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1-7 ANDREWS AVENUE AND 26 GLEN STREET, BONDI NSW

COMBINED BCA AND ACCESS 2022 COMPLIANCE REPORT FOR CONSENT AUTHORITY SUBMISSION

DATE: **16 OCTOBER 2024**
REPORT NO: **2868 – REV E DRAFT**
PREPARED FOR: **DCN CAPITAL C/- MHNDUNION**
PREPARED BY: AM **| J² BCA CONSULTING**

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REVISION STATUS

REPORT NO.	REVISION	DATE	STATUS	WRITTEN	REVIEWED
2868	REV A	24/07/2023	**DRAFT**	AM	JA
2868	REV B	04/08/2023	**FINAL**	AM	JA
2868	REV C	09/08/2023	**FINAL**	AM	JA
2868	REV D	17/08/2023	**FINAL**	AM	JA
2868	REV E	16/10/2024 – FOR S4.55 SUBMISSION	**DRAFT**	AM	JA

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EXECUTIVE SUMMARY

This report relates to a BCA compliance assessment of the residential apartment and ancillary carpark building at 1-7 ANDREWS AVENUE AND 26 GLEN STREET, BONDI NSW. The report contains an assessment of the architectural details by way of a clause-by-clause comparison of the Building Code of Australia 2022. The outcome of this report highlights that the current design contains compliance departures from the Deemed-to-Satisfy provisions of the BCA.

The current design does not preclude the ability for fire-engineered solutions (as required) to be provided for the subject development as proposed. In any case, confirmation of final architectural plans supported by council will enable the preparation of fire-engineered or access performance solutions reflective of these details.

The following table outlines the deviations identified from the BCA compliance assessment of the works to be construction. Where these items are addressed, the unit can be confirmed as being compliant with the draft version of the Building Code of Australia 2022.

SUMMARY OF IDENTIFIED ISSUES OF NON-COMPLIANCES TO BE ADDRESSED

NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
1.	C2D2 *C1.1* S5C11(1), Spec 5 *Spec C1.1*	Type of Construction Required / Fire Resisting Construction The building is required to be constructed and achieve the required Fire Resistance Levels in accordance with Specification 5, as applicable. An extract is provided below. Detailing of the façade junction to the slab edge between storeys within the building is required to be considered. To achieve compliance with the required fire rating (120-minutes for carparks and 90-minutes for residential levels) the floor slab must extend through the wall. Where required a Fire Engineered Performance Solution may be sought to address this item.	Note only – to be detailed within the Construction Certificate documentation.
2.	C2D2 *C1.1* S5C8	Fire Resisting Construction – Enclosure of shafts Shafts which ware required to achieve a fire resistance level must be enclosed at the top and bottom by construction achieving a fire resistance level not less than that required for the wall of a non-loadbearing shaft in the same building. This does 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. Typically, the garbage shaft located within the building which opens into the bin room does not comply with the provisions of this clause as the waste room contains bins which is an item other than an area reserved for services.	A Fire Engineered Performance Solution may be sought at the Construction Certificate stage of the application.

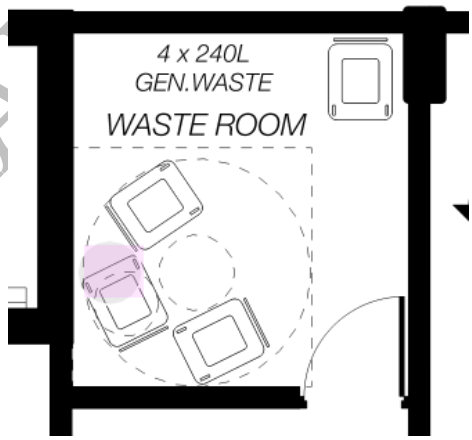
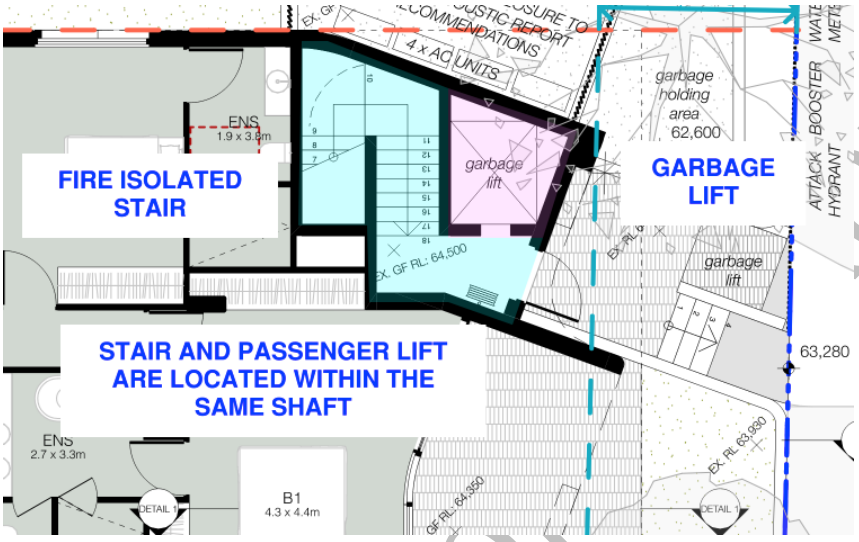


Figure A – Bin room located at the base of the shaft

NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
3.	C3D11 *C2.11*	Stairways and lifts in one shaft A stairway and lift must not be in the same shaft if either of the stairway or the lift is required to be in a fire-resisting shaft. The garbage passenger lift is located within the same shaft as the fire isolated stair serving the pump room. This arrangement is shown below:  **Figure B – Fire isolated stair and passenger lift are located within the same shaft**	To be redesigned to comply.

NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
4.	C4D3 *C3.2*	Protection of openings in external walls If the distance between an opening and the fire-source feature to which it is exposed to is less than: 3m from a side or rear boundary of the allotment, 6m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level or 6m from another building on the allotment that is not a Class 10. Openings are proposed to be located within 3m of the allotment boundary. The affected openings are highlighted below. Note. the openings serving bedrooms are required to be openable to achieve natural light and ventilation in accordance with BCA Part F4. These windows are not permitted to be fixed closed.	To be designed to comply or a Fire Engineered Performance Solution is required to address this item.

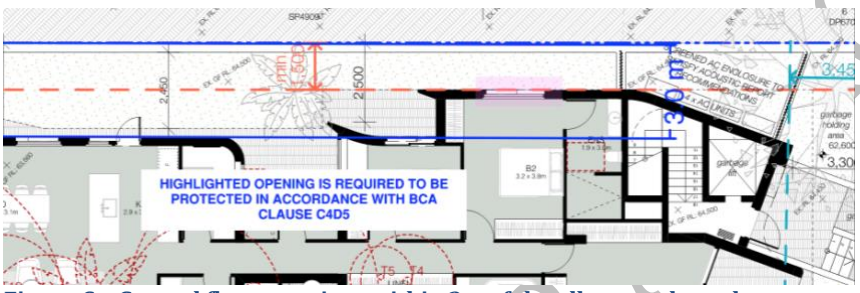


Figure C – Ground floor openings within 3m of the allotment boundary

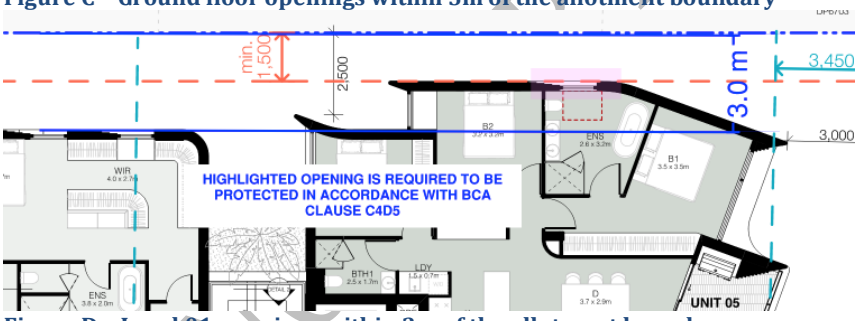


Figure D – Level 01 openings within 3m of the allotment boundary

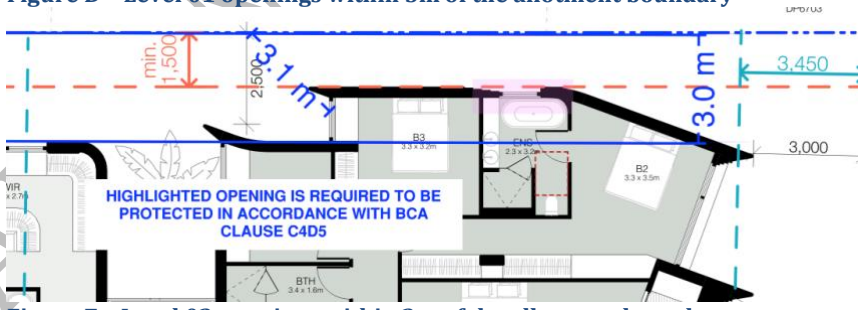


Figure E – Level 02 openings within 3m of the allotment boundary

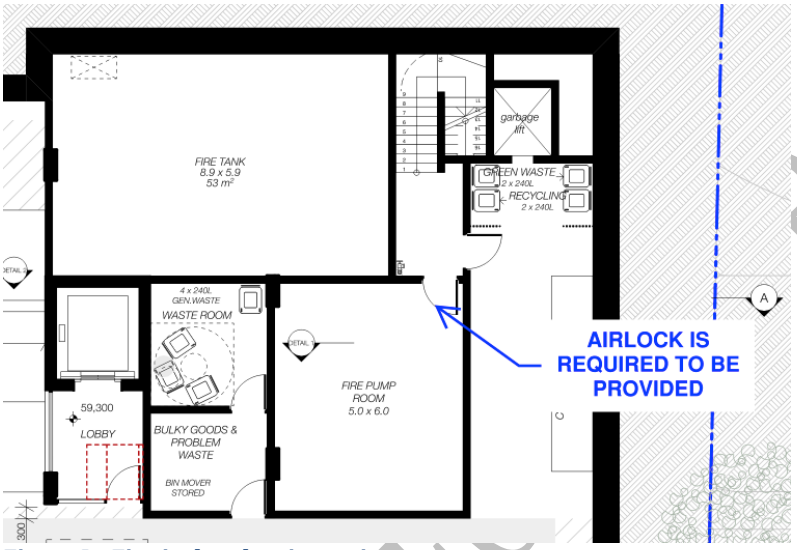
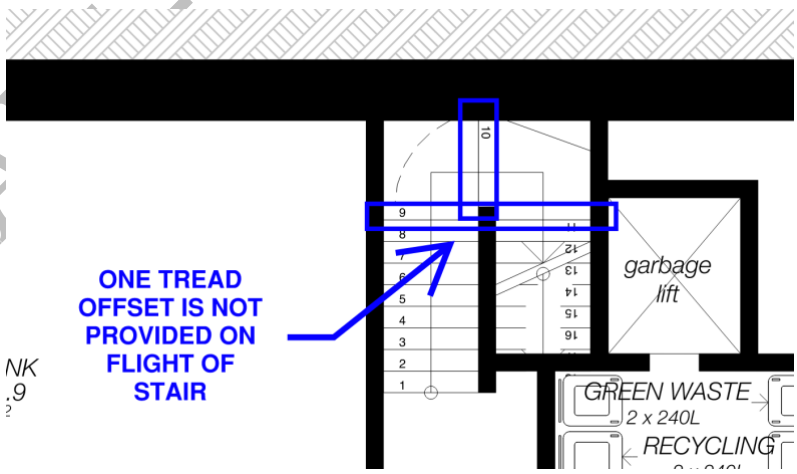
NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
5.	D2D3 *D1.2*	Number of exits required Each storey is required to be provided with an exit from the storey. Basements – In addition to any horizontal exit, not less than two exits must be provided from a storey that involves a vertical rise within the building of more than 1.5m. The basement level contains a vertical rise within the building of more than 1.5m and is therefore required to be provided with two exits. The arrangement currently contains a single fire isolated stair.  **Figure F – Egress from Basement Level**	A Fire Engineered Performance Solution may be sought to address this item.

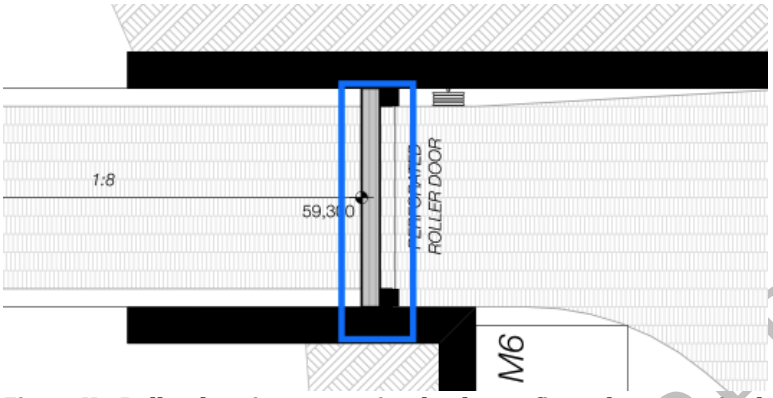
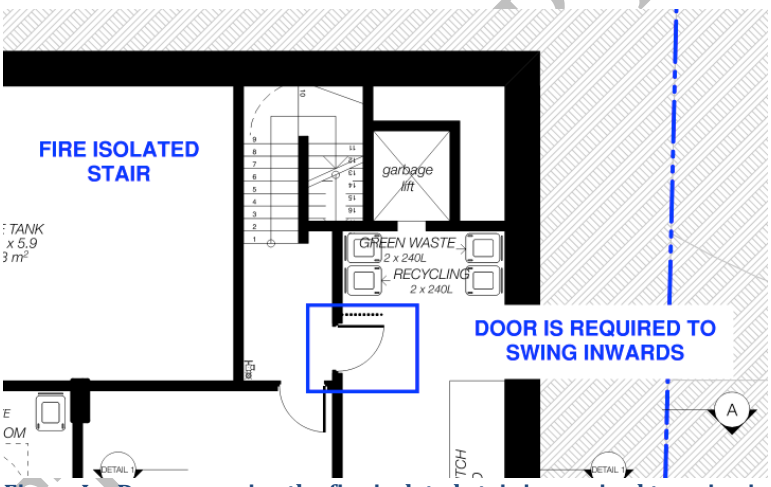
NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
6.	D2D5 *D1.4*	Exit travel distances In a Class 7a (carpark), no point on a floor must be more than 20m from an exit, or a point from which travel in different directions to two exits is available, in which case the maximum distance to one of those exits must not exceed 40m. Basement: The basement carparking level is in the order of 41m in lieu of 20m to a single exit. Where a Fire Engineered Performance Solution is undertaken to configure the roller door as an alternative exit compliance with this clause is achieved.	A Fire Engineered Performance Solution may be sought to address this item.

Figure G – Basement Level, distance of travel to a single exit is in the order of 41m

Level 01: Level 01 is provided with a single exit whereby distance to this exit is approximately 7m in lieu of 6m. This is shown below:

Figure H – Level 1, distance of travel to a single exit is in the order of 7m in lieu of 6m

NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
7.	D2D12 *D1.7*	Travel via fire isolated exits A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire isolated unless its from, a public corridor, public lobby or the like, a sole occupancy unit occupying all of a storey or sanitary compartment, airlock or the like. The fire isolated stair serving the fire pump room and fire hydrant pump room directly connects onto this stair. An airlock is required to be provided:  **Figure I – Fire isolated stair serving pump room**	To be redesigned to comply to be provided with an airlock to the fire hydrant pump room.
8.	D3D22 *D2.17*	Handrails Handrails are required to be installed at a height not less than 865mm and be continuous between stair flight landings and have no obstruction on or above them that ill tend to break a handhold. The height of the handrail is measured above the nosing. Not all handrails are detailed within the architectural drawings. The stair between the basement and ground floor does not provide a one-tread set back after the mid landing, resulting in a handrail with inconsistent height.  **Figure J – One tread offset is not provided on the mid landing and flight of stairs to facilitate a continuous handrail to be installed throughout the flight**	To be redesigned to comply or a BCA Performance Solution is required to be sought to address this item. All stairs throughout the building should be provided with handrails in accordance with the prescriptive requirements.

NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
9.	D3D23 *D2.19*	Doors and doorways Roller doors are not permitted to form part of the required exit. A roller door is proposed to the vehicle entrance ramp. This is shown below:  **Figure K – Roller door is not permitted to be configured as a required exit**	Where this is configured as an exit, a Fire Engineered Performance Solution is required to address this item.
10.	D3D25 *D2.20*	Swinging doors Doorways are required to swing in the direction of egress. The stair discharging to the fire isolated stair is required to swing inwards (direction of egress). This doorway is shown below:  **Figure L – Door accessing the fire isolated stair is required to swing inwards**	To be redesigned to swing the door inwards (i.e. In the direction of egress).
11.	D4D3 *D3.2*	Access to buildings Access is required to the following areas: • 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 carparking spaces on the allotment. The following is noted in relation to accessing the sanitary compartment: The shower is considered a Class 10a building on the same allotment, a continuous accessible path of travel is required to be provided to this building and common area. Access is not provided to the building as door circulation is not achieved to this doorway. A minimum of 1220mm is required to be provided (length clearance) for a hinge side approach. Additionally, the accessway indicates showers affixed to the external	To be redesigned to comply with the prescriptive requirements to achieve the required door circulation to the amenities building.

wall which will encroach within the required accessway (requiring 2m unobstructed height clearance).

This is shown below:

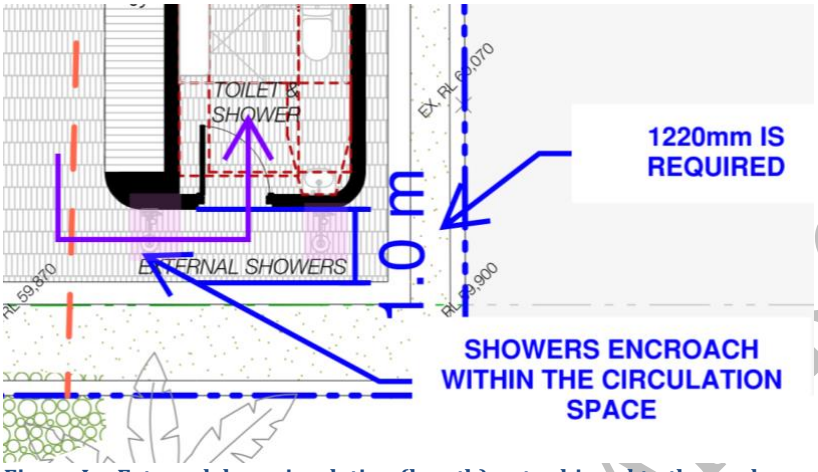


Figure L – External door circulation (length) not achieved to the pool Toilet/shower room

The site is provided with two entrances to the building via Glen Lane and Andrews Avenue. It is proposed to access the building via the following mechanisms:

Andrews Avenue:
A 1:20 walkway is proposed to be provided. Door circulation is provided at the entrance doorways.

Glen Lane:
Glen Lane is accessed via an awning and gate entrance. The accessway comprises of both a platform lift with BCA Clause E3D7. A low rise, low speed constant pressure lift is required to be provided.

The stairs external stairs are required to be provided with accessible features in accordance with BCA Clause D4D4. These accessible features are not currently detailed within the architectural drawings:

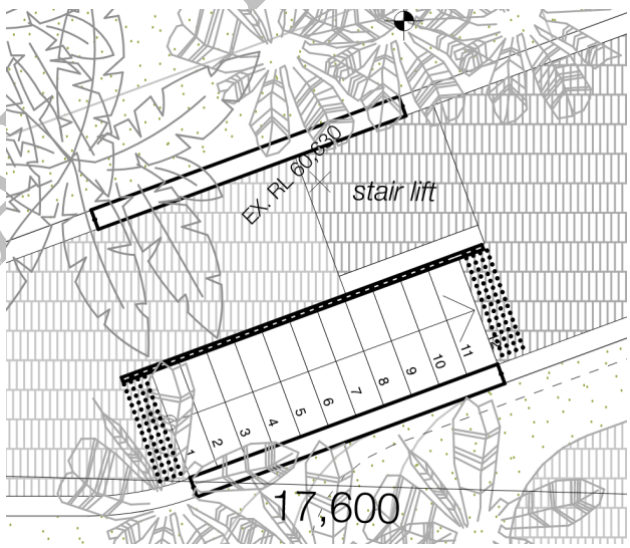
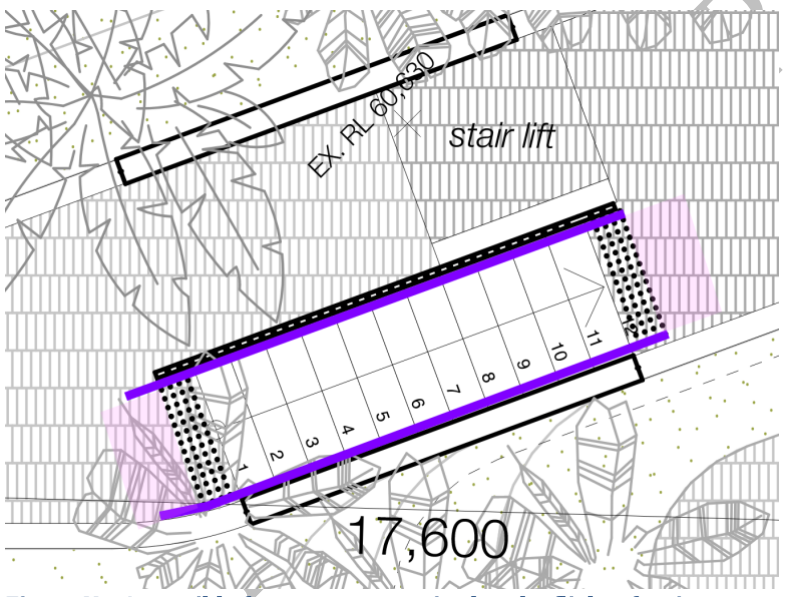
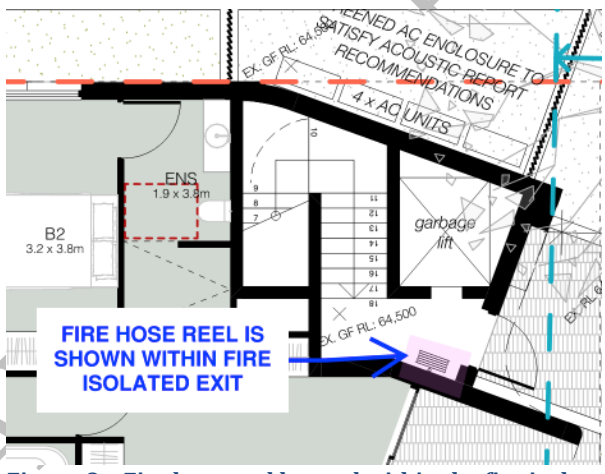
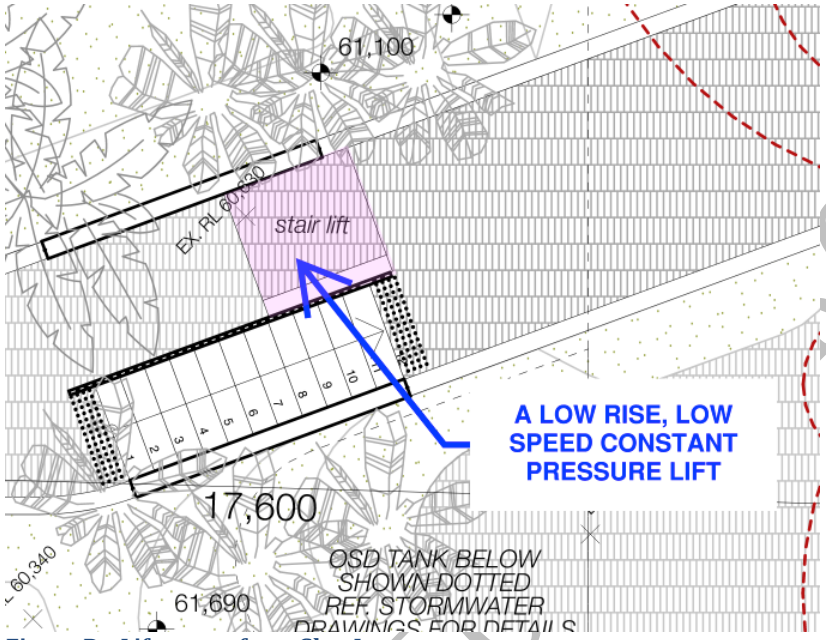
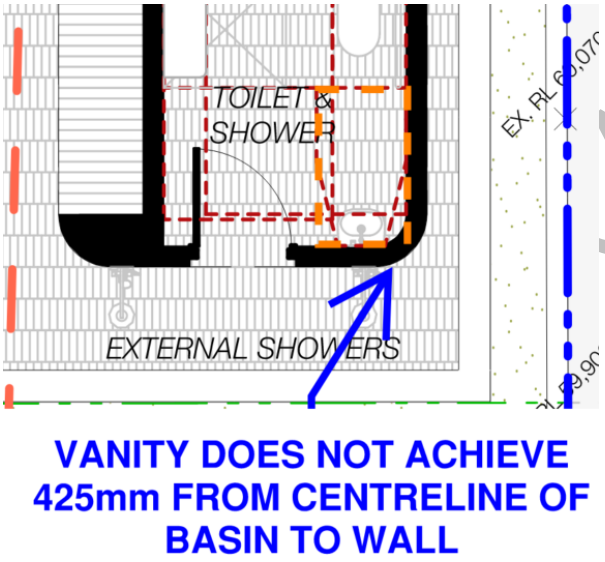


Figure M – Accessible features are required to the external stair

NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
12.	D4D4 *D3.3*	Parts of buildings to be accessible Every stairway, except for a fire isolated stairway, Clause 11 of AS1428.1. As noted above in BCA Clause D4D3, the stair accessing the building from Glen Lane are required to be provided with accessible features. The following is noted in relation to this stair: • The stair is provided with a single handrail, two handrails are required to be provided to the stair. • At the base of the stair, the handrail is required to extend a minimum of one tread + 300mm. This handrail extension is required to run parallel to the path of travel. Due to the slight curve in the external wall this may not achieve compliance with this clause. • The TGSIs are required to be setback a minimum of one tread from the flight of stairs. TGSIs are required to extend for 600mm. This is not currently provided to the flight of stairs and is shown below:  **Figure N – Accessible features are required to the flight of stairs**	To be redesigned to comply in accordance with the prescriptive requirements of the BCA.
13.	D4D9 *D3.8*	Tactile ground surface indicators Tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching: A stairway, other than a fire isolated stairway. Tactile ground surface indicators must comply with Sections 1 and 2 of AS1428.4.1-2009. Architectural drawings show TGSIs at the top and bottom of the stair on the path of travel from Glen Lane and at the top and bottom of the common non-fire isolated stair within the building, adjacent the lift. The TGSIs located on the path of travel from Glen Lane are required to be setback a minimum of one tread from the flight of stairs. TGSIs are required to extend for 600mm.	In conjunction with BCA Clause D4D4, Tactile Ground Surface Indicators are required to be redesigned to comply with AS1428.4.1-2009.

NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
14.	E1D2 *E1.3*	Fire hydrants A fire hydrant system is required to serve building as it exceeds 500m². Fire hydrant coverage to be provided in compliance with AS 2419.1-2021 throughout the entire building, including balconies, occupiable outdoor areas and carpark area. The fire hydrant booster assembly is located facing the street (Andrews Avenue) located adjacent to the primary entrance of the building. As the building is required to be sprinkler protected it is permitted to be located within 10m of the building without a radiant barrier. Note. where an 'I-pattern' fire hydrant booster assembly is proposed, this is required to be affixed to the building façade. Refer to Clause 7.5.5 of AS2419.1-2021. The spatial configurations are to be determined by the services consultants. Fire Hydrant coverage does not appear capable of achieving coverage from the single attack hydrant at the front of the site. Coverage is required to be provided to the outdoor balconies. The hydraulic engineering consultant is to confirm coverage layouts.	Details confirmation coverage is achieved is required to be incorporated in the Construction Certificate and Fire Service drawings.
15.	E1D3 *E1.4*	Fire hose reels Fire hose reels does not apply to a Class 2 part of the building. Fire hose reel coverage is required to be provided to the carpark level. A fire hose reel system complying with AS2441-2005 must be provided to serve the carpark level due to the fire compartment with a floor area exceeding 500m². Coverage is required to be provided throughout the building achieved by a 36m hose + 4m spray of water. A Fire Hose Reel is currently detailed within the fire isolated exit. This is shown below:  **Figure O – Fire hose reel located within the fire isolated exit**	To be redesigned to comply by removing the fire hose reel from the fire isolated exit.
16.	Spec 17	Fire sprinkler systems Fire sprinklers are required to be installed in accordance with this clause. Notably, the scope of AS2118.4 permits only a four storey residential building. Therefore, an AS2118.1 sprinkler system should be installed.	Note only.
17.	E1D17 *E1.10* E2D21 *E2.3*	Provision for special hazards We note that the Principal Certifying Authority may consider electric cars/charging stations as a hazard within the building, where proposed. As there are no prescriptive requirements this will be required to be addressed via a Performance Solution.	This is to be determined by the Principal Certifying Authority.

NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
18.	E3D7 *E3.6*	Passenger lift types and their limitations Access provided from Glen Lane is provided with a 'stair lift', this appears to contain a vertical change in level greater than 1m, therefore a low-rise, low speed constant pressure lift is required to be provided.  **Figure P – Lift access from Glen Lane**	Note. To be designed to comply.

NO.	DTS CLAUSE	DESCRIPTION OF NON-COMPLIANCE	RECOMMENDATION
19.	F4D6 *F2.4a*	Accessible unisex sanitary compartments In a building required to be accessible, accessible unisex sanitary compartments must be provided within accessible parts of the building in accordance with F4D6. The communal sanitary compartment provided within the outdoor pool area is required to comply with AS1428.1-2009. An accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate disposal of sanitary produces. Circulation spaces, fixtures and fittings of all accessible sanitary facilities provided must comply with the requirements of AS1428.1-2009. The handbasin within the pool Toilet/shower room does not achieve the required set back of 425mm between the wall and the centreline of the handbasin due to the curvature of the wall. This is shown below:  **Figure Q – Handbasin within pool Toilet/Shower room does not meet required setback from side wall**	To be redesigned at the Construction Certificate stage to achieve compliance with this clause.

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1.0 INTRODUCTION

This report provides a Building Code of Australia (BCA) 2022 compliance assessment of the proposed residential apartment building and ancillary carpark building located at 1-7 Andrews Avenue, 26 Glen Street, Bondi NSW. The proposed development comprises of a single basement level of carparking and four storeys of residential sole occupancy units. The building comprises of seven residential sole occupancy units.

The basement level contains 14 carparking spaces incorporating four dedicated electric vehicle spaces. There are a total of two designated accessible carparking spaces proposed as part of this development.

The proposed development is situated within the local government area of Waverley Council.

The current design does not preclude the ability for fire-engineered or access performance solutions (as required) to be provided for the subject development as proposed. In any case, confirmation of final architectural plans supported by Council will enable the prepared of fire-engineered or access performance solutions reflective of these details.

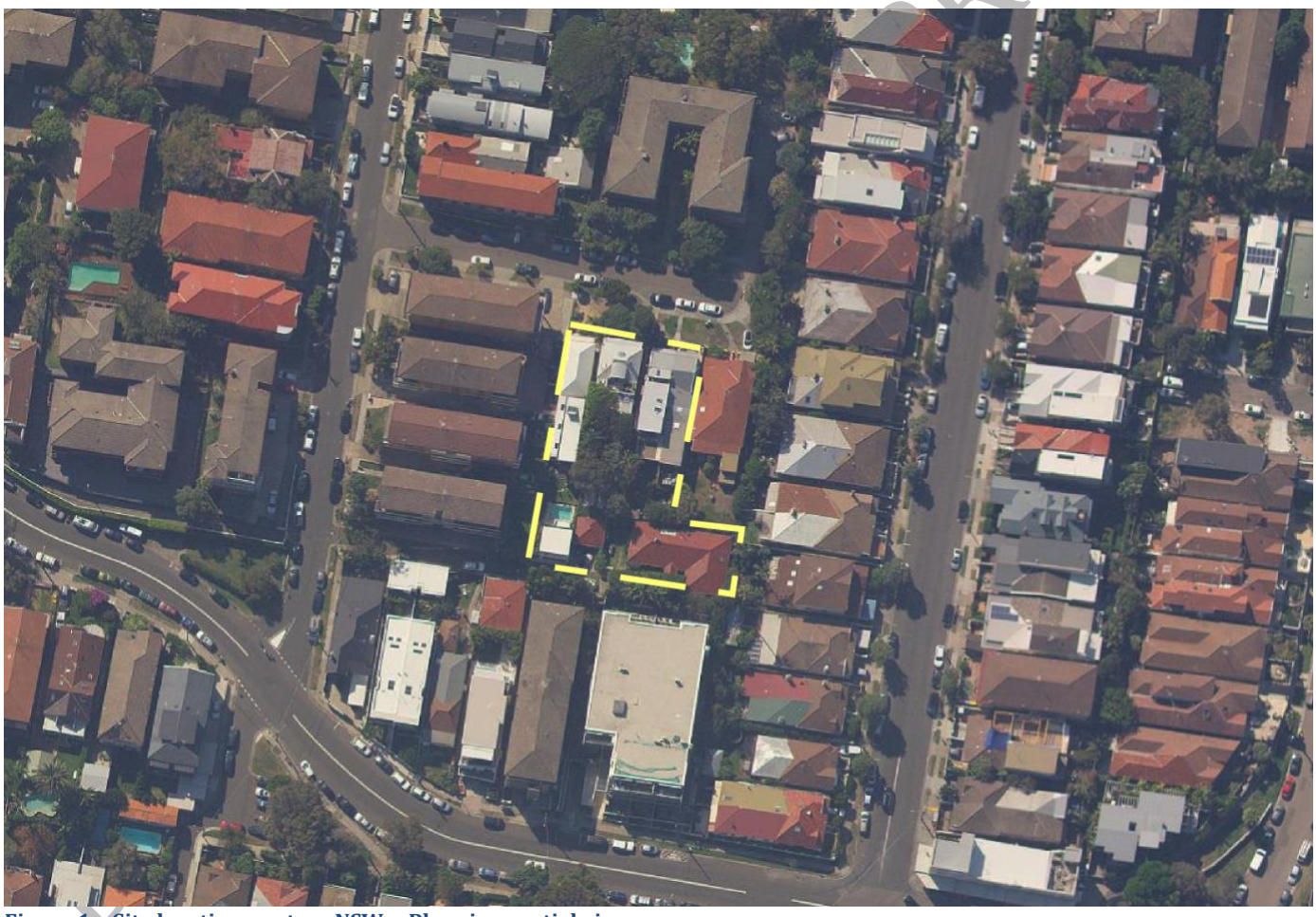

Figure 1 – Site location, curtesy NSW e-Planning spatial viewer

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1.1 BASIS OF REPORT

The key objective of the report is to:

- Make an assessment of the proposed works under the Building Code of Australia 2022 (BCA), version inclusive of Sections C, D, E and F and list any departures and information applicable from the BCA that will need to be addressed prior to the issue of the occupation certificate.
- Provide BCA compliance advice and information where departures are identified.

The following architectural drawings prepared by MHNDUNION project number 22-029 were provided for assessment:

Drawing Number	Drawing Title	Revision / Date
DA 0000	Coverpage	I / WIP
DA 1000	Site Context	I / WIP
DA 1001	Context Local	I / WIP
DA 1005	Site Analysis Plan	I / WIP
DA 2000	Context Plan	I / WIP
DA 2001	Basement Plan	I / WIP
DA 2002	Ground Floor Plan	I / WIP
DA 2003	Level 1 Floor Plan	I / WIP
DA 2004	Level 2 Floor Plan	I / WIP
DA 2005	Level 3 Floor Plan	I / WIP
DA 2006	Roof Plan	I / WIP
DA 3000	North Elevation	I / WIP
DA 3001	South Elevation	I / WIP
DA 3002	East Elevation	I / WIP
DA 3003	West Elevation	I / WIP
DA 3001	Section A	I / WIP
DA 3101	Section B	I / WIP
DA 3102	Section C Contentions	I / WIP
DA 3103	Section D Contentions	I / WIP
DA 3104	Section E Contentions	I / WIP
DA 3105	Detailed Section 1	I / WIP
DA 3106	Detailed Section 2	I / WIP
DA 6000	External Finishes	I / WIP
DA 9000	GFA Diagrams	I / WIP
DA 9001	Landscape and Deep Soil	I / WIP
DA 9002	SEPP 65 Compliance	I / WIP
DA 9300	Adaptable Apartment	I / WIP
DA 9301	Waste Management Plan	I / WIP
DA 9302	Height Analysis Diagram 1/2	I / WIP
DA 9303	Height Analysis Diagram 2/2	I / WIP

1.2 LIMITATIONS AND EXCLUSIONS

The following items are outside the scope of this report:

- Reporting on hazardous materials, OH&S matters or construction site contamination.
- Assessment of any structural elements or geotechnical matters relating to the building, including a structural or other assessment of the existing fire-resistant levels of the building.
- Assessment of any fire services operations (including hydraulic, electrical or other systems).
- Assessment of plumbing and drainage installations, including stormwater.
- Assessment of mechanical plant operations, electrical systems or security systems.

- Heritage significance.
- Consideration of energy or water authority requirements.
- Consideration of local planning policies.
- Environmental, planning or heritage issues.
- Requirements of statutory authorities.
- Pest inspection or assessment of building damage caused by pests.
- Energy efficiency Part J.
- Assessment against the Disability Discrimination Act 1992.
- Planning for Bushfire Protection 2006.
- Assessment of the external wall system/building envelope and the associated provisions of BCA Section F. The project Façade Engineer/Structural Engineer shall confirm compliance with the section and the associated prescriptive and Performance requirements.
- Reference to, or discussion of, any existing Fire Engineered or BCA Performance Solution does not imply concurrence, acceptance or agreeance with the subject Performance Solution. This is not considered an third-party/peer review of any proposed Performance Solution.
- Review against BCA Part G7 – Livable Housing Assessment; and
- Destructive inspections to determine exact makeup of external wall and bounding wall construction.

1.3 BUILDING CODE OF AUSTRALIA 2022 – APPLICABLE BCA

This Building Code of Australia 2022 assessment has been undertaken against the version released by the Australian Building Codes Board on the 20 June 2023.

1.4 REPORTING TEAM

The information contained herein has been prepared by Abby Mortimer (Building Surveyor, SA Accredited Professional – Building Level 1 and AIBS, Building Surveyor – Level 1) and James Alexander (Building Surveyor, Grade A1 Accredited Certifier and PCA BDC 0002 and C10 Fire Engineer BDC4516).

1.5 REPORTING METHODOLOGY

The following methodology has been undertaken within Chapter 3.0 of this report and the items providing additional design advice to assist with the documentation at the Construction Certificate stage has been included within the below summary table:

Non-compliant – The design requires the provision of a Performance Solution/s or the design is required to achieve compliance with the Deemed-to-Satisfy provisions of the BCA or additional information is provided to assist with the design detailing of the project.
Compliance advice – Further information is required to determine compliance
Generally Compliant

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2.0 BUILDING CLASSIFICATION

2.1 BUILDING CHARACTERISTICS

Classification of Building or Part:	Class 2 (Residential) Class 7a (Carpark) Class 10a (sanitary compartment/BBQ) Class 10b (swimming pools)
Rise in Storeys:	5 Storeys
Storeys contained	5 Storeys
Effective Height:	<12m (12.6m)
Type of Construction:	Type A
Floor areas: Class 2 Class 7a Class 10a	Approximately 2,500m^2 Approximately 825m^2 Approximately 15m^2
Table C3D3 max compartment sizes	Not applicable to Class 2 portion of the building. The Class 7a portion does not exceed a maximum compartment size must not exceed 5,000m^2 and 30,000m^3 volume.

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3.0 BCA COMPLIANCE SUMMARY

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
SECTION C - FIRE RESISTANCE AND STABILITY				
PART C2 - FIRE RESISTANCE AND STABILITY				
C2D1 *C1.0*	DTS provisions	✓	✓	Applies as noted.
C2D2 *C1.1*	Type of Construction Required	✓	Compliance advice – additional note	Type A construction. The building is required to be constructed and achieve the required Fire Resistance Levels in accordance with Specification 5, as applicable. An extract is provided below. Detailing of the façade junction to the slab edge between storeys within the building is required to be considered. To achieve compliance with the required fire rating (120-minutes for carparks and 90-minutes for residential levels) the floor slab must extend through the wall. Where required a Fire Engineered Performance Solution may be sought to address this item, where required.
C2D3 *C1.2*	Calculation of Rise in Storeys	✓	Note	5 Storeys.
C2D4 *C1.3*	Buildings of Multiple Classification	✓	Note	The building contains Class 2 and 7a portions of the building. Storage within the basement level is less than 10% of the floor area. The outdoor swimming pool is classified as a Class 10b structure, and the amenities building is a Class 10a building.
C2D6 *C1.4*	Mixed Types of Construction	X	N/A	Not applicable – the building is considered Type A construction throughout.
C2D6 *C1.5*	Two Storey Class 2, 3 or 9c Buildings	X	N/A	Not applicable.
C2D7 *C1.6*	Class 4 Parts of Buildings	X	N/A	Not applicable.
C2D8 *C1.7*	Open Spectator Stands and Indoor Sports Stadiums	X	N/A	Not applicable.
C2D9 *C1.8*	Lightweight Construction	✓	Note only	Where lightweight construction proposed for fire rating purposes it must comply with this clause.
C2D10 *C1.9*	Non-combustible building elements	✓	Compliance advice	In a building required to be of Type A or B Construction, the following building elements and their components must be non-combustible: (a) External walls and common walls, including all components incorporated in them include the façade covering, framing and insulation. (b) The flooring and floor framing of lift pits. (c) Non-loadbearing internal walls where they are required to be fire-resisting.

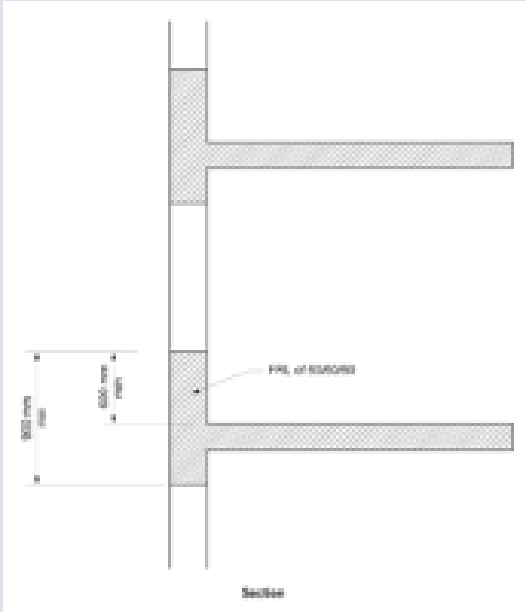
CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				A shaft, being a lift, ventilating, pipe, garbage or similar shaft that is not for the discharge of hot products of combustion, that is non-load bearing, must be of non-combustible construction in – (a) a building required to be of Type A construction; and (b) a building required to be of Type B construction, subject to C3D11, in – (i) A Class 2, 3 or 9 building; and (ii) A Class 5, 6,7 or 8 building if the shaft connects more than two storeys. A load bearing internal wall and load bearing fire wall, including those that are part of a loadbearing shafts, must comply with Specification 5. The requirements of (1) and (2) do not apply to the following: (a) Gaskets. (b) Caulking. (c) Sealants. (d) Termite management systems. (e) Glass, including laminated glass, and associated adhesives, including tapes. (f)Thermal breaks associated with – (i) Glazing systems. (ii) External wall systems, where the thermal breaks – (A) Are no larger than necessary to achieve thermal objectives. (B) Do not extend beyond one storeys; and (C) Do not extend beyond one fire compartment. (g) Damp-proof courses. (h) Compressible fillers and backing materials, including those associated with articulation joints, closing gaps not wider than 50mm. (i) Isolated – (i) Construction packers and shims; or (ii) Blocking for fixing fixtures; (iii) Fixings, including fixing accessories; or (iv) Acoustic mounts. (j) Waterproofing materials applied to the external face, used below ground level and up to 250mm above ground level.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				(k) Joint trims and joint reinforcing tape and mesh of a width not greater than 50mm. (l) Weather sealing materials, applied to gaps not wider than 50mm, used within and between concrete elements. (m) Wall ties and other masonry components complying with AS2699 Part 1 and Part 3 as appropriate, and associated with masonry wall construction. (n) Reinforcing bars and associated minor element that are wholly or predominately encased in concrete or grout. (o) A paint, lacquer or a similar finish or coating. (p) Adhesives, including tapes associated with stiffeners for cladding system. (q) Fire-protective materials and components required for the protection of penetrations. This clause outlines the materials, when entirely composed of itself, are non-combustible and materials that may be used wherever a non-combustible material is required. Details demonstrating compliance with this clause must be incorporated into the Construction Certificate documentation.
C2D11 *C1.10*	Fire Hazard Properties	✓	Compliance advice	The fire hazard properties of internal linings, material and assemblies must comply with BCA Specification 7. Details demonstrating compliance with this clause must be incorporated into the Construction Certificate documentation.
C2D12 *C1.11*	Performance of External Walls in Fire	**X**	N/A	Not applicable – the building has a rise in storeys greater than two.
C2D13 *C1.13*	Fire Protected Timber: Concession	**X**	Note only	Noted.
C2D14 *C1.14*	Ancillary Elements	✓	Compliance advice	An ancillary element must not be fixed, installed, attached to or supported by the concealed internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following: (a) An ancillary element that is non-combustible. (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate, grille or similar cover not more than 2m² in area associated with a building service. (e) An electrical switch, socket-outlet, cover plate or the like.

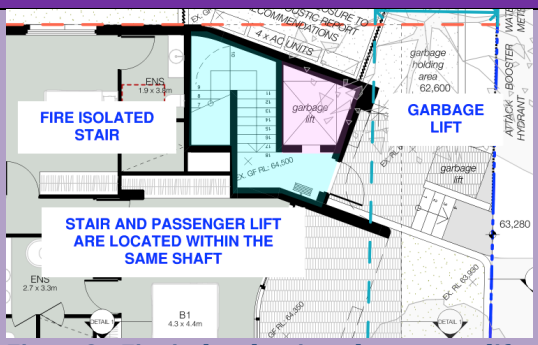
CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				(f) A light fitting. (g) A required sign. (h) A sign other than one provided under (a) or (g) that (i) Achieves a group number of 1 or 2; and (ii) Does not extend beyond one fire compartment; and (iii) Is separated vertically from other signs permitted under (h) by at least two storeys. (i) An awning, sunshade, canopy, blind or shading hood other that one provided under (a) that – (i) Meets the relevant requirements of Table S7C7 as for an internal element; and (ii) Serves a storey- (A) At ground level; (B) Immediately above a storey at ground level; and (iii) does not serve an exit, where it would render the exit unusable in a fire. (j) A part of a security, intercom or announcement system. (k) Wiring. (l) Waterproofing material installed in accordance with AS4654.2 and applied to an adjacent floor surface including vertical upturn, or a roof surface. (m) Collars, sleeves and insulation associated with service installations. (n) Screens applied to vents, weepholes and caps complying with AS3959. (o) Wiper and brush seals associated with doors, windows or other openings. (p) A gasket, caulking, sealant or adhesive directly associated with (a) to (o). Details demonstrating compliance with this clause must be incorporated into the Construction Certificate documentation.
C2D15 *New to BCA 2022*	Fixing of bonded laminated cladding panels	**X**	N/A	Not applicable – no bonded laminated cladding is proposed as part of this development.

PART C3 - COMPARTMENTATION AND SEPARATION

C3D1 *C2.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
C3D2 *C2.1*	Application of Part	✓	Note only	Applies as noted.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
C3D3 *C2.2*	General Floor Area and Volume Limitations	✓	✓	Not applicable to Class 2 portion of the building. The Class 7a portion does not exceed a maximum compartment size of 5,000m² and 30,000m³ volume.
C3D4 *C2.3*	Large Isolated Buildings	**X**	N/A	Not applicable – the building is not considered a large isolated building.
C3D5 *C2.4*	Requirements for open space & Vehicular Access	**X**	N/A	Not applicable.
C3D6 *C2.5*	Class 9 Buildings	**X**	N/A	Not applicable – the building does not contain a Class 9 portion.
C3D7 *C2.6*	Vertical separation of openings in external walls	✓	✓	In a building of Type A construction, consideration for the vertical separation of openings is required. This may be achieved via either: Vertical separation in openings in external walls may be achieved by either: A spandrel which- (A) is not less than 900mm in height; and (B) extends not less than 600mm above the upper surface of the intervening floor; and (C) is of non-combustible material having an FRL of not less than 60/60/60. OR A slab or other horizontal construction that - (A) projects outwards from the external face of the wall not less than 110mm; and (B) extends along the wall not less than 450mm beyond the opening concerned; and (C) is non-combustible and has an FRL of not less than 60/60/60.  **Figure 2 – Extract from the BCA, Spandrel protection**

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				It is understood that an AS2118 sprinkler system is proposed throughout the building and therefore compliance with this clause is achieved.
C3D8 *C2.7*	Separation by fire walls	**X**	N/A	Not applicable – no fire walls are detailed within the architectural drawings.
C3D9 *C2.8*	Separation of classifications in the same storey	**X**	N/A	Not applicable to this design. There is a single building classification assigned to each level, no separation of classification applies in the proposed arrangement.
C3D10 *C2.9*	Separation of classifications in different storeys	✓	Compliance advice	If parts of different classification are situated one above the other in adjoining storeys, they must be separated as follows: Type A Construction: The floor between the adjoining parts must have an FRL of not less that prescribed in Specification 5 for the classification of the lower storey. The basement level is proposed to be a carpark level, this is required to achieve a minimum of 120/120/120 fire separation.
C3D11 *C2.10*	Separation of lift shafts	✓	Compliance advice	As the lift connects more than two storeys, the lift is required to be separated via construction achieving an FRL prescribed by Specification 5. As the lift connects the five storeys within the building, the shaft is required to achieve an FRL of 120/120/120 as this connects the carparking level of the building.
C3D11 *C2.11*	Stairways and lifts in one shaft	✓	**X**	A stairway and lift must not be in the same shaft if either of the stairway or the lift is required to be in a fire-resisting shaft. The lift is required to be fire isolated shaft due to this connecting the five storeys of the building. The lift which connects the basement carpark opens directly into the non-fire isolated stair contained within the residential portion of the building. The risk in this instance is that a fire within the carpark will promote the spread of fire, smoke and heat through the shaft, in particular as the lift door is not smoke separated the creates a pathway through the building. A smoke lobby has been created on the basement level and hence this addresses the issue. The doors to the lobby must be smoke sealed and self closing. Additionally, the stair on the upper level is not located within a shaft and therefore compliance with this clause is achieved. Additionally, the garbage passenger lift is located within the same shaft as the fire isolated stair serving the pump room. This arrangement is shown below:

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				 **Figure 3 – Fire isolated stair and passenger lift are located within the same shaft** To be redesigned to comply.
C3D13 *C2.12*	Separation of equipment	✓	Compliance advice	Equipment including lift motors and lift control panels, emergency generators used to sustain emergency equipment operating in the emergency mode, boilers, central smoke control plant or specific battery systems are required to be separated from the remainder of the building via fire resisting construction as prescribed by Specification 5 or not less than 120/120/120 and any doorway protected with a self-closing fire door having an FRL of not less than -/120/30. Separation of on-site fire pumps must comply with AS2419.1-2021.
C3D14 *C2.13*	Electricity supply system	✓	Compliance advice	Electrical substations are not detailed to be located within the building. Where proposed, an electrical substation located within the building, main switchboard sustaining emergency equipment, electrical conductors etc. must be separated from the remainder of the building via construction achieving an FRL of 120/120/120.
C3D15 *C2.14*	Public corridors in Class 2 and 3 buildings	✓	✓	In a Class 2 or 3 building, a public corridor, if more than 40m in length must be divided at intervals of not more than 40m with smoke-proof walls complying with Clause S11C2 of Specification 11. This is considered generally compliant throughout the building as corridor lengths do not exceed 40m.
PART C4 - PROTECTION OF OPENINGS				
C4D1 *C3.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
C4D2 *C3.1*	Application of Part	✓	Note only	Applies as noted.
C4D3 *C3.2*	Protection of openings in external walls	✓	**X**	If the distance between an opening and the fire-source feature to which it is exposed to is less than: 3m from a side or rear boundary of the allotment, 6m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a

storey at or near ground level or 6m from another building on the allotment that is not a Class 10.

Openings are proposed to be located within 3m of the allotment boundary. The affected openings are highlighted below.

Note. the openings serving bedrooms are required to be openable to achieve natural light and ventilation in accordance with BCA Part F4. These windows are not permitted to be fixed closed.

To be redesigned to comply or a Fire Engineered Performance Solution is required to address this item.

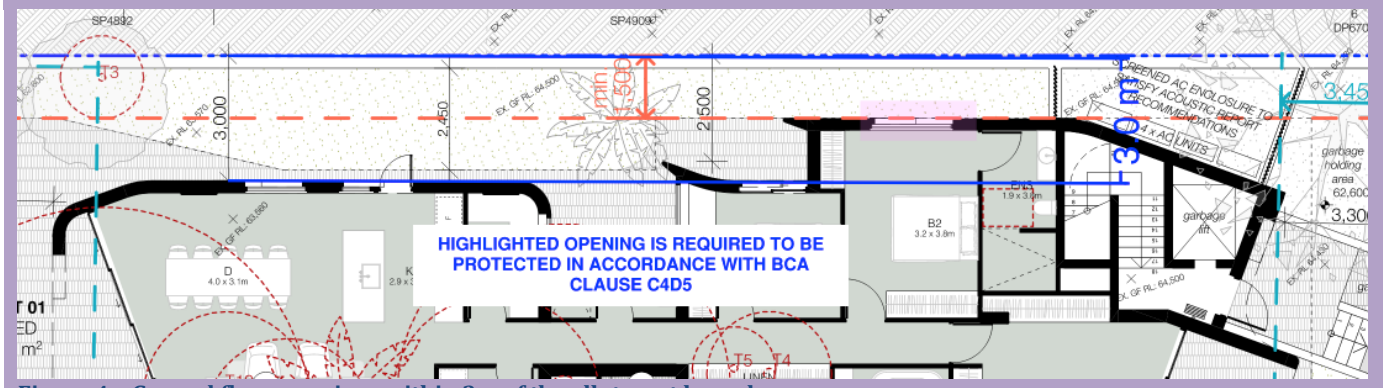


Figure 4 – Ground floor openings within 3m of the allotment boundary

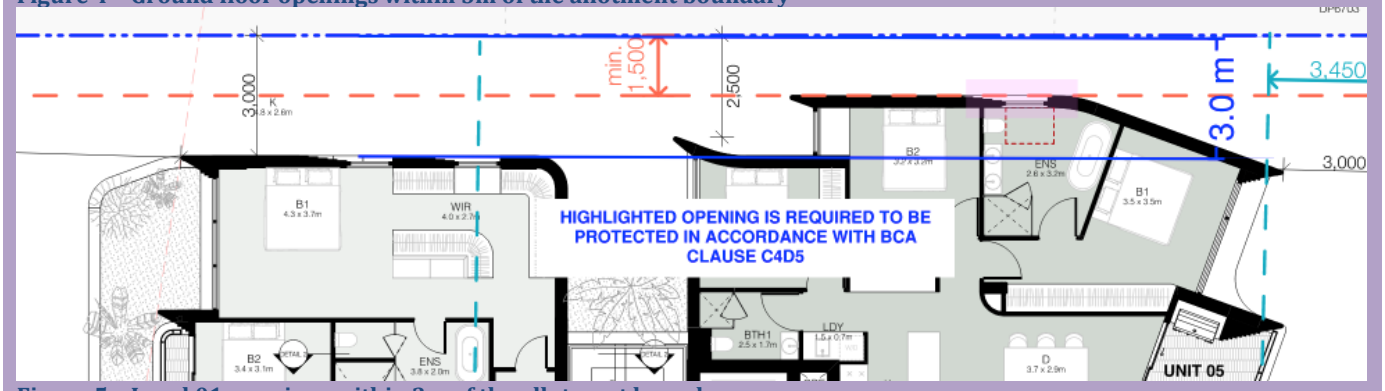


Figure 5 – Level 01 openings within 3m of the allotment boundary

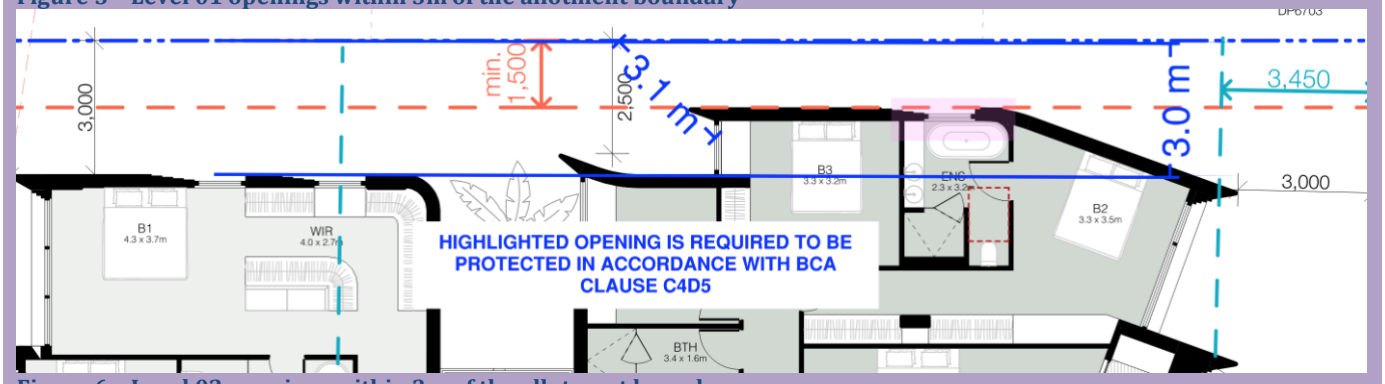


Figure 6 – Level 02 openings within 3m of the allotment boundary

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CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
C4D4 *C3.3*	Separation of openings in different fire compartments	**X**	N/A	Not applicable to this building – no separate fire compartments contained within the building.
C4D5 *C3.4*	Acceptable methods of protection	✓	Note – Method of achieving compliance	Where protection is required, doorways, windows and other openings must be protected as follows: (i) Doorways— (A) internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or (B) –/60/30 fire doors that are self-closing or automatic closing. (ii) Windows — (A) internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or (B) –/60/– fire windows that are automatic closing or permanently fixed in the closed position; or (C) –/60/– automatic closing fire shutters. (iii) Other openings— (A) excluding voids — internal or external wall-wetting sprinklers, as appropriate; or (B) construction having an FRL not less than –/60/–. (b) Fire doors, fire windows and fire shutters must comply with Specification 12.
C4D6 *C3.5*	Doorways in fire walls	**X**	N/A	Not applicable – no fire doors are detailed within the architectural drawings.
C4D7 *C3.6*	Sliding fire doors	**X**	N/A	Not applicable – no sliding fire doors are proposed.
C4D8 *C3.7*	Protection of doorways in horizontal exits	**X**	N/A	Not applicable – no horizontal exits are proposed.
C4D9 *C3.8*	Openings in fire-isolated exits	✓	Compliance advice	Doorways that open to fire-isolated stairways, passageway or ramps must be protected by a -/60/30 fire door that is self-closing or automatic closing in accordance with this clause.
C4D10 *C3.9*	Service penetrations in fire isolated exits	✓	Compliance advice	Fire-isolated exits must not be penetrated by any services other than electrical wiring permitted by D3D8(6), ducting associated with a pressurisation system, services associated with fire service, water supply and test drainpipes.
C4D11 *C3.10*	Openings in fire isolated lift shafts	✓	Compliance advice	Lift doors are required to achieve -/60/- fire door which complies with AS1735.11.
C4D12 *C3.11*	Bounding construction Class 2, 3 and 4 buildings	✓	Compliance advice	A doorway in a Class 2 building must be protected if it provides access from a sole-occupancy unit to a public corridor, public corridor or the like, a room not within a sole occupancy unit or another sole occupancy unit. Or from a room not within a sole occupancy unit.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				The doorway must be protected via a -/60/30 self-closing fire door, for Type A Construction.
C4D13 *C3.12*	Openings in floors for services	✓	Compliance advice	Where a service passes through a floor or ceiling required to achieve a Fire Resistance Level or resistance to the incipient spread of fire, the service must be constructed within a shaft complying with Specification 5 or in accordance with BCA Clause C4D15.
C4D14 *C3.13*	Openings in shafts	✓	Compliance advice	In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, garbage, or other service shaft must be fire protected in accordance with this clause.
C4D15 *C3.15*	Openings for service installations	✓	Compliance advice	Where services pass through an element which is required to achieve a FRL (other than an external wall or roof) the service must be fire protected in accordance with this Clause.
C4D16 *C3.16*	Construction Joints	✓	Compliance advice	Construction joints required to be fire rated in fire rated suspended slabs, if used. (AS1530.4)
C4D17 *C3.17*	Columns protected with lightweight construction to achieve an FRL	✓	Compliance advice	Assumed no columns to be protected with lightweight construction. Where proposed, columns shall be protected in fire rated plasterboard to be compliant with this clause.

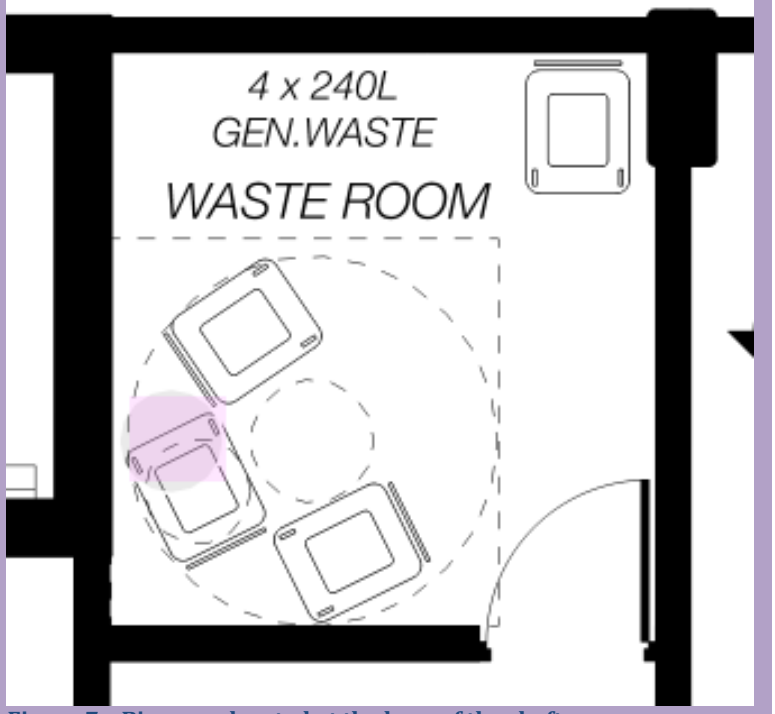
SPECIFICATIONS REFERENCED WITHIN SECTION C

Spec 5	Fire-resisting construction	✓	Applies	Refer to Specification 5 assessment contained below.
Spec 6	Structural tests for lightweight construction	✓	Applies	Applies for proposed lightweight cladding utilised to achieve fire resisting construction.
Spec 7	Fire hazard properties	✓	Applies	Applies to the building as per BCA Clause C2D11.
Spec 8	Performance of external walls in fire	X	N/A	Not applicable.
Spec 9	Cavity barriers for fire-protected timber	X	N/A	Not applicable.
Spec 10	Fire-protected timber	X	N/A	Not applicable.
Spec 11	Smoke-proof walls in health-care and residential care buildings	X	N/A	Not applicable.
Spec 12	Fire doors, smoke doors, fire windows and shutters	✓	Applies	Applies to the building as per the requirements of BCA Clause C3D15
Spec 13	Penetration of walls, floors and ceilings by services	✓	Applies	Applies to the building as per BCA Clause C4D13.

CLAUSE	REFERENCE	APPLICABLE	COMMENT

SPECIFICATION 5 – FIRE RESISTING CONSTRUCTION

CLAUSE	REFERENCE	APPLICABLE	COMMENT
S5C2	Exposure to fire source feature	**Noted**	The building is required to be constructed in accordance with Table S5C11a of Specification 5.
S5C3	Fire protection for a support of another part	**Noted**	Where a part of a building required to achieve a fire resistance level depends upon the direct or lateral support from another part to maintain its fire resistance level, the supporting part must have FRL not less that required by BCA Specification 5 throughout.
S5C4	Lintels	**Noted**	A lintel must achieve the fire resistance level required for the part of building. This does not apply to non-loading bearing walls of a Class 2 part of the building.
S5C5	Method of attachment not to reduce the fire-resistance of the building elements	**Noted**	The method of attaching or installing a finish, lining, ancillary element or service installation to the building element must not reduce the fire resistance of that element to below that required. Refer to BCA Clause C2D14 for details regarding achieving compliance for attachments to the external wall of the building.
S5C6	General concessions	**N/A**	None proposed.
S5C6(1)	Steel columns	**N/A**	None proposed.
S5C6(2)	Timber structures	**N/A**	None proposed.
S5C6(3)	Structures on roofs	**N/A**	None proposed.
S5C6(4)	Curtain walls and panel walls	**Noted**	None proposed.
S5C6(5)	Balconies and verandahs	**N/A**	Noted but not applicable.
S5C7	Mezzanine Floors: Concession	**N/A**	Concession noted but is not applicable.
S5C8	Enclosure of shafts	**X**	Shafts which ware required to achieve a fire resistance level must be enclosed at the top and bottom by construction achieving a fire resistance level not less than that required for the wall of a non-loadbearing shaft in the same building. This does 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. Typically, the garbage shaft located within the building which opens into the bin room does not comply with the provisions of this clause as the waste room contains bins which is an item other than an area reserved for services.

CLAUSE	REFERENCE	APPLICABLE	COMMENT
			 **Figure 7 – Bin room located at the base of the shaft** A Fire Engineered Performance Solution may be sought at the Construction Certificate stage of the application.
S6C9	Car parks in Class 2 and 3 buildings	**N/A**	Not applicable – the building contains more than four storeys.
C5C10	Residential care buildings	**N/A**	Not applicable.
Type A Construction			
S5C11	Type A fire resisting construction – fire-resistance of building elements	**Noted**	Refer to extract below for fire resistance levels required to be achieved.
S5C11(1)	Fire resistance of building elements	**Noted**	Each building element listed in Tables S5C11a to S5C11g and any beam or column incorporated in it, must have an FRL not less than that listed in those Tables for the particular Class of building concerned. Detailing of the façade junction to the slab edge between storeys within the building is required to be considered. To achieve compliance with the required fire rating (120-minutes for carparks and 90-minutes for residential levels) the floor slab must extend through the wall. Where required a Fire Engineered Performance Solution may be sought to address this item, where required.
S5C11(2)	Fire protected timber	**N/A**	Not applicable.
S5C11(3)	External wall includes any column incorporated within	**Noted**	Noted.

CLAUSE	REFERENCE	APPLICABLE	COMMENT
S5C12	Concessions for floors	**N/A**	Concession noted but is not applicable.
S5C13	Floor loading of Class 5 and 9b buildings: Concession	**N/A**	Concession noted but is not applicable.
S5C14	Roof superimposed on concrete slab	**N/A**	Concession noted but is not applicable.
S5C15	Roof: Concession	**Applies**	Concession applies – the building is a Class 2 building.
S5C16	Roof lights	**N/A**	Not applicable.
S5C17	Internal columns and walls concession	**N/A**	Concession noted but is not applicable.
S5C18	Open spectator stands and indoor sports stadiums: Concession	**N/A**	Concession noted but is not applicable.
S5C19	Carparks	**N/A**	Concession noted but is not applicable.
S5C20	Class 2 and 3 buildings: Concession	**N/A**	Not applicable – this concession does not apply due to the building incorporating a Class 7a component within the building.

TYPE A CONSTRUCTION DISTANCE FROM A FIRE SOURCE FEATURE	FRL (IN MINUTES): STRUCTURAL ADEQUACY/INTEGRITY/INSULATION CLASS 2, 3 OR 4 PART	CLASS 5, 7A OR 9
Table S5C11a: Type A Construction: FRL of loadbearing parts of external walls		
Less than 1.5m	90/90/90	120/120/120
1.5m to less than 3m	90/60/60	120/90/90
3m or more	90/60/30	120/60/30
Table S5C11b: Type A Construction: FRL of non-loadbearing parts of external walls		
Less than 1.5m	-/90/90	-/120/120
1.5m to less than 3m	-/60/60	-/90/90
3m or more	-/-/-	-/-/-
Table S5C11c: Type A Construction: FRL of external columns not incorporated in an external wall		
Loadbearing	90/-/-	120/-/-
Non-loadbearing	-/-/-	-/-/-
Table S5C11d: Type A Construction: FRL of common walls and fire walls		
Loadbearing or non-load bearing	90/90/90	120/120/120
Table S5C11e: Type A Construction: FRL of loadbearing internal walls		
Fire-resisting lift and stair shafts	90/90/90	120/120/120
Bounding public corridors, public lobbies and the like	90/90/90	120/-/-
Between or bounding sole-occupancy units	90/90/90	120/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion	90/90/90	120/90/90
Table S5C11f: Type A Construction: FRL of non-load bearing internal walls		
Fire-resisting lift and stair shafts	-/90/90	-/120/120
Bounding public corridors, public lobbies and the like	-/60/60	-/-/-
Between or bounding sole-occupancy units	-/60/60	-/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion	-/90/90	-/90/90
Table S5C11g: Type A Construction: FRL of other building elements not covered by Tables S5C11a to S5C11f		
Other loadbearing internal walls, internal beams and trusses	90/-/-	120/-/-
Floors	90/90/90	120/120/120
Roofs	90/60/30	120/60/30

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
SECTION D – ACCESS AND EGRESS				
PART D2 – PROVISION FOR ESCAPE				
tD2D1 *D1.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
D2D2 *D1.1*	Application of Part	✓	Note only	Applies as noted.
D2D3 *D1.2*	Number of exits required	✓	**X**	Each storey is required to be provided with an exit from the storey. Basements – In addition to any horizontal exit, not less than two exits must be provided from a storey that involves a vertical rise within the building of more than 1.5m. Each residential storey is provided with a single exit from each level and is considered generally compliant. The basement level contains a vertical rise within the building of more than 1.5m and is therefore required to be provided with two exits. The arrangement currently contains a single fire isolated stair. A Fire Engineered Performance Solution may be sought to address this item.

Figure 8 – Egress from Basement Level

D2D4 *D1.3*	When Fire isolated exits are required	✓	Compliance advice	In a Class 2 building, every stairway or ramp serving as a required exit must be fire-isolated unless it connects not more than three storeys. An extra storey may be included

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				in this calculation where a sprinkler system (other than an FPAA101D system is installed). It is recommended that an AS2118 sprinkler system is installed throughout the building (alternatively an FPAA101H system may be installed). In a Class 7 building every stairway or ramp serving as a required exit must be fire isolated where connecting more than two storeys. The stair serving the basement level appears to be fire isolated (required where accessing the pump room).
D2D5 *D1.4*	Exit Travel Distances	✓	**X**	<u>Class 7a parts of the buildings –</u> No point on a floor must be more than 20m from an exit, or a point from which travel in different directions to two exits is available, in which case the maximum distance to one of those exits must not exceed 40m; and <u>Class 2 parts of the buildings –</u> The entrance doorway of any sole-occupancy unit must be not more than 6m from an exit or from a point from which travel in different directions to two exits is available or 20m from a single exit. Additionally, no point on the floor of a room which is not in a sole-occupancy unit must be more than 20m from an exit or from a point at which travel in different directions to two exits is available. <u>Basement:</u> The basement carparking level is in the order of 41m in lieu of 20m to a single exit. Where a Fire Engineered Performance Solution is undertaken to configure the roller door as an alternative exit compliance with this clause is achieved. <u>Ground Floor:</u> The residential SOUs located on the ground floor are located within 20m of a single exit. This is considered generally compliant. As the pool/sanitary compartment is provided with direct egress to the road (Glen Lane). This is not considered an occupiable outdoor area. <u>Level 01:</u> Level 01 is provided with a single exit whereby distance to this exit is approximately 7m in lieu of 6m. This is shown below. <u>Remaining Residential SOU levels:</u> Distance of travel is within 6m to a single exit.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT

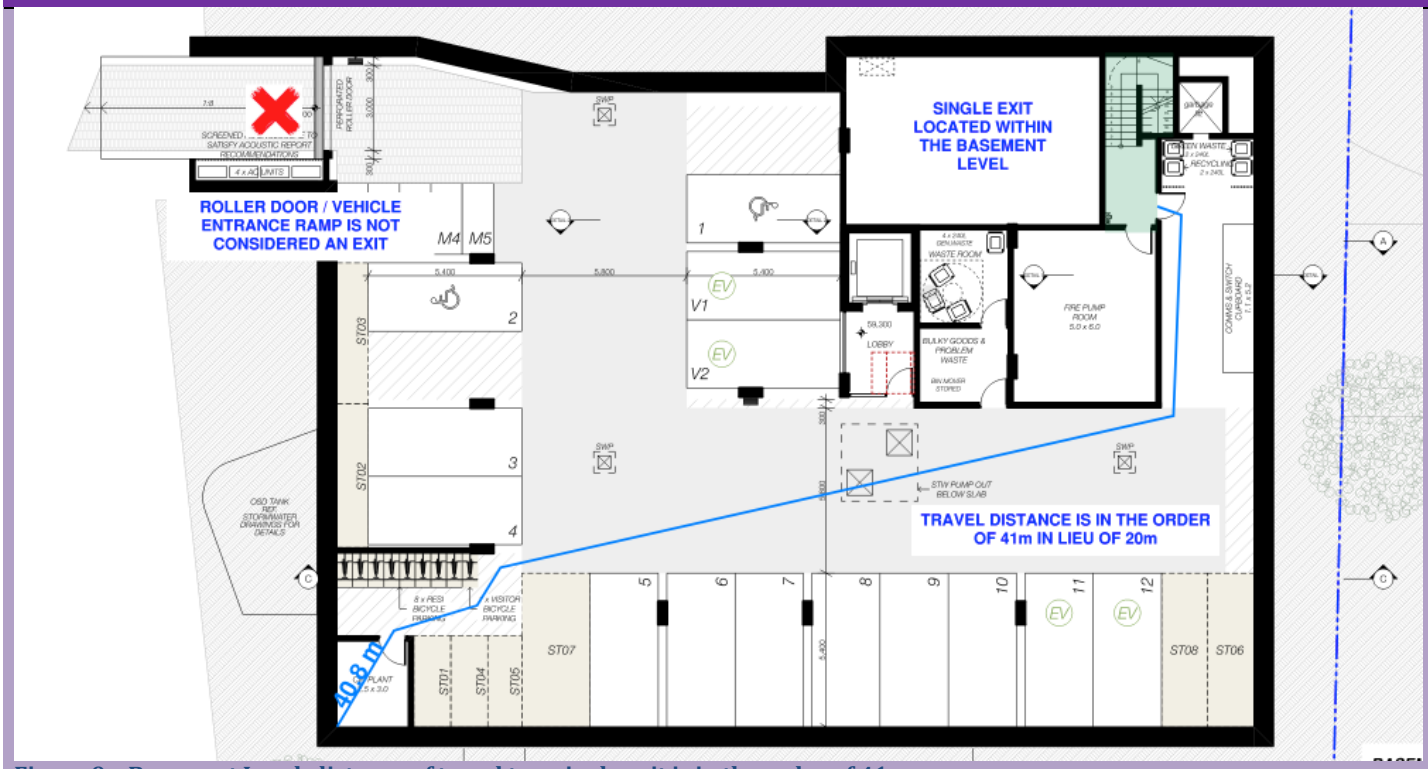


Figure 9 – Basement Level, distance of travel to a single exit is in the order of 41m

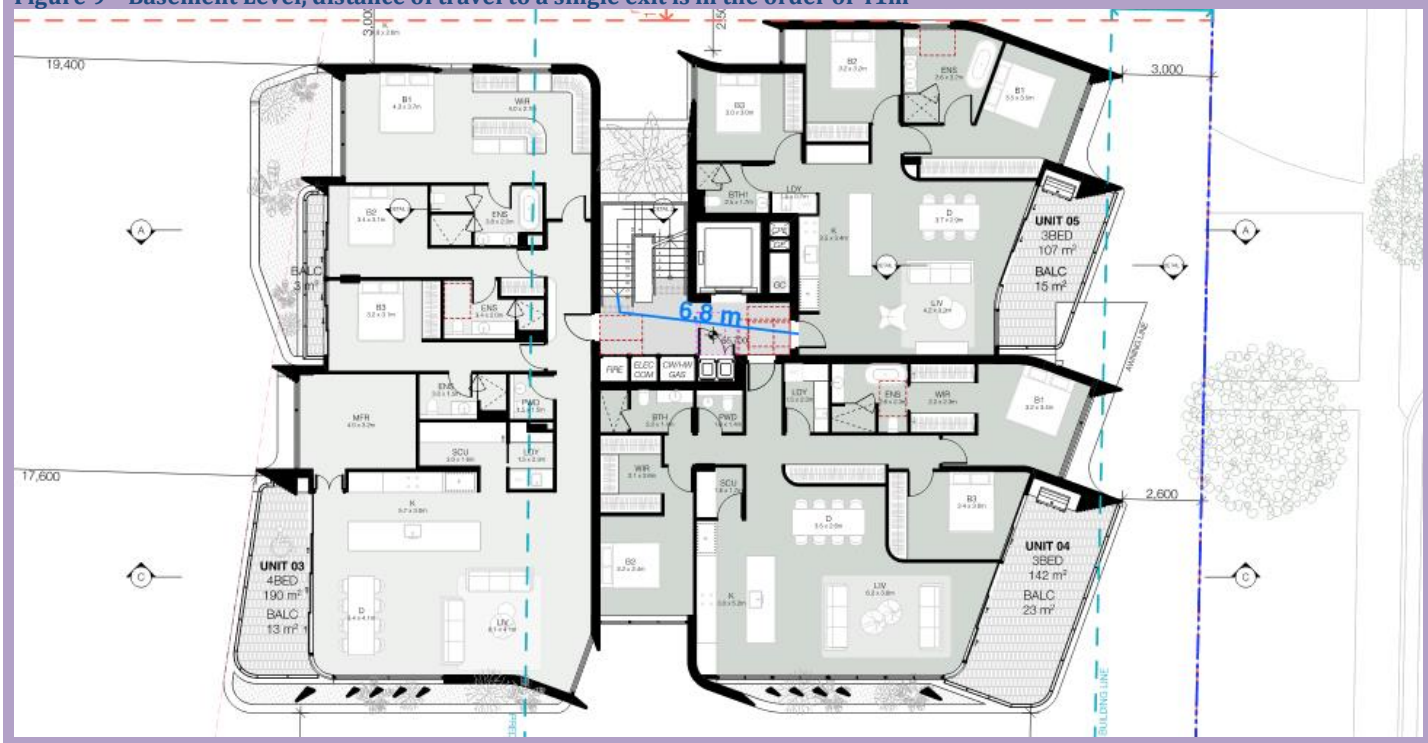
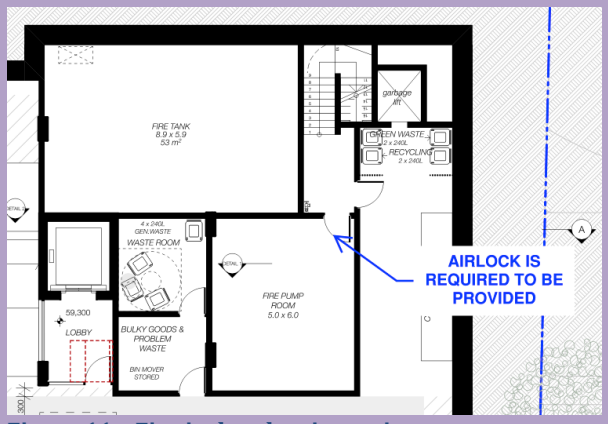


Figure 10 – Level 1, distance of travel to a single exit is in the order of 7m in lieu of 6m

D2D6 *D1.5*	Distances between alternative exits	**X**	N/A	Not applicable – no alternative exits are proposed as part of the layout.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
D2D7 *D1.6*	Heights of exits, paths of travel to exits and doorways	✓	Compliance advice	In a required exit or path of travel to an exit the unobstructed height throughout must not be less than 2m, except the unobstructed height of any doorway may be reduced to not less than 1980mm.
D2D8 *D1.6*	Width of exits and paths of travel to exits	✓	Compliance advice	The unobstructed width of each required exit or path of travel to an exit (except for ladders, provided in accordance with BCA Clause D2D21, D3D23 or I3D5) and doorways must not be less than: 1m. This is generally capable of achieving compliance. Details demonstrating compliance is required to be incorporated within the Construction Certificate documentation.
D2D9 *D1.6*	Width of doorways in exits or paths of travel to exits	✓	Compliance advice	In a required exit or path of travel to an exit, the unobstructed with must be not less than 750mm wide. Note. BCA Part D4 requires a minimum of 850mm unobstructed width to doorways in buildings required to be accessible. A door schedule confirming compliance with this clause must be incorporated within the Construction Certificate documentation.
D2D10 *D1.6*	Exit width not to dimmish in direction of travel	✓	Compliance advice	The unobstructed width of a required exit must not dimmish in the direction of travel to a road or open space, except where the width is increased in accordance with BCA Clause D2D8(1)(b) or D2D9(a)(i).
D2D11 *D1.6*	Determination and measurement of exits and paths of travel to exits	✓	Note – method of measurement	The required width of a stairway or ramp in a required exit or path of travel is to be measured clear of all obstructions such as handrail, projecting parts of barriers and the like. This must extend without interruption, except for ceiling cornices to a height not less than 2m vertically above a line along the nosing of the treads or the floor surface of the ramp or landing.
D2D12 *D1.7*	Travel via fire isolated exits	✓	**X**	A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire isolated unless its from, a public corridor, public lobby or the like, a sole occupancy unit occupying all of a storey or sanitary compartment, airlock or the like. Each fire isolated stairway or fire-isolated ramp must provide independent egress from each storey served directly, or by way of its own fire isolated passageway To a road or open space; To a point: (i) in a storey or space, within the confines of the building, that is used only for pedestrian movement, carp parking or the like and is open for at least 2/3 of its perimeter; and (ii) from which an unimpeded path of travel, not further than 20m, is available to a road or open space; or Into a covered area that: (i) adjoins a road or open space; (ii) is open for at least 1/3 of its perimeter; and

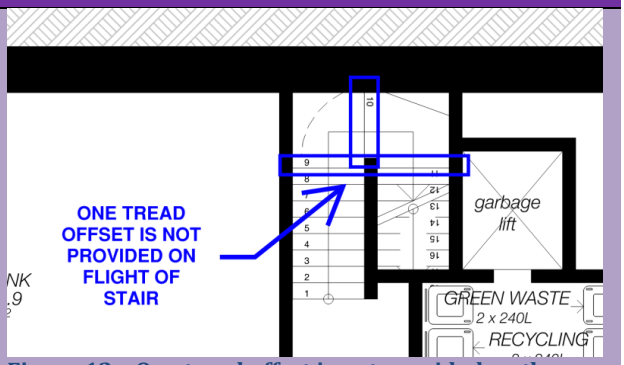
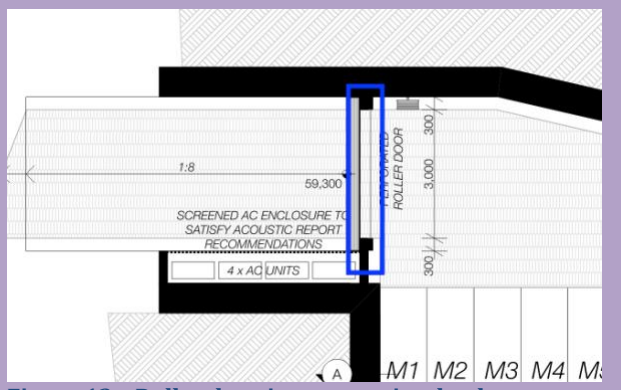
CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				(iii) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3m; and (iv) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6m. Where the fire isolated exit discharges whereby occupant pass within 6m of any part of the external wall of the same building (measured horizontally at right angles) to the path of travel, the part of the wall must achieve an FRL of not less than 60/60/60 and any openings protected internally in accordance with C4D5. The protection required above must extend for a distance of 3m above or below as appropriate the level of the path or for the height of the wall, whichever is lesser. The discharge of this stair appears generally compliant. The fire isolated stair serving the fire tank room and fire hydrant pump room directly connects onto this stair. An airlock is required to be provided:  **Figure 11 – Fire isolated stair serving pump room** To be redesigned to comply to be provided with an airlock to the fire hydrant pump room.
D2D13 *D1.8*	External stairways or ramps in lieu of fire-isolated exits	**X**	N/A	Not applicable.
D2D14 *D1.9*	Travel by non-fire-isolated stairways or ramps	✓	✓	The stairs serving the residential levels is permitted to be a non-fire isolated stair where a sprinkler system (other than an FPAA101D) is installed within the building 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 (part) of the 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 stair must not exceed 60m. This is generally achieved throughout the building.

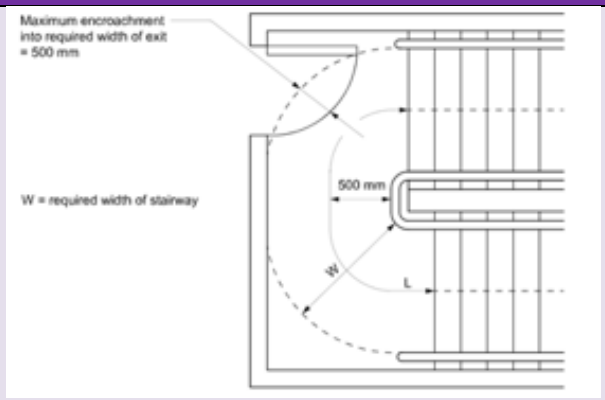
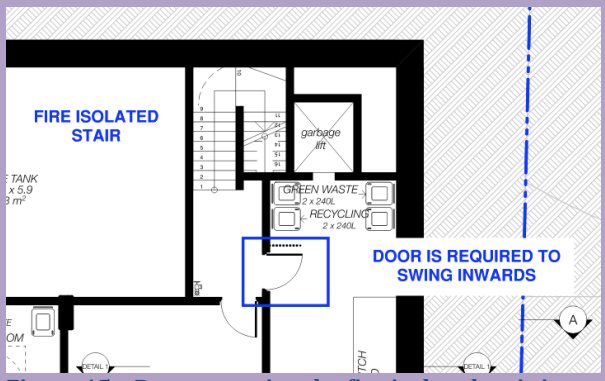
CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
D2D15 *D1.10*	Discharge from exits	✓	Compliance advice	An exit must not be blocked at the point of discharge and where required suitable barriers must be provided to prevent vehicles from blocking the exit or access to it. The path of travel to a road or open space must have an unobstructed width throughout out of not less than 1m or the minimum width of the required exit, whichever is greater. Where an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be a ramp or other incline having a gradient not steeper than 1:8 at any part, or 1:14 where required by BCA Part D4. Where the vehicle entrance ramp is configured as an exit for occupants egressing from the basement. The ramps within the basement carpark are required to not exceed a gradient of 1:8.
D2D15(6) *D1.10(f)* *NSW*	Class 9b - place of public entertainment	**X**	N/A	Not applicable – the building is not deemed place of public entertainment.
D2D16 *D1.11*	Horizontal exits	**X**	N/A	Not applicable – no horizontal exits detailed.
D2D17 *D1.12*	Non-Required stairways ramps and escalators	**X**	N/A	Not applicable - no non-required stairways, ramps or escalators proposed.
D2D18 *D1.13*	Number of persons accommodated	✓	Note only	Class 7a – Carpark allows for 30m² per person.
D2D19 *D1.14*	Measurement of distances	✓	Note only	Noted.
D2D20 *D1.15*	Method of measurement	✓	Note only	Noted.
D2D21 *D1.16*	Plant rooms and lift motor rooms: Concession	✓	Compliance advice	A ladder may be used in lieu of a stairway to provide egress from a plat room with a floor area of not more than 100m². Where proposed, the ladder is required to comply with this clause.
D2D22 *D1.17*	Access to lift pits	✓	Compliance advice	Access to lift pits must, where the pit depth is not more than 3m, be through the lowest landing doors or where the pit depth exceeds 3m, be provided through an access doorway complying with this clause.
D2D23 *D1.18*	Egress from primary schools	**X**	N/A	Not applicable – the building is not considered a primary school.
PART D3 - CONSTRUCTION OF EXITS				
D3D1 *D2.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
D3D2 *D2.1*	Application of Part	✓	✓	Applies as noted: BCA Clauses D3D14, D3D15(a), D3D17, D31D18, D3D19, D3D20, D3D22(5), D322(6), D3D23 and D3D29, the Deemed-to-Satisfy provisions of this Part do not apply to the internal parts of a sole occupancy unit in a Class 2 building or Class 4 parts of a building.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
D3D3 *D2.2*	Fire-Isolated stairways and ramps	✓	Compliance advice	A stairway or ramp (including any landings) that is required to be within a fire-resisting shaft must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage to or impair the fire resistance of the shaft.
D3D4 *D2.3*	Non-Fire-Isolated stairways and ramps	✓	Compliance advice	Non fire isolated stairways and ramps must be constructed of— • Reinforced or prestressed concrete; or • Steel in no part less than 6mm thick; or • Timber that— o Has a finished thickness of not less than44 mm; and o Has an average density of not less than 800kg/m³ at a moisture content of 12%; and o has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue.
D3D5 *D2.4*	Separation of rising and descending stair flights	✓	✓	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 the flight descending from a store above that level. Compliance with this clause is achieved.
D3D6 *D2.5*	Open access ramps and balconies	**X**	N/A	No open access ramp proposed or required to meet smoke hazard management.
D3D7 *D2.6*	Smoke lobbies	**X**	N/A	Not applicable – no smoke lobbies are proposed.
D3D8 *D2.7*	Installations in exits and paths of travel	✓	Compliance advice	Any electricity meters, distribution boards, telecommunications distribution boards or equipment, electrical motors or other motors within corridors, hallways and lobbies or the like must be enclosed with non-combustible construction of a fire protective covering with doorways suitably sealed against smoke spread.
D3D9 *D2.8*	Enclosure of space under stairs and ramps	✓	✓	The stairs appear generally compliant as no details suggest the stairs are proposed to be enclosed.
D3D10 *D2.9*	Width of stairways	**X**	N/A	Not applicable - No stair are proposed in excess of 2m.
D3D11 *D2.10*	Pedestrian ramps	✓	Compliance advice	Any proposed ramp serving as a required exit must be constructed in accordance with BCA Part D4 and AS1428.1-2009 where required to be accessible or in any other case, achieve a gradient not steeper than 1:8. Any new pedestrian ramps are required to achieve a non-slip finish complying with AS4586-2013 slip resistance classification of new pedestrian surface materials.
D3D12 *D2.11*	Fire Isolated passageways	✓	Compliance advice	The enclosing construction of a fire isolated passageway must achieve a fire resistance level when tested for fire outside the passageway. This applies to the basement stair where providing access to a fire hydrant pump room
D3D12 *D2.12*	Roof as open space	**X**	N/A	Not applicable – the roof is not considered open space.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
D3D14 *D2.13*	Goings and risers	✓	Compliance advice	Stairways must comply with the following: •Not more than 18 and not less than two risers in each flight of stairs. •Goings must be between 240mm and 355mm within the residential units; •Goings must be between 250mm and 355mm in other area; •Risers must be between 115mm high and 190mm high; •The slope relationship (2x riser dimensions going dimension) must be within the range of 550-700mm; •The goings and risers must be constant (uniform) throughout each flight in accordance with this clause. •Each tread must have a non-slip finish or an adequate non-skid strip near the edge of the nosings; •Treads must be of solid construction (not mesh or perforated) if the stairway is more than 10m high or connects more than three storeys. •Treads must have a surface with a slip-resistant classification not less than that listed in BCA Table D3D14 when tested in accordance with AS4586-2013 slip resistance classification of new pedestrian surface materials. Details demonstrating compliance with this clause must be included in documentation for a Construction Certificate.
D3D15 *D2.14*	Landings	✓	Compliance advice	Landings must not be less than 750mm long and have a slip-resistant classification not less than that listed in BCA Table D3D15 when tested in accordance with AS4586-2013 slip resistance classification of new pedestrian surface materials. The Building Code of Australia 2022, Volume 1 does not directly specify slip-resistance classification(s) for all accessible paths of travel; however, we highlight the need under AS1428.1-2009 for all accessible paths of travel to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant.
D3D16 *D2.15*	Thresholds	✓	Compliance advice	The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door unless: In a building required to be accessible by BCA Part D4, the doorway opens to a road or open space and is provided with a threshold ramp or step ramp in accordance with AS1428.1-2009. Compliance with this clause appears readily achievable. Details demonstrating compliance with this clause is required to be incorporated within the Construction Certificate documentation.
D3D17 *D2.16*	Barriers to Prevent Falls	✓	Compliance advice	A continuous barrier must be provided along the side of: A roof to which general access is provided; A stairway or ramp;

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				A floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and Any delineated path of access to a building. If the trafficable surface is 1m or more above the surface beneath. The barrier is required to be constructed in accordance with BCA Clauses D3D18, D3D19, D3D20 and if a wire barrier is used D3D21.
D3D18 *D2.16*	Heights of barriers	✓	Compliance advice	The height of barriers required by BCA Clause D3D17 must be: Stairway or ramps with a gradient of 1:20 or steeper – 865mm. Landing to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500mm in length – 865mm. For all other locations – 1m. Barrier heights are measured vertically from the surface beneath, except that for stairways the height must be measured above the nosing line of the stair tread. A transition zone may be incorporated where the barrier height changes from 865mm on a stair flight or ramp to 1m at the landing or floor.
D3D19 *D2.16*	Openings in barriers	✓	Compliance advice	Opening in required barriers must not allow for a 125mm sphere to pass through. In a fire-isolated stairway, ramp or other area used primarily for emergency purposes, openings in a required barrier must not allow a 300mm sphere to pass through, or where rails are used a 150mm sphere must not be able to pass through the opening between the nosing line of the stair treads and the rail or between the rail and the floor of the landing, balcony or the like and the openings between rails must not be more than 460mm.
D3D20 *D2.16*	Barrier climbability	✓	Compliance advice	A barrier required by BCA Clause D3D17, located on a floor more than 4m above the surface beneath must not incorporated horizontal or near horizontal elements that could facilitate climbing between 150mm and 760mm above the floor.
D3D21 *D2.16*	Wire barriers	✓	Compliance advice	Where the barrier is proposed to be constructed of wire, compliance is achieved where proposed in accordance with this clause.
D3D22 *D2.17*	Handrails	✓	**X**	Handrails are required to be installed at a height not less than 865mm and be continuous between stair flight landings and have no obstruction on or above them that ill tend to break a handhold. The height of the handrail is measured above the nosing. Handrails are not currently noted on the drawings. The stair between the basement and ground floor does not provide a one-tread set back after the mid landing, resulting in a handrail with inconsistent height.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				 **Figure 12 – One tread offset is not provided on the mid landing and flight of stairs to facilitate a continuous handrail to be installed throughout the flight** To be redesigned to comply or a BCA Performance Solution is required to be sought to address this item.
D3D23 *D2.18*	Fixed platforms, walkways stairways and ladders	✓	Compliance advice	Machinery rooms, boiler houses, lift machine rooms, plant rooms and the like may be access via a fixed platform, walkway, stairway or ladder complying with AS1657-2018 in lieu of the requirements contained above.
D3D23 *D2.19*	Doorways and doors	✓	**X**	Roller doors are not permitted to form part of the required exit. A roller door is proposed to the vehicle entrance ramp. This is shown below:  **Figure 13 – Roller door is not permitted to be configured as a required exit** Where this is configured as an exit, a Fire Engineered Performance Solution is required to address this item.
D3D25(1) *D2.20(a)*	Swinging doors	✓	Compliance advice	A swinging door in a required exit or forming part of a required exit must not encroach within 500mm on the required width (including any landings). This is shown within the figure below:

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				 **Figure 14 – Extract from the Guide to the BCA** Compliance with this clause appears to be capable of achieving compliance. Details demonstrating compliance with this clause is required to be incorporated within the Construction Certificate documentation.
D3D25(2) *D2.20(b)*	Swinging doors	✓	**X**	Doorways are required to swing in the direction of egress. The required exits within the building appear generally compliant and swing outwards in accordance with the prescriptive requirements. Notably, the door serving the ground floor lift lobby appears to swing in both directions. Compliance with this clause is readily achieved. The stair discharging to the fire isolated stair is required to swing inwards (direction of egress). This doorway is shown below:  **Figure 15 – Door accessing the fire isolated stair is required to swing inwards** To be redesigned to swing the door inwards (i.e.. In the direction of egress).
D3D26 *D2.21*	Operation of latch	✓	Compliance advice	A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be openable without a key from the side that faces a person seeking egress in accordance with this clause.
D3D27 *D2.22*	Re-entry from fire isolated exits	**X**	N/A	Not applicable to the proposed building.
D3D28 *D2.23*	Signs on doors	✓	Compliance advice	Information clause relevant to the provision of signs on required fire doors to alert people that operation of these doors is not to be impaired.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				Refer also to offence signage required by Clause 183 of the EP&A Regulation (EPAR) 2000.
D3D29 *D2.24*	Protection of openable windows	✓	Compliance advice	A window opening must be provided with protection if the floor beneath the window is 2m of more above the surface beneath within a bedroom of a Class 2 building.
D3D30 *D2.25*	Timber Stairways: Concession	**X**	Noted	Noted – not applicable.
PART D4 - ACCESS FOR PEOPLE WITH DISABILITIES				
D4D1 *D3.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
D4D2 *D3.1*	General building access requirements	✓	Note	Buildings are required to be accessible unless otherwise exempt by BCA Clause D4D5. <u>Class 2:</u> common areas are to be accessible including 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. Where a ramp or lift is provided to the entrance doorway of each sole occupancy units or to and within rooms or spaces for use in common by the residents. Access is provided to all levels of the building via passenger lift which services the basement carpark to level three. <u>Class 7a:</u> To and within any level containing accessible carparking spaces. Class 7a only requires access to and within any level containing accessible carparking spaces and the public has access to. Notably, common Class 2 portions of the basement and therefore access is required to the basement levels. <u>Class 10a buildings:</u> For a non-habitable area intended for the use of the public and containing sanitary facilities access must be provided. Class 10b swimming pools: Access is required to and into swimming pools with a total perimeter greater than 40m, associated with the Class 2 portion. The swimming pool is less than 40m in perimeter and therefore access is not required to within the pool.
D4D3 *D3.2*	Access to buildings	✓	**X**	Access is required to the following areas: • 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 carparking spaces on the allotment.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT

The following is noted in relation to accessing the sanitary compartment:

The shower is considered a Class 10a building on the same allotment, a continuous accessible path of travel is required to be provided to this building and common area. Access is not provided to the building as door circulation is not achieved to this doorway.

A minimum of 1220mm is required to be provided (length clearance) for a hinge side approach. Additionally, the accessway indicates showers affixed to the external wall which will encroach within the required accessway (requiring 2m unobstructed height clearance).

This is shown below:

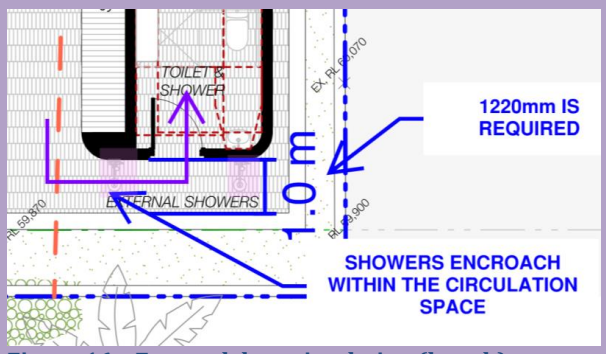


Figure 16 – External door circulation (length) not achieved to the pool Toilet/shower room

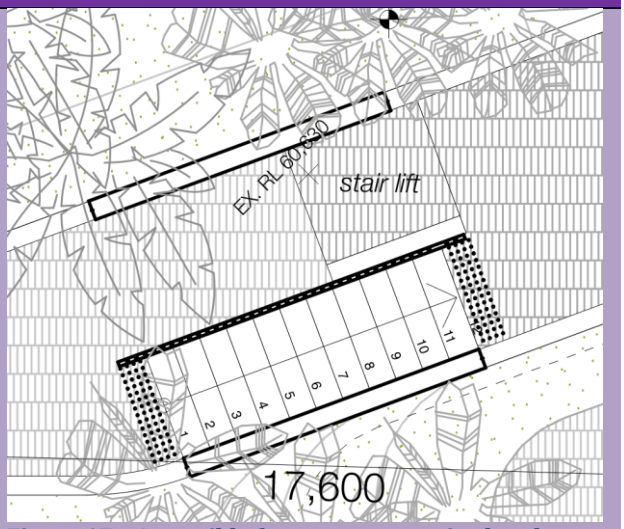
The site is provided with two entrances to the building via Glen Lane and Andrews Avenue. It is proposed to access the building via the following mechanisms:

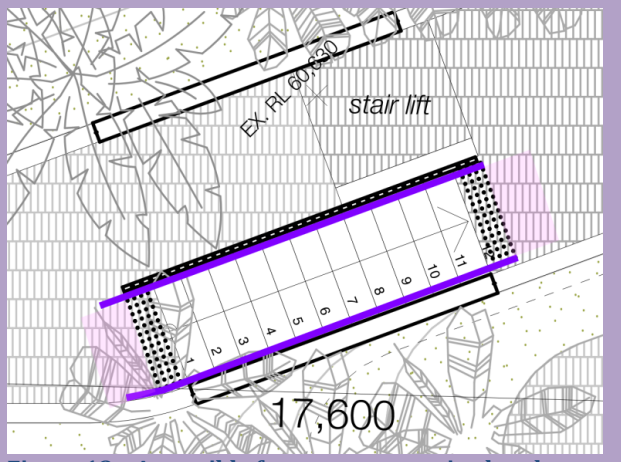
Andrews Avenue:
A 1:20 walkway is proposed to be provided. Door circulation is provided at the entrance doorways.

Glen Lane:
Glen Lane is accessed via an awning and gate entrance. The accessway comprises of both a platform lift with BCA Clause E3D7. A low rise, low speed constant pressure lift is required to be provided.

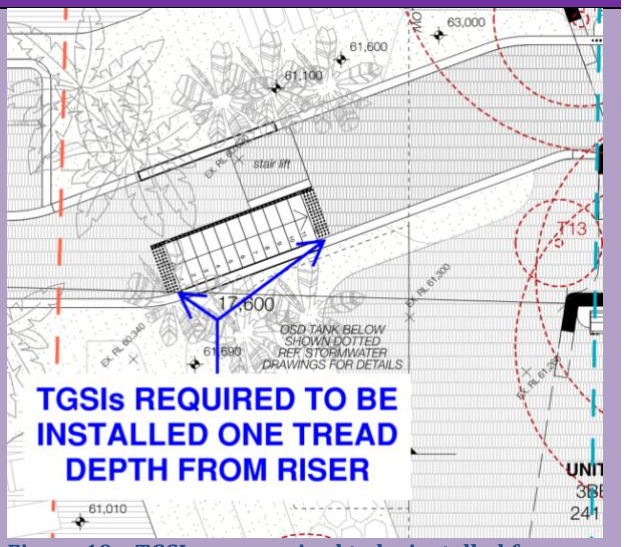
Not all gradients and levels are provided within the architectural drawings to verify the accessway. Compliance with this clause is capable of being incorporated within the Construction Certificate documentation.

The external stairs are required to be provided with accessible features in accordance with BCA Clause D4D4. These accessible features are not currently detailed within the architectural drawings:

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				 **Figure 17 – Accessible features are required to the external stair** To be redesigned to comply.
D4D4 *D3.3*	Parts of buildings to be accessible	✓	**X**	In a building required to be accessible, access is required: • Every ramp or stairway (i) for a ramp (except a fire isolated ramp), clause 10 of AS1428.1; and (ii) for a stairway, except for a fire isolated stairway, Clause 11 of AS1428.1. • Every passenger lift must comply with BCA Clause E3D7; • Accessways must have: (i) passing spaces complying with AS1428.1 at maximum 20m intervals; (ii) turning spaces complying with AS1428.1 - (A) within 2m of the end of accessways where it is not possible to continue along the accessway; and (B) at maximum 20m intervals along the accessway; • An intersection of accessways satisfies the spatial requirements for a passing and turning space; and • a passing space may serve as a turning space; and • A ramp complying with AS1428.1-2009 or a passenger lift need not be provided to serve a storey or level other than the entrance storey in a Class 5, 6, 7b or 8 building containing not more than three storeys and with a floor area for each storey, excluding the entrance storey of not more than 200m^2. • Clause 7.4.1(a) of AS1428.1 does not apply and is replaced with 'the pile height or pile thickness shall not exceed 11mm and the carpet backing thickness shall not exceed 4mm; and • the carpet pile height or pile thickness dimension, carpet backing thickness dimension and their combined dimension shown in Figure 8 of AS 1428.1 do not apply

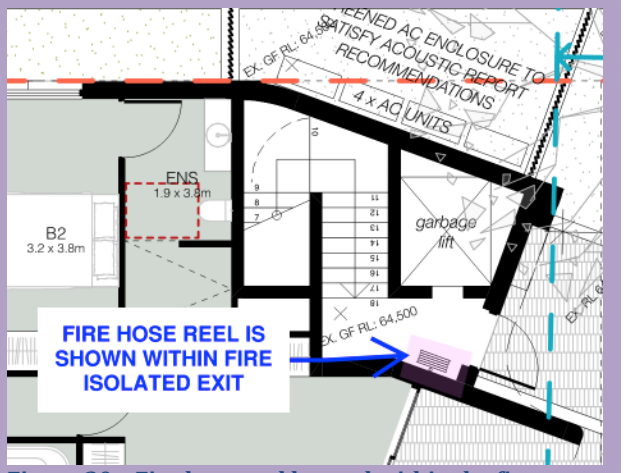
CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				and are replaced with 11mm, 4mm and 15mm respectively. The public corridors are provided with a direct line of sight and therefore passing spaces are not required to be provided. Each corridor is provided with the minimum spatial requirement of 1540mm x 2070mm to facilitate an 180 degree manoeuvrer. As noted above in BCA Clause D4D3, the stair accessing the building from Glen Lane are required to be provided with accessible features. The following is noted in relation to this stair: • The stair is provided with a single handrail, two handrails are required to be provided to the stair. • At the base of the stair, the handrail is required to extend a minimum of one tread + 300mm. This handrail extension is required to run parallel to the path of travel. Due to the slight curve in the external wall this may not achieve compliance with this clause. • The TGSIs are required to be setback a minimum of one tread from the flight of stairs. TGSIs are required to extend for 600mm. This is not currently provided to the flight of stairs and is shown below:  **Figure 18 – Accessible features are required to the external stair** To be redesigned to comply in accordance with the prescriptive requirements of the BCA.
D4D5 *D3.4*	Exemptions	✓	Compliance advice	The following areas are not required to be accessible, where access would be inappropriate because of the particular purpose for which the area is used. An area that would pose a health or safety risk for people with a disability or any path of travel providing access only to these areas. The following areas may be considered exempt: • Fire Pump room – Basement level

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				• CW Plant room – Basement level • Garbage lift area – Basement level Where this access is not proposed to these areas, an exemption may be sought under BCA Clause D4D5. This is to be determined by the Principal Certifying Authority.
D4D6 *D3.5*	Accessible carparking	✓	Note	The basement carparking does not provide direct access, available to the public and therefore accessible carparking spaces are not required. Two designated accessible carparking spaces are provided to this development. Where accessible carparking is proposed it must comply with AS2890.6. Where accessible carparking is proposed it must comply with AS 2890.6. Note. this may be required under the adaptable assessment. Refer to separate adaptable assessment in relation to the non-compliances associated with this clause.
D4D7 *D3.6*	Signage	✓	Compliance advice	Braille and tactile signage is required to be provided in accordance with BCA Specification 15 and incorporate the international symbol of access or deafness, as appropriate in accordance with AS1428.1-2009. To identify each door required by E4.5 to be provided with an exit sign and state – (A) "Exit"; and (B) "Level"; and either (aa) the floor level number; or (bb) a floor level descriptor; or (cc) a combination of (aa) and (bb); Details demonstrating compliance with this clause must be included in documentation for a Construction Certificate.
D4D8 *D3.7*	Hearing augmentation	**X**	N/A	Not applicable.
D4D9 *D3.8*	Tactile indicators	✓	**X**	Tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching: A stairway, other than a fire isolated stairway; An escalator; A passenger conveyor or moving walk; A ramp other than a fire-isolated ramp, step ramp, kerb ramp or swimming pool ramp. Tactile ground surface indicators must comply with Sections 1 and 2 of AS1428.4.1-2009. Architectural drawings show TGSIs at the top and bottom of the stair on the path of travel from Glen Lane and at the top and bottom of the common non-fire isolated stair within the building, adjacent the lift. The TGSIs located on the path of travel from Glen Lane are required to be setback a minimum of one tread from the flight of stairs. TGSIs are required to extend for 600mm.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				 **Figure 19 – TGSIs are required to be installed for a depth of 600mm and be one tread setback from the flight of stairs** To be redesigned to comply in conjunction with the requirements of BCA Clause D4D4.
D4D10 *D3.9*	Wheelchair seating spaces in Class 9b assembly buildings	**X**	N/A	Not applicable.
D4D11 *D3.10*	Swimming pools	**X**	N/A	Not applicable – A swimming pool is detailed within the scope of works. The swimming pool does not have an area greater than 40m and therefore compliance with this clause is not required. We note the area associated is considered a communal area and required to be provided with a continuous accessible path of travel.
D4D12 *D3.11*	Ramps	✓	Compliance advice	A series of connected ramps must not have a combined vertical rise of more than 3.6m and a landing for a step ramp must not overlap a landing for another step ramp or ramp.
D4D13 D*3.12*	Glazing on an accessway	✓	Compliance advice	Note - 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 1428.1-2009. Clause 6.6 requires windows as referenced about to be clearly marked for their full width with a solid and non-transparent contrasting line. The contrasting line shall be not less than 75mm wide and shall extend across the full width of the glazing panel. The lower edge of the contrasting line shall be located between 900mm and 1000mm above the plane of the finished floor level. Any glazing shall provide a minimum of 30% luminance contrast when viewed against the floor surface or surfaces within 2m of the glazing on the opposite side.

REFER TO APPENDIX A FOR FURTHER DETAILS RELATING TO THE CONSTRUCTION REQUIREMENTS OF AS1428.1-2009.

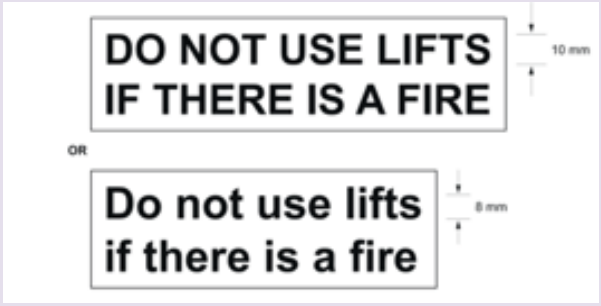
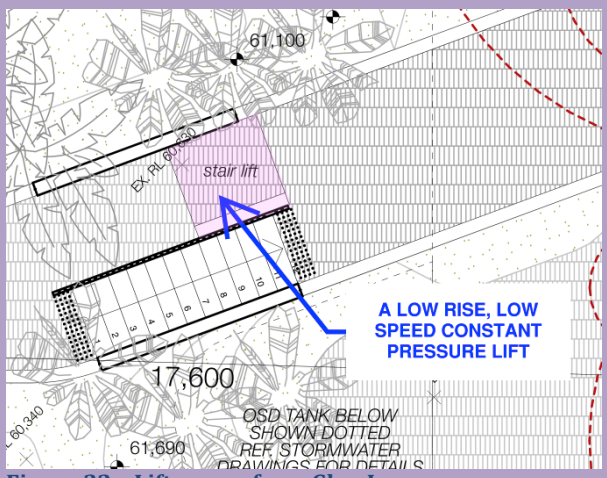
CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
SPECIFICATIONS REFERENCED WITHIN SECTION D				
Spec 14	Non-required stairways, ramps and escalators	X	N/A	Not applicable – no proposed non-required stairways, ramps or escalators are proposed as part of this development.
Spec 15	Braille and tactile signs	✓	Applies	Specification 15 applies to the assessment contained within BCA Part D4.
Spec 16	Accessible water entry/exit from swimming pools	X	N/A	Not applicable – the swimming pool proposed as part of this development is not required to comply with this clause due to the pool perimeter not exceeding 40m.
SECTION E - SERVICES AND EQUIPMENT				
PART E1 - FIRE FIGHTING EQUIPMENT				
E1D1 *E1.0*	Deemed-to-Satisfy Provisions	✓	Note	Noted.
E1D2 *E1.3*	Fire Hydrants	✓	Compliance advice	A fire hydrant system is required to serve building as it exceeds 500m². Fire hydrant coverage to be provided in compliance with AS 2419.1-2021 throughout the entire building, including balconies, occupiable outdoor areas and carpark area. Clearances are required in accordance with Clause 3.2.2.2 requiring a minimum of 1m directly in front of the fire hydrant outlets, a clearance of not less than 500mm from any point of a door-swing arc and the fire hydrant outlet, a clearance of not less than 100mm around the handwheel of the fire hydrant valve and a clearance around the fire hydrant valve outlet of not less than 300mm through an arc of 225 degrees in the plane of the valve outlet. The fire hydrant booster assembly is located facing the street (Andrews Avenue) located adjacent to the primary entrance of the building. As the building is required to be sprinkler protected it is permitted to be located within 10m of the building without a radiant barrier. Note. where an 'I-pattern' fire hydrant booster assembly is proposed, this is required to be affixed to the building façade. Refer to Clause 7.5.5 of AS2419.1-2021. The spatial configurations are to be determined by the services consultants. Fire Hydrant coverage does not appear capable of achieving coverage from the single attack hydrant at the front of the site. Coverage is required to be provided to the outdoor balconies. The hydraulic engineering consultant is to confirm coverage layouts. <u>Additional note:</u> The scope of AS2419.1-2021 applies to buildings and associated areas that do not include special hazards (refer to Clause 1.1 of AS2419.1-2021). Where the building incorporates electric vehicles and are considered a special hazard (under BCA Clause E1D17 and E2D21) a Fire Engineered Performance Solution will be required to adopt this Australian Standard. The fire hydrants are not

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				currently detailed on the drawings. Details confirmation coverage is achieved is required to be incorporated in the Construction Certificate and Fire Service drawings. The fire hydrants are not currently detailed on the drawings. Details confirmation coverage is achieved is required to be incorporated in the Construction Certificate and Fire Service drawings.
E1D3 *E1.4*	Fire Hose Reels	✓	**X**	Fire hose reels does not apply to a Class 2 part of the building. Fire hose reel coverage is required to be provided to the carpark level. A fire hose reel system complying with AS2441-2005 must be provided to serve the carpark level due to the fire compartment with a floor area exceeding 500m². Coverage is required to be provided throughout the building achieved by a 36m hose + 4m spray of water. A Fire Hose Reel is currently detailed within the fire isolated exit. This is shown below:  **Figure 20 – Fire hose reel located within the fire isolated exit** To be redesigned to comply by removing the fire hose reel from the fire isolated exit.
E1D4 *E1.5*	Sprinklers	✓	Compliance advice	A sprinkler system must be installed in a building or part of a building when required by BCA Clause E1D5 to E1D12, as applicable and comply with Specification 17.
E1D5 *E1.5*	Where sprinklers are required: all classifications	**X**	N/A	Not applicable – the building does not have an effective height of greater than 25m. However, sprinklers are required under BCA Clause E1D6.
E1D6 *E1.5*	Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings	✓	Compliance advice – additional commentary	Sprinklers are required throughout the building is any part of the building, containing a Class 2 part has a rise in storeys of four or more. It is understood that an AS2118 sprinkler system is proposed to be installed throughout the building.
E1D7 *E1.5*	Where sprinklers are required: Class 3 building	**X**	N/A	Not applicable – sprinklers are required throughout the entire building under BCA Clause E1D6.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
	used as a residential care building			
E1D8 *E1.5*	Where sprinklers are required: Class 6 buildings	X	N/A	Not applicable – sprinklers are required throughout the entire building under BCA Clause E1D6.
E1D9 *E1.5*	Where sprinklers are required: Class 7a building, other than an open-deck carpark	X	N/A	Not applicable – sprinklers are required throughout the entire building under BCA Clause E1D6.
E1D10 *E1.5*	Where sprinklers are required: Class 9a health-care building used as a residential care building, Class 9c buildings	X	N/A	Not applicable – sprinklers are required throughout the entire building under BCA Clause E1D6.
E1D11 *E1.5*	Where sprinklers are required: Class 9b buildings	X	N/A	Not applicable – sprinklers are required throughout the entire building under BCA Clause E1D6.
E1D12 *E1.5*	Where sprinklers are required: additional requirements	X	N/A	Not applicable – sprinklers are required throughout the entire building under BCA Clause E1D6.
E1D13 *E1.5*	Where sprinklers are required: occupancies of excessive hazard	X	N/A	Not applicable.
E1D14 *E1.6*	Portable Fire Extinguishers	✓	Compliance advice	Portable Fire Extinguishers are required to be installed throughout carpark in accordance with AS2444. Portable fire extinguishers provided in the Class 2 parts of the building must be: • An ABE type fire extinguisher; • A minimum size of 2.5kg; and • Distributed outside a sole occupancy unit to serve only the storey which they are located and so that the travel distance from the entrance doorway of any sole-occupancy unit to the nearest fire extinguisher is not more than 10m. Details demonstrating compliance with this clause must be included in documentation for a Construction Certificate.
E1D15 *E1.8*	Fire Control Centres	X	N/A	Not applicable.
E1D16 *E1.9*	Fire precautions during construction	✓	Compliance advice	Not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stair or exit.
E1D17 *E1.10*	Provision for special hazards	✓	Compliance advice – additional note	We note that the Principal Certifying Authority may consider electric cars/charging stations as a hazard within the building, where proposed. As there are no prescriptive requirements this will be required to be addressed via a Performance Solution. This is to be determined by the Principal Certifying Authority.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
PART E2 - SMOKE HAZARD MANAGEMENT				
E2D1 *E2.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
E2D2 *E2.1*	Application of Part	✓	Note	Applies as noted.
E2D3 *E2.2*	General requirements	✓	Compliance advice	An air handing system which does not form part of a smoke hazard management system in accordance with BCA Clause E2D4 to E2D20 and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must be designed and installed to: Operate as a smoke control system in accordance with AS1668; or Such that it incorporates smoke dampers where the air-handling ducts penetrate any elements separating the fire compartment served and is arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors comply with Clause 7.5 of AS1670.1.
E2D4 *E2.2a*	Fire-isolated exits	**X**	N/A	Not applicable - Does not apply as building in not in excess of 25m in effective height or have levels 2 or more below ground level.
E2D5 *E2.2a*	Buildings more than 25m in effective height: Class 2 and 3 buildings and Class 4 part of a building	**X**	N/A	Not applicable – the building does not have an effective height of more than 25m.
E2D6 *E2.2a*	Buildings more than 25m in effective height: Class 5, 6, 7b, 8 or 9b buildings	**X**	N/A	Not applicable.
E2D7 *E2.2a*	Buildings more than 25m in effective height: Class 9a buildings	**X**	N/A	Not applicable.
E2D8 *E2.2a*	Buildings not more than 25m in effective height: Class 2 and 3 buildings and Class 4 part of a building	✓	Compliance advice	In a Class 2 and 3 building or part of a building, or Class 4 part of a building, where the building is not more than 25m in effective height, it must be provided with an automatic smoke detection and alarm system complying with BCA Specification 20.
E2D9 *E2.2a*	Buildings not more than 25m in effective height: Class 5, 6, 7b, 8 and 9b buildings	**X**	N/A	Not applicable.
E2D10 *E2.2a*	Buildings not more than 25m in effective height: large isolated buildings subject to C3D4	**X**	N/A	Not applicable – the building is not considered a Large Isolated Building.
E2D11 *E2.2a*	Buildings not more than 25m in effective height: Class 9a and 9c buildings	**X**	N/A	Not applicable – the building is not a 9a health care building or 9c building.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
E2D12 *E2.2a*	Class 7 buildings	✓	Compliance advice	A Class 7a building, including a basement, provided with a mechanical ventilation system in accordance with AS1668.2, must comply with Clause 5.5. of AS1668.1.
E2D13 *E2.2a*	Basements (other than Class 7a buildings)	**X**	N/A	Not applicable.
E2D14 *E2.2b*	Class 6 buildings – in fire compartments more than 2,000m² (not containing an enclosed common walkway or mall serving more than one Class 6 sole occupancy unite	**X**	N/A	Not applicable.
E2D15 *E2.2b*	Class 6 buildings – in fire compartments more than 2,000m²: Class 6 Building (containing an enclosed common walkway or mall)	**X**	N/A	Not applicable.
E2D16 *E2.2b*	Class 9b – assembly buildings: nightclubs, discotheques and the like	**X**	N/A	Not applicable.
E2D17 *E2.2b*	Class 9b – assembly buildings: exhibition halls	**X**	N/A	Not applicable.
E2D18 *E2.2b*	Class 9b – assembly buildings: theatre and public halls	**X**	N/A	Not applicable.
E2D19 *E2.2b*	Class 9b – assembly buildings: theatres and public halls (not listed in E2D18)	**X**	N/A	Not applicable.
E2D20 *E2.2b*	Class 9b assembly buildings: other assembly buildings (not listed in E2D16 to E2D19)	**X**	N/A	Not applicable.
E2D21 *E2.3*	Provision for special hazard	✓	Compliance advice – additional note	We note that the Principal Certifying Authority may consider electric cars/charging stations as a hazard within the building, where proposed. As there are no prescriptive requirements this will be required to be addressed via a Performance Solution. This is to be determined by the Principal Certifying Authority.
PART E3 - LIFT INSTALLATIONS				
E3D1 *E3.0*	Deemed-to-Satisfy Provisions	✓	Note	Noted.
E3D2 *E3.1*	Lift installations	✓	Compliance advice	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification 24.
E3D3 *E3.2*	Stretcher facility in lifts	✓	Compliance advice	As the building contains an effective height of greater than 12m. A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				space not less than 600mm wide x 2000mm long x 1400mm high above the floor level. The lifts appear to comply with this requirement. Details of the selected lift details are required to be incorporated within the Construction Certificate documentation.
E3D4 *E3.3*	Warning against use of lifts in fire	✓	Compliance advice	Signage is required to warn occupants against the use of lifts in a fire:  **Figure 21 – Lift signage required**
E3D5 *E3.4*	Emergency lifts	X	N/A	Not applicable.
E3D6 *E3.5*	Landings	✓	Compliance advice	Access and egress to and from lift well landings must comply with Parts D3, D3 and D4.
E3D7 *E3.6*	Passenger lift types and their limitations	✓	Compliance advice – additional note	As the building is required to be accessible, every passenger lift installed must comply with this clause: Electric passenger lifts, electrohydraulic passenger lifts or inclined lifts have no limitations on the use. Access provided from Glen Lane is provided with a 'stair lift', this appears to contain a vertical change in level greater than 1m, therefore a low-rise, low speed constant pressure lift is required to be provided.  **Figure 22 – Lift access from Glen Lane** To be designed to comply.
E3D8 *E3.6a*	Accessible features required for passenger lifts	✓	Compliance advice	The passenger lift must have the following features, including the provisions of a handrail complying AS1735.12.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				Lift doors must be a minimum clearance of 900mm. The lift shall achieve the floor dimensions of not less than 1100mm wide x 1400mm deep as the lift does not travel more than 12m. Details demonstrating compliance with the clause is required to be incorporated within the Construction Certificate documentation.
E3D9 *E3.7*	Fire Service Controls	✓	Compliance advice	Effective height of >12 m which requires lifts serving any storey above 12m, must be provided with: (a) a fire service recall control switch complying with E3D11 for – (i) a group of lifts; or (ii) a single lift not in a group that serves the storey. (b) a lift car fire service drive control switch complying with E3D12 for every lift.
E3D10 *E3.8*	Residential care buildings	**X**	N/A	Not applicable – not a residential care building.
E3D11 *E3.9*	Fire Service Recall Control Switch	✓	Compliance advice	The lifts must be provided with one fire service recall control switch required by E3D9 that activates the fire service recall operation. The switch must be installed to the requirements of BCA Clause E3D11.
E3D12 *E3.10*	Lift Car Fire Service Drive Control Switch	✓	Compliance advice	The lift car fire service drive control switch required by BCA Clause E3D9 must be activated from within the lift car. The switch must be installed as per the requirements of E3D12.

PART E4 – VISABILITY IN AN EMERGENCY, EXIT SIGNS AND WARNING SYSTEMS

E4D1 *E4.0*	Deemed-to-Satisfy Provisions	✓	Note	Noted.
E4D2 *E4.2*	Emergency Lighting Requirements	✓	Compliance advice	Emergency lighting is required to be installed throughout the building, in the following areas: Fire-isolated stairway, fire-isolated passageway or fire-isolated ramps. In every storey of Class 7 building where the storey has an area more than 300m^2 in any room having a floor area more than 100m^2 that does not open to a corridor or space that has emergency lighting or in any room having a floor area more than 300m^2. In every passageway, corridor, hallway or like having a length of more than 6m from the entrance doorway of the sole occupancy unit in a Class 2 building. In every required non-fire isolated stairway.
E3D3 *E4.3*	Measurement of distances	✓	Note	Noted.
E4D4 *E4.4*	Design and operation of emergency lighting	✓	Compliance advice	The emergency lighting provided must comply with AS2293.1-2018.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
E4D5 *E4.5*	Exit signs	✓	Compliance advice	Exit signs must be provided above or adjacent to each door providing direct egress from a storey to an enclosed stairway passageway or ramp serving as a required exit and any door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with BCA Clause E4E2.
E4D6 *E4.6*	Direction signs	✓	Compliance advice	Directional exit signs are required where an exit is readily apparent to persons occupying or visiting the building then exit signs must be installed in appropriate positions indicating the direction to a required exit.
E4D7 *E4.7*	Class 2 and 3 Buildings and Class 4 parts: exemptions	✓	Compliance advice	Exit doors in Class 2 parts need not comply with E4.5 provided every exit door is clearly and legibly labelled on the side remote from the exit with the word "EXIT" in capital letters 25mm high in a colour contrasting with that of the background or some other suitable method. Additionally, an entrance door of a SOU does not require exit signage.
E4D8 *E4.8*	Design and operation of exit signs	✓	Compliance advice	Exit signs must comply with AS/NZS2293.1-2018 or for a photoluminescent exit sign, Specification 25 and be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.
E4D9 *E4.9*	Emergency warning and intercom systems	**X**	N/A	Not applicable.

SPECIFICATIONS REFERENCED WITHIN SECTION E

Spec 17	Fire sprinkler systems	✓	Applies	Fire sprinklers are required to be installed in accordance with this clause. Notably, the scope of AS2118.4 permits only a four storey residential building. Therefore, an AS2118.1 sprinkler system should be installed.
Spec 18	Class 2 and 3 buildings not more than 25m in effective height	✓	Applies	Applies.
Spec 19	Fire control centres	**X**	N/A	Not applicable to the proposed building.
Spec 20	Smoke detection and alarm systems	✓	Applies	Applies.
Spec 21	Smoke exhaust systems	**X**	N/A	Not applicable to the proposed building.
Spec 22	Smoke-and-heat vents	**X**	N/A	Not applicable to the proposed building.
Spec 23	Residential fire safety systems	✓	Applies	Applies.
Spec 24	Lift installations	✓	Applies	Applies.
Spec 25	Photoluminescent exit signs	✓	Applies	Applies.

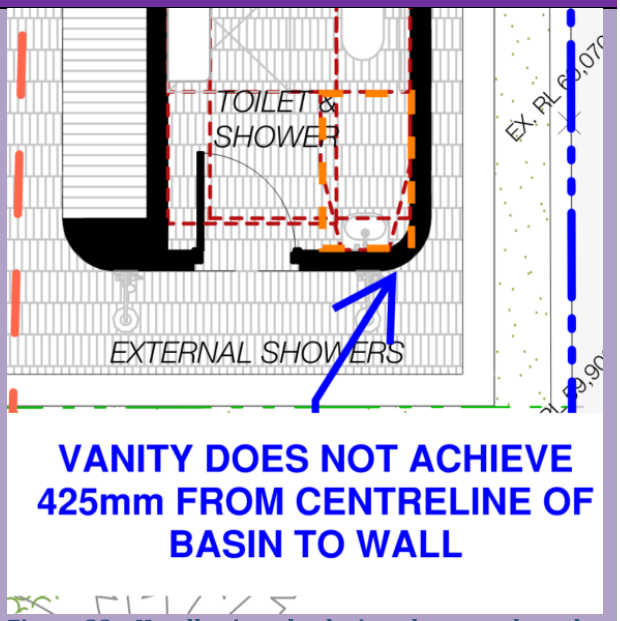
SECTION F - HEALTH AND AMENITY

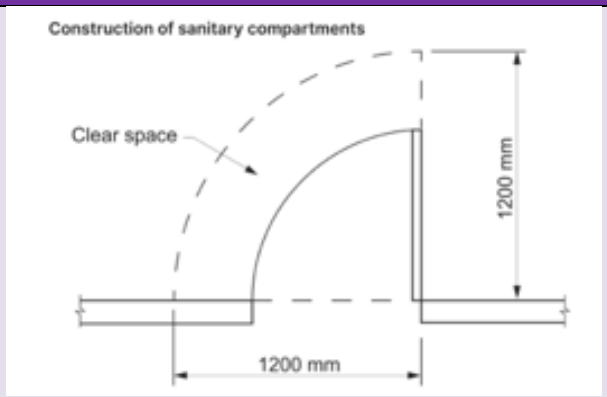
PART F1 – SURFACE WATER MANAGEMENT, RISING DAMP AND EXTERNAL WATERPROOFING

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
BCA Part F1 applies as noted throughout the project Façade Consultant/Structural Engineer shall confirm the building envelope and weatherproofing requirements to achieve compliance with the prescriptive and Performance Requirements of the BCA.				
F1D1 *F1.0*	Deemed-to-Satisfy Provisions	✓	Note	Noted.
F1D2 *New to BCA 2022*	Application of Part	✓	✓	Applies as noted.
F1D3 *F1.1*	Stormwater drainage	✓	Compliance advice	Stormwater draining is required to be designed and constructed in accordance with AS/NZS3500.3
F1D4 *New to BCA 2022*	Exposed joints	✓	Compliance advice	Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must be protected in accordance with Section 2.9 of AS4654.2 and not be located beneath or run through a planter box, water feature or similar part of the building.
F1D5 *F1.4*	External waterproofing membrane	✓	Compliance advice	A roof, balcony, podium or similar horizontal surface part of a building must be provided with a waterproofing membrane which complies with AS4654.1 and is designed and installed in accordance with AS4654.2.
F1D6 *F1.9*	Damp-proofing	✓	Compliance advice	The building is required to be designed to prevent moisture from the ground reaching the lowest floor timbers and the walls above the lowest floor joists, the walls above the damp-proof course and the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. Materials must comply with AS/NZ2904 or be an impervious sheet material in accordance with AS3660.1.
D1D7 *F1.10*	Damp-proofing of floors on the ground	✓	Compliance advice	Where floors are directly laid on the ground a vapour barrier must be provided in accordance with AS2870.
F1D8 *F1.12*	Subfloor ventilation	X	N/A	Not applicable – no raised or suspended floors are proposed.
PART F2 – WET AREAS AND OVERFLOW PROTECTION				
F2D1 *New to BCA 2022*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
F2D2 *F1.7*	Wet area construction	✓	Compliance advice	In a Class 2 building, building elements must be water resistant or waterproof in accordance with Specification 26. Alternatively, compliance with AS3740 is required. In a Class 5, 6, 7, 8 or 9 building, building elements in a bathroom or shower room, a slop hopper or sink compartment, a laundry or sanitary compartment must be water resistant or waterproof in accordance with Specification 26. Alternatively, compliance with AS3740 is required as if they were in a Class 2.
F2D3 *F1.7*	Rooms containing urinals	X	N/A	Not applicable – no urinals proposed.
F2D4 *F1.11*	Floor wastes	✓	Compliance advice	Where a bathroom or laundry is located at any level above a sole occupancy unit or public space, the room must be provided with a floor waste.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				A floor waste is required to achieve: A minimum continuous fall of a floor plane to the waste must be 1:80; and The maximum continuous fall of a floor plane to the waste must be 1:50. Details demonstrating compliance with this clause is required to be incorporated within the Construction Certificate documentation.
PART F3 – ROOF AND WALL CLADDING				
BCA Part F3 applies as noted throughout the project Façade Consultant/Structural Engineer shall confirm the building envelope and weatherproofing requirements to achieve compliance with the prescriptive and Performance Requirements of the BCA.				
F3D1 *New to 2022*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
F3D2 *F1.5*	Roof coverings	✓	Compliance advice	The roof covering must comply with: Metal sheet roofing complying with AS1562.1. An external waterproofing membrane complying with BCA Clause F1D5.
F3D3 *F1.6*	Sarking	✓	Compliance advice	Sarking type materials used for weatherproofing of roofs and walls must comply with AS4200.1 and AS4200.2.
F3D4 *F1.13*	Glazing	✓	Compliance advice	Glazed assemblies are required to comply with AS2047.
PART F4 - SANITARY AND OTHER FACILITIES				
F4D1 *F2.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted – Applies as noted.
F4D2 *F2.1*	Facilities in residential buildings	✓	Compliance advice	In a Class 2 building, the following facilities are required: Within a sole occupancy unit: A kitchen sink and facilities for the preparation of food; and A bath or shower; and A closet pan; and A washbasin. For laundry facilities: In each sole occupancy unit, clothes washing facilities, comprising of at least one washtub and space for a washing machine and a clothes drying cabinet or appliance in the same room as the clothes washing facility. Or A separate laundry for each four sole occupancy units, or part thereof must contain clothes washing facilities comprising of at least one washtub and space for a washing machine and clothes drying facilities comprising clothesline or a hoist with not less than 7.5m of line per sole occupancy unit.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				Note. A kitchen sink or washbasin must not be counted as a laundry washtub. This is capable of achieving compliance, details demonstrating compliance with this clause is required to be incorporated within the Construction Certificate documentation.
F4D3 *F2.2*	Calculation of number of occupants and fixtures	**X**	N/A	Not applicable.
F4D4 *F2.3*	Facilities in Class 3 to 9 Buildings	**X**	N/A	Not applicable.
F4D5 *F2.4*	Accessible Sanitary Facilities	✓	Compliance advice	In a building required to be accessible, accessible unisex sanitary compartments must be provided within accessible parts of the building in accordance with F4D6.
F4D6 *F2.4a*	Accessible unisex sanitary compartments	✓	**X**	In a building required to be accessible, accessible unisex sanitary compartments must be provided within accessible parts of the building in accordance with F4D6. At each bank of toilets, where there is one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, not less than one sanitary compartment suitable for a person with an ambulant disability for use by males and one sanitary compartment suitable for a person with an ambulant disability for use by females must be provided. The communal sanitary compartment provided within the outdoor pool area is required to comply with AS1428.1-2009. An accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate disposal of sanitary products. Circulation spaces, fixtures and fittings of all accessible sanitary facilities provided must comply with the requirements of AS1428.1-2009. The handbasin within the pool Toilet/shower room does not achieve the required set back of 425mm between the wall and the centreline of the handbasin due to the curvature of the wall. This is shown below:

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				 **Figure 23 – Handbasin to be designed to comply at the Construction Certificate stage** To be redesigned to comply at the Construction Certificate stage of the design documentation.
F4D7 *F2.4b*	Accessible unisex showers	✓	Compliance advice	The communal sanitary compartment provided within the outdoor pool area is required to comply with AS1428.1-2009. An accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate disposal of sanitary produces. Circulation spaces, fixtures and fittings of all accessible sanitary facilities provided must comply with the requirements of AS1428.1-2009. Confirmation is required to be provided within the Construction Certificate documentation.
F4D8 *F2.5*	Construction of sanitary compartments	✓	Compliance advice	The door to a fully enclosed sanitary compartment must open outwards or slide or be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2m, measured in accordance with Figure F4D8, extract provided below, between the closet pan within the sanitary compartment and the doorway.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				 **Figure 24 – Construction of sanitary compartments**
F4D9 *F2.6*	Interpretation: urinals and wash basins	**X**	N/A	Not applicable.
NSW F4D10 *F2.7 NSW*	Microbial (legionella) control	**X**	N/A	BCA Clause F4D10 does not apply in NSW as the installation of hot water, warm water and cooling water systems (and their operation and maintenance) is regulated in the Public Health Regulation 2012, under the Public Health Act 2010.
F4D11 *F2.8*	Waste Management	**X**	N/A	Not applicable - not a class 9a or 9c building.
F4D12 *F2.9*	Accessible adult change facilities	**X**	N/A	Not applicable to the proposed design.
PART F5 - ROOM HEIGHTS				
F5D1 *F3.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
F5D2 *F3.1*	Height of rooms and other spaces	✓	Compliance advice	The height of rooms and other spaces in a Class 2 buildings, or Class 4 part of the building must not be less than – For a kitchen, laundry or the like – 2.1m For a corridor, passageway or the like – 2.1m For a habitable room, excluding a kitchen – 2.4m The heights of rooms and other spaces in a Class 5, 6, 7 or 8 building must not be less than Except otherwise permitted – 2.4m; A corridor, passageway or the like – 2.1m. Details demonstrating compliance with this clause must be included in documentation for a Construction Certificate. Coordination with the services consultants should be undertaken to ensure compliance with this clause is capable of being achieved.
PART F6 - LIGHT AND VENTILATION				
F6D1 *F4.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
F6D2 *F4.1*	Provision of Natural light	✓	Compliance advice	Natural light must be provided in a Class 2 building and a Class 4 part of the building to all habitable rooms.
F6D3 *F4.2*	Methods and extent of natural lighting	✓	Compliance advice	Natural lighting must be provided by way of: Windows (excluding roof lights), which: (i) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and (ii) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like. Roof lights, that – (i) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the floor area of the room; and (i) are open to the sky. In a Class 2, 3 or 9 building, or Class 4 portion, a required window that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of: (a) Generally – 1m; and (b) In a patient care area or other room used for sleeping purposes in a Class 9a building – 3m; and (c) 50% of the square root of the exterior height of the wall in which the window is located, measured from its sill height. In a Class 9b early childhood centre, the sills of 50% of windows in children's rooms must be located not more than 500mm above the floor level. Note on extent of verification: Window schedules have not been reviewed as part of this technical review. Details demonstrating compliance with this clause is required to be incorporated within the Construction Certificate documentation.
F6D4 *F4.3*	Natural light borrowed from adjoining room	✓	Compliance advice	Natural light to a room in a Class 2 building or Class 4 part or in a sole occupancy unit of a Class 3 building may come through one or more glazed panels or openings from an adjoining room (including an enclosed verandah) where designed this is required in accordance with this clause.
F6D5 *F4.4*	Artificial lighting	✓	Compliance advice	Artificial lighting is required to be provided throughout the building in accordance with this Clause. Artificial lighting is required to comply with AS1680.0.
F6D6 *F4.5*	Ventilation of rooms	✓	Compliance advice	A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must achieve natural ventilation complying with BCA Clause F6D7 or a mechanical ventilation or air-

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				conditioning system complying with AS1668.2 and AS/NZ3666.1. Note. where mechanical ventilation is proposed, this requires outside make up (fresh air) to be provided in accordance with AS1668.2.
F6D7 *F4.6*	Natural ventilation	✓	Compliance advice	Natural ventilation must consist of opening, windows, doors or other devices which can be opened achieving an area not less than 5% of the floor area of the room required to be ventilated. The openings must open to a suitably size court or space open to the sky, an open verandah, carport or an adjoining room in accordance with BCA Clause F6D8. <u>Note on extent of verification:</u> Window schedules have not been reviewed as part of this technical review. Details demonstrating compliance with this clause is required to be incorporated within the Construction Certificate documentation.
F6D8 *F4.7*	Ventilation borrowed from adjoining rooms	✓	Compliance advice	Borrowed natural ventilation may be borrowed through a window, opening, door or other device from an adjoining room (or enclosed verandah) where the rooms are within the same sole occupancy units. Borrowed natural ventilation is required to be determined in accordance with this clause.
F6D9 *F4.8*	Restriction on location of sanitary compartments	✓	Note	A sanitary compartment must not open directly into a kitchen, pantry. Where this occurs compliance with F6D10 is required to be provided to achieve compliance.
F6D10 *F4.9*	Airlocks	✓	Compliance advice	Where sanitary compartments in a Class 2 building opens into a kitchen the sanitary compartment must be provided with mechanical exhaust. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.
F6D11 *F4.11*	Carparks	✓	Compliance advice	Each storey of a carpark is required to have a system of mechanical ventilation complying with AS1668.2 or natural ventilation complying with Section 4 of AS1668.4. Mechanical ventilation is required to be provided throughout the carpark levels. Details demonstrating compliance with this clause is required to be incorporated within the Construction Certificate documentation.
F6D12 *F4.12*	Kitchen local exhaust ventilation	**X**	N/A	Not applicable – not commercial kitchen exhausts proposed as part of this development.

PART F7 - SOUND TRANSMISSION AND INSULATION

F7D1 *F5.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
F7D2 *F5.1*	Application of Part	✓	✓	Applies as noted – applies to Class 2 portions of the building. Refer to separate Acoustic Consultant for details

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				on achieving compliance with the prescriptive requirements.
F7D3 *F5.2*	Determination of airborne sound insulation ratings	✓	Compliance advice	A form of construction required to have an airborne sound insulation rating must – Have the required value for weighted sound reduction (R_w) or weighted sound reduction index with spectrum adaption term ($R_w + C_{tr}$) determined in accordance with AS/NZISO717.1 using results from laboratory measurements or comply with Specification 28.
F7D4 *F5.3*	Determination of impact sound insulation ratings	✓	Compliance advice	A floor in a building required to have an impact sound insulation rating must – Have the required value for weighted normalised impact sound pressures level ($L_{n'w}$) determined in accordance with AS ISO717.2 using results from laboratory measurements or comply with Specification 28. A wall in a building required to have an impact insulation rating must be of dissentious construction in a Class 2 building. Discontinuous construction means a wall having a minimum 20mm cavity between two separated leaves and be in accordance with this Clause.
F7D5 *F5.4*	Sound insulation rating of floors	✓	Compliance advice	A floor in a Class 2 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n'w}$ (impact) not more than 62 where it separates sole-occupancy units or sole occupancy units from a plant room, lift shaft, stairway, public corridor, public lobby or the like or parts of different classifications.
F7D6 *F5.5*	Sound Insulation of walls	✓	Compliance advice	A wall in a class 2 building must achieve: A R_w+C_{tr} (airborne) not less than 50 if it separated sole occupancy units. Have an R_w (airborne) not less than 50, if it separates a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby, or the like, or different parts of classifications. The construction must comply with F7D4 (i.e. discontinuous construction) where it separates a bathroom, sanitary compartment, laundry or kitchen in one sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit or from a sole occupancy unit from a plant room or lift shaft. The wall is required to extend to the underside of the floor above or ceiling that provides the sound insulation where there is a floor located above. A wall is required to extend to the underside of the roof above or a ceiling that provides the sound insulation where there is a roof located above.
F7D7 *F5.6*	Sound insulation rating of internal services	✓	Compliance advice	If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one sole-occupancy unit the duct must be separated from the rooms of an any sole occupancy unit by construction with an $R_w + C_{tr}$ (airborne)

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				not less than – 40 if the adjacent room is a habitable room or 25 if the adjacent room is a kitchen or non-habitable room.
F7D8 *F5.7*	Sound isolation of pumps	✓	Compliance advice	A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.
PART F8 – CONDENSATION MANAGEMENT				
F8D1 *F6.0*	Deemed-to-Satisfy Provisions	✓	✓	Noted.
F8D2 *F6.1*	Application of part	✓	✓	Applies as noted.
F8D3 *F6.2*	External wall construction	✓	Compliance advice	Where a pliable building membrane is installed in an external wall, it must comply with AS4200.1, be installed in accordance with AS4200.2 and be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. Except for single skin masonry and single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials water sensitive materials. Materials that have an inherent capacity to absorb water vapour and include timber, plasterboard, plywood, oriented strand board and the like by a drained cavity.
F8D4 *F6.3*	Exhaust systems	✓	Compliance advice	An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of— • 25L/s for a bathroom or sanitary compartment; and • 40L/s for a kitchen or laundry. Exhaust from a kitchen, kitchen range hood, bathroom, sanitary compartment or laundry must discharge directly or via a shaft or duct to outdoor air. Where space for a clothes drying appliance is provided in accordance with F4D2(1)(b), space must also be provided for ducting from the clothes drying appliance to outdoor air. An exhaust system that is not run continuously and is serving a bathroom or sanitary compartment that is not ventilated in accordance with F6D7 must— be interlocked with the room's light switch; and include a run-on timer so that the exhaust system continues to operate for 10 minutes after the light switch is turned off. Except for rooms that are ventilated in accordance with F6D7, a room with space for ducting a clothes drying appliance to outdoor air in accordance with (3) must be provided with make-up air in accordance with AS 1668.2.
F8D8 *F6.4*	Ventilation of roof spaces	✓	Compliance advice	In climate zones 6, 7 and 8, a roof must have a roof space that—

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				is located— • immediately above the primary insulation layer; or • immediately above sarking with a vapour permeance of not less than 1.14 µg/N.s, which is immediately above the primary insulation layer; or • immediately above ceiling insulation which meets the requirements of J3D7(3) and J3D7(4); and has a height of not less than 20 mm; and is either— • ventilated to outdoor air through evenly distributed openings in accordance with Table F8D5; or • located immediately underneath roof tiles of an unsarked tiled roof.

SPECIFICATIONS REFERENCED WITHIN SECTION F

Spec 26	Waterproofing and water-resistance requirements for building elements in wet areas	✓	Applies	Compliance with this specification is required in accordance with BCA Clause F2D2.
Spec 27	Accessible adult change facilities	**X**	N/A	Not applicable – no accessible adult change facilities are proposed or required as part of this development.
Spec 28	Sound insulation for building elements	✓	Applies	This specification may apply to the proposed development – Refer to separate Acoustic Consultant for assessment against BCA Part F7.
Spec 29	Impact sound – test of equivalence	✓	Applies	This specification may apply to the proposed development – Refer to separate Acoustic Consultant for assessment against BCA Part F7.

SECTION G - ANCILLARY PROVISIONS

PART G1 - MINOR STRUCTURES AND COMPONENTS

G1D1 *G1.0*	Deemed-to-Satisfy provisions	✓	✓	Noted.
G1D2 *G1.1*	Swimming pools	✓	Compliance advice	A swimming pool with a depth of water more than 300mm and which is associated with a Class 2 building must have suitable barriers to restrict access by young children to the immediate pool surrounds in accordance with AS1926.1-2012 and AS1926.2-2007. Additionally, a water recirculation system in a swimming pool with a depth of water more than 300mm must comply with AS1926.3-2010. This is capable of achieving compliance with this Clause, details demonstrating compliance with this clause must be incorporated within the Construction Certificate documentation.
G1D3 *G1.2*	Refrigerated chambers, strong rooms and vaults	**X**	N/A	Not applicable.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
G1D4 *G1.3*	Outdoor Play spaces	X	N/A	Not applicable.
G1D5 *NSW G1.101*	Provision for cleaning windows	✓	Compliance advice	A building must be provided with a safe manner of cleaning of any windows located three or more storeys above ground level.

PART G2 – BOILERS, PRESSURE VESSELS, HEATING APPLIANCES, FIREPLACES, CHIMNEYS AND FLUES

G2D1 *G2.0*	Deemed to satisfy provisions	✓	✓	Noted
G2D2 *G2.2*	Installation of appliances	X	N/A	No solid fuel burning heaters proposed.
G2D3 *G2.3*	Open fireplaces	X	N/A	No open fireplaces proposed.
G2D4 *G2.4*	Incinerator rooms	X	N/A	No incinerators proposed.

PART G3 - ATRIUM CONSTRUCTION

G3D1 *G3.1*	Application of Part	X	N/A	Not applicable – the open nature of the balcony is not considered an atrium. This is due to the balcony/external walkway not being enclosed on the upper level. Notably, the stair is permitted to be a non-fire isolated stair under BCA Clause D2D4.
G3D2 *G3.2*	Dimensions of atrium well	X	N/A	Not applicable.
G3D3 *G3.3*	Separation of atrium by bounding walls	X	N/A	Not applicable.
G3D4 *G3.4*	Construction of Bounding walls	X	N/A	Not applicable.
G3D5 *G3.5*	Construction at balconies	X	N/A	Not applicable.
G3D6 *G3.6*	Separation at roof	X	N/A	Not applicable.
G3D7 *G3.7*	Means of egress	X	N/A	Not applicable.
G3D8 *G3.8*	Fire and smoke control systems	X	N/A	Not applicable.

PART G4 - CONSTRUCTION IN ALPINE AREAS

G4D1 *G4.0*	Deemed to satisfy provisions	✓	✓	Noted.
G4D2 *G4.1*	Application of Part	X	N/A	Not applicable.
G4D3 *G4.3*	External doors	X	N/A	Not applicable.
G4D4 *G4.4*	Emergency lighting	X	N/A	Not applicable.
G4D5 *G4.5*	External trafficable structures	X	N/A	Not applicable.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
G4D6 *G4.6*	Clear space around buildings	X	N/A	Not applicable.
G4D7 *G4.8*	Fire-fighting services and equipment	X	N/A	Not applicable.
G4D8 *G4.9*	Fire orders	X	N/A	Not applicable.
PART G5 - CONSTRUCTION IN BUSHFIRE PRONE AREAS				
G5D1 *G5.0*	Deemed-to-Satisfy provisions	✓	✓	Noted.
G5D2 *G5.1*	Application of this Part	X	N/A	Not applicable – does not appear to be located within a designated bushfire area.
G5D3 *G5.2*	Protection – residential buildings	X	N/A	Not applicable.
G5D4 *New to BCA 2022*	Protection – certain Class 9 buildings	X	N/A	Not applicable.
PART G6 – OCCUPIABLE OUTDOOR AREAS				
G6D1 *G6.1*	Application of Part	✓	✓	Applies as noted – No occupiable outdoor areas are proposed as part of this development. The ground floor pool area is provided with direct access to the road/open space and is not considered an occupiable outdoor area.
G6D2 *G6.2*	Fire Hazard Properties	X	N/A	Not applicable.
G6D3 *G6.3*	Fire Separation	X	N/A	Not applicable.
G6D4 *G6.4*	Provision for escape	X	N/A	Not applicable.
G6D5 *G6.5*	Construction of exits	X	N/A	Not applicable.
G6D6 *G6.6*	Fire Fighting equipment	X	N/A	Not applicable.
G6D7 *G6.7*	Lift installations	X	N/A	Not applicable.
G6D8 *G6.8*	Visibility in an emergency, exit signs and warning systems	X	N/A	Not applicable.
G6D9 *G6.9*	Light and ventilation	X	N/A	Not applicable.
G6D7 *G6.10*	Fire orders	X	N/A	Not applicable.
PART G7 – LIVABLE HOUSING DESIGN				
G7D1 *New to BCA 2022*	Deemed-to-Satisfy Provisions	✓	✓	Noted.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
G7D2 *New to BCA 2022*	Livable housing design	**X**	N/A	Part G7 does not apply in NSW as Livable housing design requirements do not apply to sole-occupancy units in a Class 2 building in NSW.

SPECIFICATIONS REFERENCED WITHIN SECTION G

Spec 30	Installation of boilers and pressure vessels	**X**	N/A	Not applicable – It is assumed that no boilers or pressure vessels are proposed. Where proposed, details confirming compliance with Specification 30 is required to be incorporated within the Construction Certificate documentation.
Spec 31	Fire and smoke control systems in building containing atriums	**X**	N/A	Not applicable – No atriums are proposed as part of this development.
Spec 43	Bushfire protection for certain Class 9 buildings	**X**	N/A	Not applicable – the building does not contain a Class 9 portion of the building.

4.0 CONCLUSION

The primary purpose of this report is to identify non-compliance matters in comparison to the current Deemed-to-Satisfy provisions of the BCA under Sections C, D, E and F. This report has identified several non-compliances, which need to be addressed via a change in the architectural details or via a Performance Solution or Fire Engineered Performance Solution.

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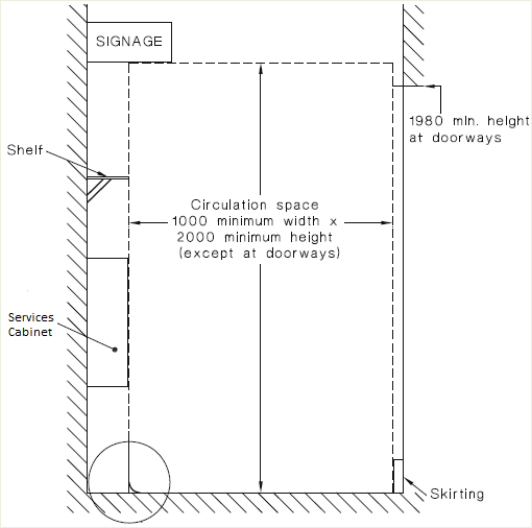
APPENDIX A – SUMMARY OF ACCESS REQUIREMENTS

Summary of AS1428.1-2009 Requirements for accessways

Continuous accessible path of travel –
All paths of travel shall achieve unobstructed heights and widths in accordance with cl. 6 of AS 1428.1 – see diagram below for detail.



Doorways / Doors –
(i) All doorways shall have a minimum luminance contrast of 30% between –

- door leaf and door jamb;
- door leaf and adjacent wall;
- architrave and wall;
- door leaf and architrave;
- door jamb and adjacent wall.

(ii) The minimum width of the area of luminance contrast shall be 50mm,
(iii) Door hardware should be generally located between 900-1100mm from the floor and be of lever type with a clearance between the handle and the door face at the centre of the handle being not less than 35mm and not more than 45mm in accordance with AS1428.1-2009,
(iv) Doors shall have a clear opening width of 850mm.
(v) Door handles and related hardware shall be of the type that allows the door to be unlocked and opened with one hand. The handle shall be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch.
(vi) 'D' type handles shall be provided on sliding doors.
(vii) Any snibs shall have a lever handle of a minimum length of 45 mm from the centre of the spindle.
(viii) For doors (other than fire doors and smoke doors) where a door closer is fitted, the force required at the door handle to operate the door shall not exceed the 20N,
(ix) Where an outward opening door is not self-closing, a horizontal handrail or pull bar shall be fixed on the closing face of a side-hung door,
(x) The location of controls for doors and gates above a level surface shall be provided as per Clause 13.5.3.
(xi) Manual controls for power-operated doors shall be located no closer than 500 mm from an internal corner and between 1000 mm to 2000 mm from the hinged door leaf in any position or clear of a surface-mounted sliding door in the open position.
(xii) Push-button controls shall have a minimum dimension of 25 mm diameter and be proud of the surface and shall activate the door before the button becomes level with the surrounding surface.

Floor or ground surfaces on continuous accessible paths of travel and circulation spaces –
(i) A continuous accessible path of travel and any circulation spaces shall have a slip-resistant surface. The texture of the surface shall be traversable by people who use a wheelchair and those with ambulant or sensory disability.

(ii) Abutment of surfaces shall have a smooth transition. Design transition shall be 0mm, however, construction tolerances are as follows –

- 0 ±3mm vertical change in level – see Figure 1
- 0 ±5mm change in level provided the edges have a bevelled or rounded edge to reduce the likelihood of tripping – see Figure 2
- Various tolerances for raked joint pavers –
- see Figures 3a - level surfaces, 3b - irregular surfaces & 3c - domed surfaces.

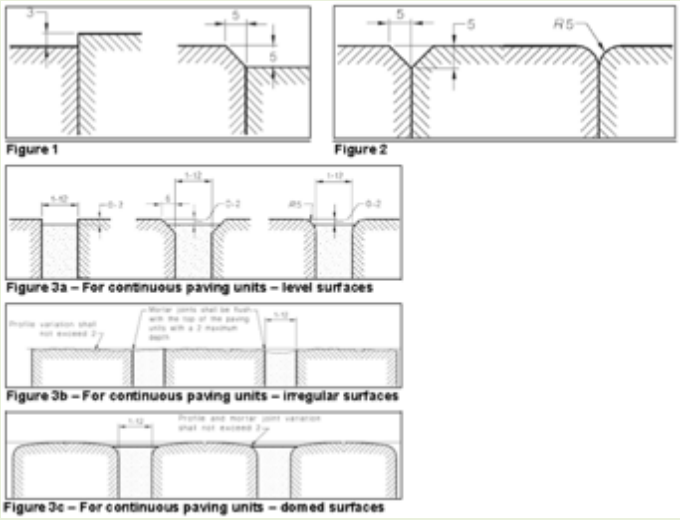


Figure 1

Figure 2

Figure 3a – For continuous paving units – level surfaces

Figure 3b – For continuous paving units – irregular surfaces

Figure 3c – For continuous paving units – domed surfaces

(xi) Where carpets or any soft flexible materials are used on the ground or floor surface –

- The pile height or pile thickness, shall not exceed 11mm and the carpet backing thickness shall not exceed 4mm,
- Exposed edges of floor covering shall be fastened to the floor surface and shall have a trim along the entire length of any exposed edge,
- At the leading edges, carpet trims and any soft flexible materials shall have a vertical face no higher than 3mm or a rounded bevelled edge no higher than 5mm or above that height a gradient of 1:8 up to a total maximum height of 10mm.

(xii) Matting recessed within an accessible path of travel –

- Where of metal and bristle type construction or similar, its surface shall be no more than 3mm if vertical or 5mm if rounded or bevelled, above or below the surrounding surface; and
- Where of a mat or carpet type material, shall have the fully compressed surface level with or above the surrounding surface with a level difference no greater than 3mm if vertical or 5mm if rounded or bevelled.

Switches and Controls –

(i) All new switches and controls, other than power points, shall be located not less than 900mm nor more than 1100mm above the finished floor and not less than 500mm from internal corners.

(ii) Rocker action and toggle switches shall be provided an accordance with Clause 14.2 in accessible residential sole-occupancy units.

Summary of AS1428.1-2009; Clause 10 & 11 Requirements (Ramps & Stairs)

Clause 10.2 – Walkways

Walkways shall comply with the following:

- The floor or ground surface abutting the sides of the walkway shall provide a firm and level surface of a different material to that of the walkway at the same level of the walkway, follow the grade of the walkway and extend horizontally for a minimum of 600 mm unless one of the following is provided:
  - Kerb in accordance with Figure 18.
  - Kerb rail and handrail in accordance with Figure 19.
  - A wall not less than 450 mm in height.
- Landings at top and bottom and at:
  - 25m intervals or less for 1:33,
  - 15m intervals or less for 1:20,

- For walkways shallower than 1 in 33, no landings are required.

Clause 10.8 - Landings

Landings for walkways (up to 1:33) and ramps shall comply with one of the following:

- min. 1.2m if no change in direction as per Figure 25(A),
- min. 1.5m where change in direction not exceeding 90° internal corner to be truncated for min. 500mm in both directions as per Figure 25(B),
- 180° turn, landing as per Figure 25(C).
- Landings for step ramps shall be min. 1.2m in length as per Figure 22(A) and (B). Where a change in direction, the length of the step ramp landing to be min. 1.5m as per Figure 22(A). At doorways, landings as per Clause 13.3 for circulation spaces at doorways shown in Figure 25(D).

ngs at kerb ramps shall be min. 1.2m in length, or 1.5m X 2.0m at 'T' junctions. Where a single change in direction is required, landings to be min. 1.5m X 1.5m.

Clause 11.1 - Stair construction

Stairs to be constructed as follows:

- Set back min. 0.9m from boundary,
- Where intersection is at an internal corridor, the stair to be set back as per Figure 26(A),
- Have opaque risers,
- Nosings shall not project beyond the face of the riser and the riser may be vertical of 25mm backwards splay,
- Nosing profiles to have a sharp intersection, be rounded up to 5mm radius or be chamfered up to 5mm x 5mm,
- 50mm – 75mm strip to full length of nosing, set back a max. 15mm from the front of the nosing, with a 30% min. luminance contrast. If not set back, luminance contrast to extend down the riser by max 10mm.
- TGSIs installed as per AS1428.4.1.

Clause 11.2 - Stairway handrails

Handrails to be continuous throughout the stair flight and around landings and have no obstructions 0.6m above, and as follows:

- Design & construction as per Clause 12,
- Installed both sides,
- No vertical sections and shall follow angle of the stairway nosings,
- Extend at bottom of stairs one stair tread depth and min. 300mm horizontally, (300mm extension not required if handrail is continuous,
- Dimensions of heights of handrails taken vertically from the nosing or landing to the top of the handrail.

Clause 12 - Handrails

Design and construction to comply with:

- Handrails and balustrades shall not encroach into required circulation,
- Circular or elliptical cross-section, not less than 30mm or more than 50mm for more than 270°. Elliptical handrails to have greater horizontal dimensions,
- Exposed edges or corners have min. radius of 5mm,
- Top of handrail to be between 865mm and 1.0m above nosing or landing,
- Height to be constant throughout,
- If balustrade is required at a height greater than the handrail, both shall be provided,
- Handrails to be securely fixed and rigid with ends turned through a total of 180°, or to the ground, or returned fully to end post or wall face (Figures 26 C and D),
- Min. 50mm clearance to adjacent wall or other obstruction, for a height of 600mm,
- Handrails to have no obstructions to the passage of a hand along the rail,
- Inside handrail at landings to always be continuous as per Figure 28(a).

Summary of AS2890.6-2009

Clause 2.3 – Pavement slope & surface

- Accessible parking space and shared zones are to have a firm plane surface with a fall not exceeding 1:40 in any direction (1:33 if the surface is a bituminous seal and the parking space is out of doors).
- These areas shall have a slip-resistant surface.

Clause 2.4 – Headroom

- The path of vehicular travel from the car park entrance to all accessible parking spaces and from those spaces to the car park exit shall have a minimum headroom of 2200 mm.
- The headroom above each dedicated space and adjacent shared area, measured from the level of the dedicated space shall be a minimum of 2500 mm. For an angle parking space, the headroom of the front of the space and its adjacent shared area may be reduced to lie within the profile shown in Figure 2.7.

Clause 3.1 – Space identification

Each dedicated space shall be identified by means of a white symbol of access in accordance with AS 1428.1 between 800 mm and 1000 mm high placed on a blue rectangle with no side more than 1200 mm, placed as a pavement marking in the centre of the space between 500 mm and 600 mm from its entry point as illustrated in Figure 3.1.

Clause 3.2 – Space delineation

- Pavement markings specified in Items (a) and (b) of this Clause shall be yellow and shall have a slip resistant surface. Raised pavement markers shall not be used for space delineation.
- Pavement markings shall be provided as follows:

(a) Dedicated parking spaces shall be outlined with unbroken lines 80 to 100 mm wide on all sides excepting any side delineated by a kerb, barrier or wall.

(b) Shared areas shall be marked as follows:

(i) Walkways within or partly within a shared area shall be marked with unbroken longitudinal lines on both sides of the walkway excepting any side delineated by a kerb, barrier or wall.

(ii) Other vacant non-trafficked areas, which may be intentionally or unintentionally obstructed (e.g. by unintended parking), shall be outlined with unbroken lines 80 to 100 mm wide on all sides excepting any side delineated by a kerb, barrier or wall, and marked with diagonal stripes 150 to 200 mm wide with spaces 200 mm to 300 mm between stripes. The stripes shall be at an angle of 45 ±10 degrees to the side of the space.

(iii) No shared area markings shall be placed in trafficked areas.

Summary of Specification D3.6; braille and tactile signs

Part 2 – Location of braille and tactile signs

Signage must be designed and installed as follows:

- Braille and tactile components located not less than 1.2m or greater than 1.6m;
- Single line signs to have tactile characters not less than 1.25m or greater than 1.35m;
- Signs identifying room features or facilities located on wall on the latch side of the door with edge of sign 50mm to 300mm from the architrave (or on the door itself if not possible to have adjacent).
- Signs identifying a door required by E4.5 to be provided with an exit sign, must be located on the side that faces a person seeking egress, and on the wall on the latch side of the door with the leading edge of the sign located between 50mm and 300mm from the architrave (or on the door itself if not possible adjacent).

Part 3 – Braille and tactile sign specification

- Tactile characters to be raised or embossed to a height between 1mm and 1.5mm;
- Sentence case must be used, with 15mm to 50mm high characters for capitals and 50% high for the lower case;
- Tactile characters, symbols and the entire sign / frame to have rounded edges;
- The entire sign including characters, background, negative space or fill of signs to be matt or low gloss finish;
- Min. letter spacing to be 2mm;
- Min. word spacing to be 10mm;
- Thickness of letter strokes between 2mm and 7mm and of Arial typeface;
- Tactile text to be left justified (excluding single words).

Part 4 – Luminance contrast

- Background, negative space and fill to be min. 30% luminance contrast to the mounted surface,
- Tactile characters icons & symbols to be min 30% luminance contrast to the background or mount surface,
- Luminance contrasts must be met under the lighting conditions of its surrounds.

Part 5 – Lighting

Braille and tactile signs must be illuminated to ensure luminance contrast requirements are met at all times during which the sign is required to be read.

Part 6 – Braille

- Grade 1 braille (uncontracted) as per Australian Braille Authority,
- Raised and domed, and left justified,
- Located 8mm below bottom line of text,
- Solid arrow, if arrow provided,
- On signs with multiple lines, semi-circular braille locator at the left margin must be horizontally aligned with the first line of braille text.

Glazing on 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 contrasting line.

Accessible sanitary facilities

In a building required to be accessible:

- Accessible unisex sanitary compartments must be provided as per Table F2.4(a),
- Accessible unisex showers must be provided as per Table F2.4(b),
- At each bank of toilets where there are one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females.
- An accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate disposal of sanitary towels.
- Circulation spaces, fixtures and fittings of all accessible sanitary facilities must comply with AS1428.1.
- Where two or more of each type of accessible unisex sanitary facility are provided, the number of left and right-handed mirror image facilities must be provided as evenly as possible.
  An accessible unisex facility must be located so that it can be entered without crossing an area reserved for one sex.

Water Taps – Must have:

- Taps shall have lever handles, sensor plates or other similar control,
- Lever handles to be min. 50mm clear from adjacent surface,
- Where hot water is provided, the water to be delivered through the mixing spout.

WC pan clearances

- WC pan clearance including set-out, seat height and seat width as per Figure 38 of AS1428.1.

Seat – As follows:

- full round type with minimal contours,
- be securely fixed when in use,
- seat fixings that create lateral stability,
- load rated to 150kgs,
- min. luminance contrast of 30%.

Backrest – As follows:

- be capable of withstanding 1100 N,
- height to the lower edge of backrest to the top of the WC pan of 120mm to 150mm,
- vertical height of 150mm-200mm and a width of 350mm and 400mm,
- front edge of the centre of the backrest to be at an angle of 950 to 1000.

Flushing control

- Flushing controls shall be user activated, either hand operated or automatic. Hand-operated controls to comply with Figure 40, or on the centreline of the toilet within the vertical limit zone. Controls within this zone shall not be within the area required for grabrails.
- Controls shall be proud of the surface and activate the flush before being level with the surrounding surface.

Toilet paper dispenser

- Toilet paper dispenser to be located within zone specified in Figure 41. Dispenser shall not encroach on required grabrail clearances.

Grabrails

- Concealed, high level cisterns or flush valves require a continuous grabrail across the rear wall and the side wall closest to the pan as per Figure 42.
- Low-level non-concealed cistern or flush valves require the grabrail to terminate each side of the cistern as per Figure 42.

Circulation space – Shall be as per Figure 43 of AS1428.1-2009, except for the following intrusions:

- Toilet paper dispenser,
- Grabrails,
- Washbasins with 100mm intrusion,
- Hand dryers and towel dispensers,
- Soap dispensers,
- Shelves,
- Wall cabinets with 150mm intrusion, mounted between 0.9m and 1.25m,
- Clothes hanging devices,
- Portable sanitary disposal units (Figure 43),
- Other wall mounted fixtures with 150mm intrusion, mounted between 0.9m and 1.25m.
- The overlapping of circulation space shall be in accordance with Clause 15.6.

Baby change tables

- Where installed, baby change tables shall not encroach into the required circulation space when in the folded position and have a max height of 820mm with clearance underneath of min. 720mm when open.

WC doors

- To be either hinged or sliding,
- Outward-opening doors shall have a mechanism to hold in the closed position without the use of a latch,
- Doors provided with an in-use indicator and a bolt or catch. If fitted with a snib, the snib handle is to be min. length of 45mm from the centre of the spindle.
- Latch mechanisms are to be openable from the outside in the case of an emergency.
- Force required as per Clause 13.5.2(e),
- Door handles and hardware as per Clause 13.5.

Washbasins for unisex accessible sanitary facilities

- A hand-washing facility shall be provided inside the toilet cubicle

Washbasins – As follows:

- Shall be located inside the cubicle,
- Washbasin outside pan circulation,
- Water taps as per Clause 15.2.1,
- Exposed hot water supply pipes to be insulated or located so as not a hazard,
- Projection of washbasins from wall and taps, bowl and drain outlet as per Figures 44 (A) and (B),
- Water supply pipes and waste outlets not to encroach on required clear space under basin.
- Each washbasin fixture to have unobstructed circulation space as per Figure 46, or Figure 45 for SOU's.

Mirrors

- Mirror to be located above or adjacent to washbasin.
- Where provided, a vertical mirror with a reflective surface not less than 350mm wide to extend from a height not less than 0.6m to not more than 1.85m.
- In an accessible residential unit, the mirror to be centred over the washbasin.

Shelves – To be provided adjacent to washbasin, as follows:

- A vanity top at a height of 800mm-830mm and min. width of 1200mm and depth of 300mm-400mm without encroaching circulation space,
- A separate fixture, within any circulation spaces at a height of 0.9m-1.0m, and external to all circulation space 0.79m-1.0m.

Soap dispensers, towel dispenser and similar fittings

- Soap and towel dispensers and hand dryers shall be operable by one hand and installed so the operative component or outlet between 0.9m and 1.1m and no closer than 0.5m from an internal corner.

Clothes-hanging devices

- A clothes-hanging device shall be installed 1.2m to 1.35m high and not less than 0.5m from an internal corner.

Sanitary disposal unit

- Where provided, sanitary disposal units to be as per Figure 43 for portable units or 0.5m from the pan for recessed units.

Switches and general-purpose outlets

- Where provided near the washbasin, switches and GPOs to be located as per Clause 14 and as close to the shelf as possible.

Showers

- Shower recesses and circulation space to a height not less than 0.9m as per Figure 47. Grabrails, shower hose fittings, taps, soap holder, shelf and seat are the only fixtures permitted in these spaces.

Circulation spaces in accessible sanitary facilities

- Circulation spaces in accessible sanitary facilities shall be in accordance with Clause 15.2.8 and Figures 43-47 and 50.
- Circulation spaces, including door circulation space, may be overlapped.
- Fixtures shall not encroach circulation space except:
  a. Washbasin in WC circulation as per Figure 43,
  b. Washbasin in shower circulation as per Figure 50,
  c. Washbasin in door circulation as per Figure 51(A) and 51(B).
- Clearances beneath washbasin as per Clause 15.3.