading into B2. + Ensure door circulation leading to main bed room satisfies AS1428.1-2021 Cl. 13.3.2. In this regard, confirmation required whether 510mm latch-side circulation is achieved at bedroom entry doorsets within the apartment corridor. Documentation verifying compliance to be provided with the relevant Construction Certificate application demonstrating compliance. Note 1: Ensure apartments/SOU layouts are delivered with 1,000mm corridors throughout clear of obstructions such as fixed lights, awnings, windows that, when open, intrude into the circulation space, telephones, skirtings and similar objects. Note 2: We do recommend the DA stage design consider this requirement to alleviate replanning of apartments/SOU layouts to satisfy SEPP Housing 2021.
7 Bedroom	+ At least one bedroom in a dwelling must have the following: - o a clear area, not including a circulation space, sufficient to accommodate: ▪ for a hostel—a wardrobe and a single-size bed, or ▪ for an independent living unit—a wardrobe and a queen-size bed, - o a clear area around the area for the bed of at least: ▪ 1,200mm at the foot of the bed, and ▪ 1,000mm on each side of the bed,	Further Information Required: It is assumed queen sized beds are provided. Circulation around bed satisfies SEPP Housing 2021 Schedule 4 Cl. 7 however not all villas show this circulation and we recommend the final plans are updated to show appropriate circulation throughout. Wardrobes shown on the plans. Documentation verifying compliance to be provided with the relevant Construction Certificate application demonstrating compliance.

+ Clause	+ Reference	+ Comment
	- o at least 2 double general power outlets on the wall where the head of the bed is likely to be, + at least one general power outlet on the wall opposite the wall where the head of the bed is likely to be.	
8 Bathroom	+ At least one bathroom in a dwelling must be located on: - o the same floor as the entry to the dwelling, or - o a floor serviced by a private passenger lift accessible only from inside the dwelling. + The bathroom must have the following— - o a slip resistant floor surface that achieves a minimum rating of P3 in accordance with AS 4586-2013, - o a washbasin with tap ware capable of complying with AS 1428.1, including by future adaptation if the washbasin and tap ware continue to use existing hydraulic lines, - o a shower that: ▪ is accessible without a shower-hob or step, and ▪ complies with the requirements of AS 1428.1 for the entry, circulation space, floor gradient to the wastewater outlet and location of the mixer tap, and ▪ is in the corner of a room, and ▪ has a wall capable of accommodating the installation of a grab rail, portable shower head with supporting grab rail and shower seat, in accordance with AS 1428.1, - o a wall cabinet with shelving illuminated by an illumination level of at least 300 lux, - o a double general power outlet in an accessible location, in accordance with AS 1428.1 (including beside the mirror). The above subsection regarding shower requirements does not prevent the installation of a shower screen that can easily be removed to enable compliance with that paragraph.	Further Information Required: Documentation verifying compliance to be provided with the relevant Construction Certificate application demonstrating compliance. This requirement only applies to the single accessible sanitary facility and not other sanitary facilities (or powder rooms with a WC pan therein). Any enhancements to these other areas are over-and-above SEPP Housing requirements. Note 1: We do recommend the DA stage design consider this requirement to alleviate replanning of apartments/SOU layouts to satisfy SEPP Housing 2021. Note 2: Refer to the comments above relating to BCA Clause C2D10(6). Generally timber noggings/blocking/supports are not localised and cover the wall substantially. Where timber noggings/blocking/supports required for grab rail supports align within internal non-loadbearing fire-rated walls a Fire Engineered Performance Solution is required. The following recommended is made: + Where the location of fixtures such as WC pans, wash basins, sinks, laundry fixtures and any other fixtures are to be relocated post-adaptation to comply with AS1428.1, then the service pipes (waste and water supply pipes) have to be laid in the correct AS1428.1 specified position at pre-adaptation itself and the services to be capped off for future use. + Consideration to be given to set down the slab in the wet areas

+ Clause	+ Reference	+ Comment
		so that there is no level difference once the floor finishes are applied (i.e. flush transition from carpeted area to tiles area). + Where a floor waste is required, Cl.10.2.12 of the ABCB Livable Housing Standards requires that the floor must be graded at a minimum continuous fall of 1:80 to a floor waste and the floor must be graded at a maximum continuous fall of 1:50 to a floor waste. Notwithstanding, AS1428.1-2021 requires grades of 1:100 hence should be adopted for this development. + This solution will likely lead to a Performance Solution for DDA compliant sanitary facilities where a minimum continuous fall of 1:100 is adopted in favour of 1:80 permitted under F2D4. + Hot water systems to be installed to deliver hot water at a maximum of 50°C at the hot water outlet..
9 Toilet	+ At least one toilet in a dwelling must be located on: - o the same floor as the entry to the dwelling, or - o a floor serviced by a private passenger lift accessible only from inside the dwelling. + The toilet must have the following: - o a water closet pan: ▪ in the corner of the room, and ▪ with a centreline set-out in accordance with AS 1428.1, - o a circulation space in front of the water closet pan that is: ▪ at least 1,200mm long and at least 900mm wide, and ▪ clear of door swings and fixtures, other than a toilet paper dispenser or grab rails, - o a circulation space around the water closet pan that complies with AS 1428.1,	Compliance Readily Achievable: Documentation verifying compliance to be provided with the relevant Construction Certificate application.

+ Clause	+ Reference	+ Comment
	- o a slip resistant floor surface that achieves a minimum rating of P3 in accordance with AS 4586-2013, - o a wall capable of accommodating the installation of a back rest and grab rail that will comply with AS 1428.1. A removable shower screen may be located in the water closet pan circulation space specified in the subsection above.	
10 Surfaces & External Finishes	Balconies and external paved areas must have surfaces that are slip resistant and comply with: + the Building Code of Australia, or + The Standards Australia Handbook SA HB 198-2014, Guide to the specification and testing of slip resistance of pedestrian surfaces, published on 16 June 2014.	Compliance Readily Achievable: Documentation verifying compliance to be provided with the relevant Construction Certificate application. The following recommended is made: + Where balconies / outdoor areas have been provided to ILU villas, provide the sliding doors such that the tracks are recessed, so level access can be provided to the balcony / outdoor areas from inside the villa. Also sliding doors in the living areas leading to outdoor areas are to be such that opening of the door is able to provide a clear opening space of 850mm with a latch side space of 530mm. + Grates to the threshold should be no more than 13mm where they run the length of the slider. + Consideration to be given to set down the slab in the wet areas so that there is no level difference once the floor finishes are applied (i.e. flush transition from carpeted area to tiles area). + A slip resistant floor surface that achieves a minimum rating of P3 in accordance with AS 4586-2013 on the basis that grade do not exceed 1:14.
11 Door hardware	Door handles and hardware for all doors, including entry doors and external doors, must comply with AS 1428.1. To avoid doubt, this subsection does not apply to cabinetry.	Compliance Readily Achievable: Documentation verifying compliance to be provided with the relevant Construction Certificate application.

+ Clause	+ Reference	+ Comment
12 Switches & Power points	Switches and power points must (a) comply with AS 1428.1, or (b) be capable of complying with AS 1428.1 through future adaptation. This subsection does not apply to (a) remote controls, or (b) power points likely to serve appliances that are not regularly moved or turned off.	Compliance Readily Achievable: Documentation verifying compliance to be provided with the relevant Construction Certificate application.
13 Private Passenger Lifts	+ This section applies to a private passenger lift that is required by this schedule to be accessible only from inside a particular dwelling. + The private passenger lift must— - o be at least 1,100mm wide and at least 1,400mm long, measured from the lift car floor, and - o have a clear indoor landing on all floors serviced by the lift, other than the floor on which the main area of private open space is located, at least 1,540mm long and at least 2,070mm wide, and - o have controls that comply with— ▪ AS 1735.12:2020, Lifts, escalators and moving walks, Part 12: Facilities for persons with disabilities, published on 26 June 2020, or ▪ AS 1735.15:2021, Lifts, escalators and moving walks, Part 15: Safety rules for the construction and installation of lifts — Special lifts for the transport of persons and goods — Vertical lifting platforms intended for use by persons with impaired mobility, published on 23 July 2021. + The width of the door opening of the private passenger lift must be at least 900mm. The private passenger lift must not be a stairway platform lift.	Compliance Readily Achievable: Documentation verifying compliance to be provided with the relevant Construction Certificate application.
Part 2	Additional Standards for independent living units	
14 Application of standards in this Part	The standards set out in this Part apply in addition to the standards set out in Part 1 to any seniors housing consisting of independent living units.	Noted:
15 Bedroom	At least one bedroom in an independent living unit that complies with this schedule, section 7 must be located on:	Compliance Readily Achievable: Documentation verifying compliance to be provided with the

+ Clause	+ Reference	+ Comment
	+ the same floor as the entry to the unit, or + a floor serviced by a private passenger lift accessible only from inside the unit.	relevant Construction Certificate application.
16 Living Room	+ A living room in an independent living unit must be located on: - o the same floor as the entry to the dwelling, or - o a floor serviced by a private passenger lift accessible only from inside the dwelling. + The living room must have— - o a circulation space that— ▪ is clear of all fixtures, and ▪ has a diameter of at least 2,250mm, and + a telecommunications or data outlet adjacent to a general power outlet.	Compliance Readily Achievable: 2,250mm circulation documented on the design plans; only loose furniture is shown on some of the circulation areas which is acceptable. Documentation verifying compliance to be provided with the relevant Construction Certificate application.
17 Main area of Private Open Space	The main area of private open space for an independent living unit must be located on: + the same floor as the entry to the dwelling, or + a floor serviced by a private passenger lift accessible only from inside the dwelling.	Compliance Readily Achievable: Documentation verifying compliance to be provided with the relevant Construction Certificate application.
18 Kitchen	+ A kitchen in an independent living unit must be located on: - o the same floor as the entry to the dwelling, or - o a floor serviced by a private passenger lift accessible only from inside the dwelling. + The kitchen must have a circulation space with a diameter of at least 1,200mm between each bench top, cupboard or large appliance and each other bench top, cupboard or large appliance. + Each circulation space specified in the kitchen subsection above must be capable of being increased to a diameter of 1,550mm without: - o relocating the sink, or - o moving a load-bearing wall, or - o breaching another circulation requirement. + The kitchen must have the following fittings: - o a bench that includes at least one work surface that is: ▪ at least 800mm long, and ▪ clear of obstructions, and	Further Information Required: Circulation requirements of 1,550mm to be clarified on the plan. It is assumed that the area WO (next to the cooktop) is the work surface bench to satisfy this requirement. Documentation verifying compliance to be provided with the relevant Construction Certificate application. The following recommended is made: + Hot water systems to be installed to deliver hot water at a maximum of 50°C at the hot water outlet.

+ Clause	+ Reference	+ Comment
	▪ not in the corner of the room, ○ a lever tap set with the lever and water source that is within 300mm of the front of the bench, ○ a cooktop next to the work surface, ○ an isolating switch for the cooktop, ○ an oven that: ▪ has operative elements between 450mm and 1,250mm above the finished floor level, and ▪ is next to the work surface, ○ at least one double general power outlet located within 300mm of the front of a work surface. + The cupboards must: ○ not be entirely located in the corner of the bench or the corner of the room, and ○ face where the user of the fixture is likely to be. + An overhead cupboard in the kitchen must be capable of being fitted with “D” pull cupboard handles towards the bottom of the cupboard. + A below-bench cupboard in the kitchen must be capable of being fitted with “D” pull cupboard handles towards the top of the cupboard. + The lever tap set, cooktop, isolating switch, oven and double general power outlet must— ○ not be in the corner of the bench or the corner of the room, and ○ face where the user of the fixture is likely to be. Cabinetry below a work surface must be able to be easily removed to allow wheelchair access to the work surface.	
19 Laundry	+ A laundry in an independent living unit must be located on: ○ the same floor as the entry to the dwelling, or ○ a floor serviced by a private passenger lift accessible only from inside the dwelling. + The laundry must have the following: ○ a circulation space that complies with AS 1428.1 at the approach to any external doors,	Compliance Readily Achievable: Documentation verifying compliance to be provided with the relevant Construction Certificate application.

+ Clause	+ Reference	+ Comment
	- o an appropriate space for an automatic washing machine and a clothes dryer, - o a clear space in front of each appliance of at least 1,550mm, - o a slip resistant floor surface that achieves a minimum rating of P3 in accordance with AS 4586-2013, - o a continuous accessible path of travel to the main area of private open space or any clothes-line provided for the dwelling. + The space specified in subsection above relating to appliance clear space may overlap with a door swing or the circulation space for a door. + For laundry facilities in a cupboard, the cupboard must be capable of being fitted with “D” pull cupboard handles in the following locations: - o for below-bench cupboards—towards the top, - o for overhead cupboards—towards the bottom, - o for floor-to-ceiling doors—between 900mm and 1,100mm above the finished floor level. + In this section— laundry includes laundry facilities in a cupboard.	
20 Storage for linen	An independent living unit must have a floor-to-ceiling linen storage cupboard that— (a) is at least 600mm wide, and (b) has adjustable shelving.	Compliance Readily Achievable: Documentation verifying compliance to be provided with the relevant Construction Certificate application.
21 Lifts in multi-storey buildings	An independent living unit on a storey above the ground storey must be accessible by a lift that complies with the Building Code of Australia, Volume 1, Part E3.	Compliance Readily Achievable: Documentation verifying compliance to be provided with the relevant Construction Certificate application.
22 Garbage	A garbage storage area and a recycling storage area provided for an independent living unit must be accessible by a continuous accessible path of travel from the dwelling entrance.	Compliance Readily Achievable: Documentation verifying compliance to be provided with the relevant Construction Certificate application demonstrating compliance.