

ABN: 89112743601

10 April 2025

DRA Architects
133 Prince Street
Grafton NSW 2460

Our Reference: 250560

**Re: Building Code of Australia 2022 – Assessment Report
8 Villiers Street Grafton NSW - Clarence Valley Conservatorium**

McCarthy Consulting Group (NSW) Pty Ltd (MCG) have been engaged by DRA Architects as the Building Code Consultant to review the above proposal with regard to compliance with the NCC 2022.

This report is a compliance review to identify all key compliance relates items to be addressed in the design development documentation for lodgement and is limited to the current level of detail.

Should you have any questions or wish to discuss please do not hesitate to contact the undersigned.

Kind Regards,

Brett Taylor
Building Surveyor - Unlimited (BDC0899)
McCarthy Consulting Group (NSW) Pty Ltd

**BUILDING CODE OF AUSTRALIA 2022
ASSESSMENT REPORT:**

PROPOSED ADDITIONS AND ALTERATIONS TO EXISTING CONSERVATORIUM OF MUSIC

Location: 8 Villiers Street Grafton NSW

Prepared by: McCarthy Consulting Group (NSW) Pty Ltd

Client: DRA Architects

Date of Report: 14/01/2025



REVISION	DATE	STATUS	APPROVED
Ø	10/04/2025	Preliminary	BAT

Introduction

McCarthy Consulting Group (NSW) Pty Ltd have conducted a compliance review based on the current level of detail of the architectural plans referenced in the documentation reviewed table below as prepared by DRA Architects.

This assessment has been undertaken against the requirements of the Deemed-to-Satisfy (DtS) provisions of the Building Code of Australia 2022 (BCA22).

This review seeks to identify matters relating to compliance with the BCA 2022 and identify aspects of the design that may require further updating / alterations as design develops prior to application for Construction Certificate via the NSW Planning portal to the registered certifier.

Building Characteristics

The following Building Characteristics have been determined based on the current level of design documentation as referenced in the documentation reviewed table below.

Building Use Classification	
BCA Classification (A6 - Classifications)	Ground Floor – Class 5 and 9b First Floor – Class 9b
Rise in storeys	2
Number of storeys contained	2
Type of construction	Type B
Effective Height	4m
Climate Zone	2
Building Importance Level	2

Legislative Framework

This review has been undertaken against the provisions of BCA 2022 and the Disability (Access to Premises - Buildings) Standard 2010.

Current Legislation	Date of Publication	Comments
National Construction Code, Building Code of Australia Volume 1	2022 Adopted 1 st May 2023	Including editions of standards referenced therein.
Disability (Access to Premises – Buildings) Standard	2010	To the extent this standard applies to new developments

Scope & Limitations

The following limitations apply to this assessment:

- The drawings are assessed to the extent available to identify current design compliance issues that are apparent from a desktop review of the drawings.
- The assessment does not consider the requirements for people with disabilities under the provisions of the Disabilities Discrimination Act 1992.

- The assessment does not consider the requirements of legislation other than that required under the Environmental Planning and Assessment Act 1979, i.e. Occupational Health and Safety, Safety in Design etc.
- Generally, this assessment will not detail requirements of the referenced Australian Standards; it is assumed the relevant design disciplines will advise where their proposed designs do not achieve absolute compliance.
- Excluded from our assessment are any comments in relation to other Authorities including: Occupational Health and Safety Legislation; Water, Drainage, Gas and Electrical Supply Authority; Telecommunications; Work Cover Authority, Traffic Management and Town Planning Assessment.

Documentation Reviewed

The following drawings prepared by DRA Architects were reviewed as part of this BCA 2022 assessment:

Drawing Number	Drawing Title	Revision	Drawing Date
A001	Location & Proposed Works Plan	DD-A	04/03/2025
A002	External Views	DD-A	04/03/2025
A050	Site Plan	DD-A	04/03/2025
A100	Demolition & Proposed Overlay Plan	DD-A	04/03/2025
A110	Proposed Ground Floor Plan	DD-A	04/03/2025
A111	Proposed First Floor Plan	DD-A	04/03/2025
A310	Elevations & Sections 1	DD-A	04/03/2025
A311	Elevations & Sections 2	DD-A	04/03/2025
A900	Notification Plan	DD-A	04/03/2025

Fire Services, Installations and related requirements

Based on the current level of detail on the above-mentioned plans, a DtS compliant building would be required to be provided with the following special fire services and equipment. Where there are departures from the DtS provisions of BCA and the referenced standards the relevant disciplines within the design team are requested to advise the nature of the proposed departure.

Fire Safety Installation	BCA 2022 Reference	Australian Standard
Emergency Lighting	BCA Clause E4D2, E4D4	AS 2293.1-2018
Exit Signs	BCA Clause E4D5, E4D6, E4D8	AS 2293.1-2018
Fire Hose Reels	BCA Clause E1D3	AS2441-2005
Fire Hydrant Systems	BCA Clause E1D2 (Specification 18)	AS2419.1-2021
Portable Fire Extinguishers	BCA Clause E1D14	AS2444-2001

Section A – Governing Requirements, Building Class

BCA 2022 Clause	Comments	Actions
A2G1 – Compliance	Performance requirements are satisfied by achieving compliance by a Performance Solution, a Deemed-to-Satisfy Solution (DtS), or a combination of 1 & 2.	To be noted for the development of the required performance solutions.
A2G2 – Performance Solutions	A performance solution is achieved by demonstrating compliance with all relevant Performance Requirements, or the solution is at least equivalent to the Deemed-to-Satisfy Provisions. This provision also outlines the required Assessment Methods that the performance solution must use (either one or a combination of) to demonstrate compliance	To be noted for the development of any required performance solutions.
A5G3 – Evidence of suitability – Volumes One and Two (BCA)	Evidence to support that the use of a material, product, form of construction or design meets a Performance Requirement or a DtS provision is to be by way of either a codemark certificate, certificate of accreditation, report from an accredited testing laboratory, report from a professional engineer, documentary evidence by way of Product Technical Statement or evidence to support that a calculation compliance with an ABCB protocol.	Note
A6G1 – Determining a building classification	The classification of a building or part of a building is determined by the purpose for which it is designed, constructed or adapted to be used. Each part of a building must be classified according to its purpose and comply with all the appropriate requirements for its classification. Unless another classification is suitable, an occupiable outdoor area must have the same classification as the art of the building to which it is associated. Note: where a part of a building has been designed, constructed or adapted for a different purposed and is less than 10% of the floor area of the storey it is situated on, the classification of the other part of the storey may apply to the whole storey.	Note
A6G6, A6G7, A6G11 - Building Classification	The building comprises the following uses: Practice Rooms – Class 9b Auditorium – Class 9b Reception/Offices – Class 5	Note
A6G12 – Multiple classifications	A building (or part of a building) may be designed, constructed or adapted for multiple purposes and have more than one classification.	Note

Section B - Structure

BCA 2022 Clause	Comments	Actions																																			
B1D2 - Resistance to actions	The resistance of the buildings structure must be greater than the most critical action effect resulting from different combinations of actions where: (a) the most critical action effect on a building or structure is determined in accordance with B1D3 and the general design procedures contained in AS/NZS 1170.0; and (b) the resistance of a building or structure is determined in accordance with B1D4 Professional Engineer to develop structural building solution in compliance with BCA referenced standards. Design Certificate to be provided by Structural Engineer together with Structural details with Construction Certificate application.	Provide a coordinated Construction Issue structural design set along with a design statement.																																			
B1D3 - Determination of individual actions	Professional Engineer to develop structural design solution. Design Certificate to be provided by Structural Engineer. Design team to pay particular to requirements for parts and components with the building to be designed with consideration for seismic actions under AS1170.4 -2007 Earthquake actions (incorporating amendment 1 & 2) and components of the building design that must comply with AS1170.4-2007. We suggest the project Structural Engineer lead discussions on achieving design compliance with these structural standards. BCA Importance Level 2 <table><tr><th>Importance level</th><th>Building Types</th></tr><tr><td>1</td><td>Buildings or structures presenting a low degree of hazard to life and <u>other property</u> in the case of failure.</td></tr><tr><td>2</td><td>Buildings or structures not included in Importance Level 1, 3 and 4.</td></tr><tr><td>3</td><td>Buildings or structures that are designed to contain a large number of people.</td></tr><tr><td>4</td><td>Buildings or structures that are essential to post-disaster recovery or associated with hazardous facilities.</td></tr></table> The Guide to the NCC suggests this building to fit within structures that must be designed to importance level of 2. <table><tr><th>Importance level</th><th>Annual probability of exceedance for non-cyclonic wind</th><th>Annual probability of exceedance for cyclonic wind</th><th>Annual probability of exceedance for snow</th><th>Annual probability of exceedance for earthquake</th></tr><tr><td>1</td><td>1:100</td><td>1:200</td><td>1:100</td><td>1:250</td></tr><tr><td>2</td><td>1:500</td><td>1:500</td><td>1:150</td><td>1:500</td></tr><tr><td>3</td><td>1:1000</td><td>1:1000</td><td>1:200</td><td>1:1000</td></tr><tr><td>4</td><td>1:2000</td><td>1:2000</td><td>1:250</td><td>1:1500</td></tr></table>	Importance level	Building Types	1	Buildings or structures presenting a low degree of hazard to life and <u>other property</u> in the case of failure.	2	Buildings or structures not included in Importance Level 1, 3 and 4.	3	Buildings or structures that are designed to contain a large number of people.	4	Buildings or structures that are essential to post-disaster recovery or associated with hazardous facilities.	Importance level	Annual probability of exceedance for non-cyclonic wind	Annual probability of exceedance for cyclonic wind	Annual probability of exceedance for snow	Annual probability of exceedance for earthquake	1	1:100	1:200	1:100	1:250	2	1:500	1:500	1:150	1:500	3	1:1000	1:1000	1:200	1:1000	4	1:2000	1:2000	1:250	1:1500	Confirmation is required as to the parts and components in accordance with AS1170.4-2007 having been designed by the structural engineer including internal partitions, ceilings, ductwork, light fittings, battens, screens etc.
Importance level	Building Types																																				
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	Structural Engineer to note and confirm accuracy of Importance Level determined.	
B1D4 - Determination of structural resistance of materials and forms of construction	The structural resistance of materials and forms of construction must be determined in accordance with the relevant Australian Standards in accordance with Clause B1D4 of the BCA. Professional Engineer to develop structural building solution. Design Certificate to be provided by Structural Engineer.	Structural Engineers design certificate to be provided as part of the CC application.
B1D5 – Structural software	Structural software used by engineering consultants must comply with the ABCB protocol for Structural Software.	Note
B1D6 – Construction of buildings in flood hazard areas.	TBCe	TBC
Specification 4 Design of buildings in cyclonic areas	Not Applicable	Not Applicable

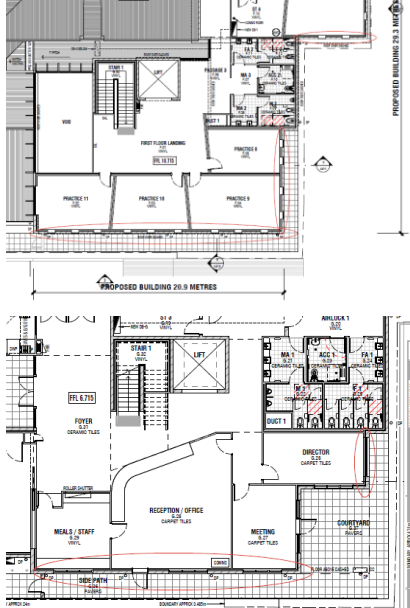
Section C – Fire Resistance		
BCA 2022 Clause	Comments	Compliance
Part C2 – Fire Resistance and Stability		
C2D1	Note	
C2D2 – Type of Construction	The building contains Class 5 and Class 9b with a rise in storeys of 2. Type of Construction applicable to the development is Type B.	Note Type B construction
C2D3 – Calculation of rise in storeys	Rise in storeys of 2	Note
C2D4 – Buildings of Multiple classifications	In a building of multiple classifications such as this, the type of construction required for the building is the most fire resisting type resulting from the application of Table C2D2 on the basis that the classification applying to the top storey applies to all storeys. Note Type A construction applies.	Note – Type B construction.
C2D5 – Mixed types of construction	Not Applicable. Whole building is Type B Construction	Note
C2D6 – Two Storey Class 2, 3 or 9c buildings	Not applicable	Not Applicable

C2D7 – Class 4 parts of buildings	Not applicable	Not Applicable
C2D8 – Open spectator stands and indoor sports stadiums	Not applicable	Not Applicable
C2D9 – Lightweight construction	Not applicable – the documentation at present does not appear to include any lightweight fire rated elements.	Note
C2D10 – Non-combustible building elements	As the building is of Type B construction, the following building elements and their components must be non-combustible: - External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. - The flooring and floor framing of lift pits. - Non-loadbearing internal walls where they are required to be fire-resisting. Non-loadbearing Shafts – eg lift, ventilation and garbage shafts etc must be non-combustible. The materials detailed below may be used wherever a non-combustible material is required by a clause in BCA: - Plasterboard. - Perforated gypsum lath with a normal paper finish. - Fibrous-plaster sheet. - Fibre-reinforced cement sheeting. - Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. - Bonded laminated materials where— - each laminate is non-combustible; and - each adhesive layer does not exceed 1 mm in thickness; and the total thickness of the adhesive layers does not exceed 2 mm; and - the Spread-of-Flame Index and the Smoke-Developed Index of the laminated material as a whole does not exceed 0 and 3 respectively.	Non-combustible test reports required for all components of the external wall, attachments, insulation, renders etc. Architectural drawings to note non-combustible requirements to external walls.

	There are concession to the non-combustibility provisions under subclause (4) and these include elements such as thermal breaks, caulking, glazing, noggings/blocking for fixtures, paint and lacquer, joint trims etc.	
C2D11 - Fire hazard properties Refer Specification 7	The fire hazard properties of the nominated internal linings, materials and assemblies within a Class 2 to 9 building must comply with Specification 7. Fire hazard properties: The following properties of a material or assembly that indicate how they behave under specific fire test conditions: a) Average specific extinction area, critical radiant flux and Flammability Index, determined as defined in Schedule 1. b) Smoke-Developed Index, smoke development rate and Spread-of-Flame Index, determined in accordance with Specification 3. c) Group number and smoke growth rate index (SMOGRARC), determined in accordance with Specification 7.	Refer to Specification 7 for specific properties and testing regime.
C2D12 - Performance of external walls in fire	Not Applicable	
C2D13 – Fire protected timber concession	Not Applicable	
C2D14 – Ancillary Elements	<i>Ancillary element</i> means an element that is secondary to and not an integral part of another element to which it is attached. An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following: (a) An ancillary element that is non-combustible (ie tested to AS1530.1). (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate or grille not more than 2m² in area associated with a building service. (e) An electrical switch, socket-outlet, cover plate or the like. (f) A light fitting. (g) A required sign. (h) A sign other than one provided under (a) or (g) that—	All ancillary elements attached to the external walls to be demonstrated as non-combustible. Architect to specify on plans. Builder to provide materials test reports to AS1530.1 confirming compliance.

	(i) achieves a group number of 1 or 2; and (ii) does not extend beyond one storey; and (iii) does not extend beyond one fire compartment; and (iv) is separated vertically from other signs permitted under (h) by at least 2 storeys. (i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that— (i) meets the requirements of Table 4 of Specification C1.10 as for an internal element; and (ii) serves a storey— (A) at ground level; or (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 services installations. (n) Screens applied to vents, weepholes and gaps 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).	
C2D15 – Fixing bonded laminated cladding panels	TBC	TBC
C3 – Compartmentation and Separation		
C3D1	Note	
C3D2 – Application of Part	Note	Note
C3D3 - General Floor Area Limitations	Note	Design Complies
C3D4 - Large isolated buildings	Not Applicable	Not Applicable
C3D5 - Requirements for open spaces and vehicular access	Not Applicable	Not Applicable

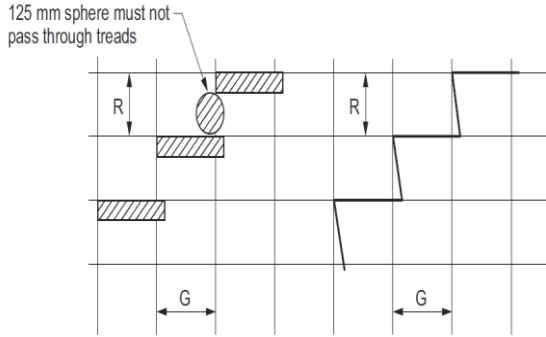
NSW C3D6(3) – Class 9 buildings	Not Applicable	Not Applicable
C3D7 – Vertical separation of openings in external walls.	Not applicable	Not Applicable
C3D8 – Separation by fire walls	Not Applicable – No fire walls required within this project.	Not Applicable
C3D9 – Separation of classifications in the same storey	If a building has parts of different classifications located alongside one another in the same storey, each building element in that storey must have the higher FRL prescribed in Specification 5 for that element for the classifications concerned, or the parts must be separated in that storey by a fire wall.	Design Complies
C3D10 – Separation of classifications in different storeys	Not Applicable	Not Applicable
C3D11 – Separation of lift shafts	Lift connecting more than 3 storeys in a sprinkler protected building – separation required. The lifts must be enclosed in a fire rated shaft achieving an FRL of not less, 120/120/120 within Class 7a carpark, 180/120/120 for Class 6 and 90/90/90 for Class 2/3.	Not Applicable
C3D12 – Stairways and lifts on one shaft	Lift and stairway must not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft. As the lift shaft is required to be rated, these services are not permitted within the same shaft.	Not Applicable
C3D13 – Separation of equipment	The following equipment must be separated from the remainder of the building by 120/120/120 fire rated construction: - Lift motors and lift control panels (except a lift installation without a machine-room) or - Emergency generators used to sustain emergency equipment operating in the emergency mode; or - Central smoke control plant; or - Boilers; or - A battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200kWh or more	TBC
C3D14 - Electricity supply system	A main switchboard located within the building which sustains emergency equipment operating in the emergency mode must be separated from any other part of the building by 2hr fire rated construction with self-closing doors -/120/30 FRL.	TBC

C3D15 – Public corridors in class 2 & 3 buildings	In a class 2 or 3 building, a public corridor more than 40m in length must be divided at intervals of not more than 40m with smoke proof construction complying with S11C2.	Not Applicable
C4 – Protection of Openings		
C34D2 – Application of Part	Part applies	Note
C4D3 – Protection of openings in external walls	Any openings in a wall that is required to have an FRL must be protected by one of the following methods:- i. internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or ii. –/60/– fire windows that are automatic closing or permanently fixed in the closed position; or –/60/– automatic closing fire shutters.	All openings in the southern and eastern elevations (new works) are required to be protected as they are less than 3m from a fire source feature (boundary) 
C4D4 – Separation of external walls and associated openings in different compartments	Not Applicable – Currently no separation of fire compartments proposed/required.	Note
Specification 5 – Fire-Resisting Construction	Noted	Structural engineer to confirm FRLs achieved by applicable members per the tables referenced in S5C21a – S5C21g.
Specification 6 – Structural tests for lightweight construction	Not Applicable	
Specification 7 – Fire hazard properties	Linings, materials and assemblies must comply with Table S7C2	Test reports for all linings, attachments, insulation, sarking and ductwork to be provided.
Specification 8	Not Applicable	Not Applicable

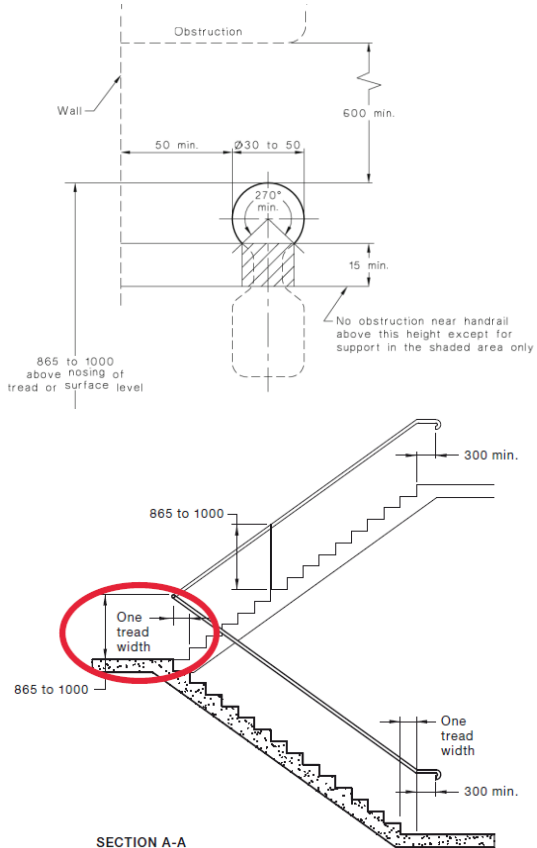
Performance of external walls in fire		
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Section D – Access and Egress		
BCA 2022 Clause	Comments	Compliance
D2 – Provision for Escape		
D2D2 – Application of Part	Applies to this building	
D2D3 – Number of exits required	Not less than one exit required for each storey above ground of the building as less than 25m in effective height. A minimum of 2 exits must be provided where the population exceeds 50 persons.	Design complies
D2D5 – Exit Travel Distances	Noted	Design Complies.
D2D6 – Distances between alternative exits	Travel distance between alternative exits must be distributed as uniformly as practicable, not less than 9m apart and not more than 60m between the exits.	Design Complies
D2D7 – Height of exits, paths of travel to exits and doorways	In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm.	Design Complies
D2D8 – Widths of exits and paths of travel to exits	The unobstructed width of each requirement exit or path of travel to an exit must be not less than 1m and for the purposes of egress only not less than 750mm through and openable door.	Design Complies
D2D9 – Width of doorways in exits or paths of travel to exits	As this is a class 5/9b building, the unobstructed width of a doorway in a requirement exit or path of travel to an exit must be not less than 750mm. Note under Part D4, the clear width is increased to 850mm for unit entry doors and all doors and gates within the common areas, retail and basement for accessibility requirements.	Door schedule to be provided for assessment
D2D10 – Exit width not to diminish in direction of travel	The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(i).	Noted
D2D11 – Determination and measurement of exits and paths of travel to exits	For the purposes of D2D7 to D2D10 the following apply: The required width of a stairway or ramp in a required exit or path of travel to an exit must—	Noted

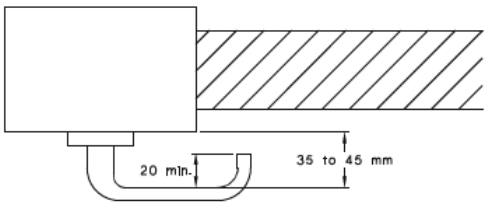
	(i) be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and (ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing. To determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D2D18.	
D2D14 – Travel by non-fire isolated stairways or ramps	Applies In a Class 5/9b building, the distance from any point on a floor to a point of egress to a road or open space must not exceed 80m.	Design Complies
D2D15 – Discharge from exit	An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it. Where a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout not less than 1m or the minimum width of the required exit (in this case, 1m).	Design Complies
D2D16 – Horizontal Exits	Not applicable	Not Applicable
D2D17 – Non required stairways, ramps or escalators	Not Applicable	Not Applicable
D2D18 – Number of persons accommodated	Projected population to be confirmed for further assessment of compliance	TBC
D2D19 – Measurement of distances	The nearest part of an exit means in the case of a fire isolated stairway, the nearest part of the doorway providing access to them. In the case of a doorway opening to a road or open space, the nearest part of the doorway.	Noted
D2D20 – Method of Measurement	Applies	Note
D2D22 – Access to Lift Pits	Where the pit depth is not more than 3m, access to the it must be through the lowest landing doors.	Lift consultant to confirm compliance.
D3 Construction of Exits		
D3D2 – Application of Part	Except for D3D14, D3D15(a), D3D17, D3D18, D3D19, D3D20, D3D21, D3D22(5) & (6), D3D26 and D3D29, the DtS provisions of this part do not apply to the internal parts of an SOU. This part applies to all common areas and carparks.	

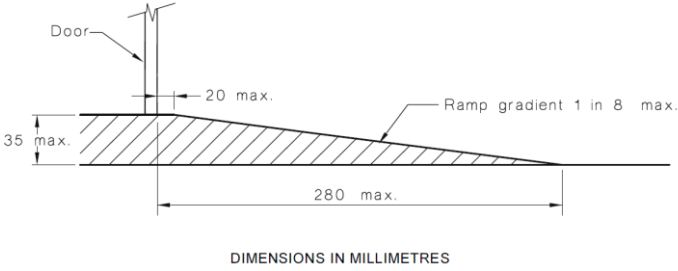
D3D4 – Non fire isolated stairways and ramps	The non-fire isolated stairs must be of non-combustible construction or only of reinforced concrete or steel that in not part is less than 6mm thick, or timber that has a finished thickness of not less than 44mm and an average density of not less than 880kg/m3 at a moisture content of 12%.	Assume concrete																											
D3D8 – Installations in exits and paths of travel	Any electrical distribution boards, communications cupboards or electrical installations located in the path of travel to an exit must be enclosed in non-combustible construction and have any opening suitably smoke sealed.	Location TBC																											
D3D10 – Width of required stairways and ramps	Complies – stairs less than 2m in width	Complies.																											
D3D11 – Pedestrian ramps	Not Applicable	Not Applicable																											
D3D14 – Going and risers	The goings and risers are to be consistent in height with a tolerance not greater than 5mm between adjacent goings or risers and not more than 10mm over the entire flight. The treads must have a slip resistant surface or nosing achieving a P3 rating or higher when tested in accordance with AS4586 for the internal stairs and P4 or higher for the external stairs. Riser and going dimensions to comply with Table D3D14 and figure D3D14 noting <i>private</i> stairways are only those within the class 2 SOU's. Table D3D14: Riser and going dimensions <table><tr><th rowspan="2">Stairway location</th><th colspan="2">Riser (R)</th><th colspan="2">Going (G)^{Note 3}</th><th colspan="2">Quantity (2R + G)</th></tr><tr><th>Max</th><th>Min</th><th>Max</th><th>Min</th><th>Max</th><th>Min</th></tr><tr><td>Public</td><td>190</td><td>115</td><td>355</td><td>250</td><td>700</td><td>550</td></tr><tr><td>Private ^{Note 1}</td><td>190</td><td>115</td><td>355</td><td>240</td><td>700</td><td>550</td></tr></table> Figure D3D14: Riser and going dimensions  The going in tapered treads in the curved or spiral stairway accessing the private roof terraces is measured—	Stairway location	Riser (R)		Going (G) ^{Note 3}		Quantity (2R + G)		Max	Min	Max	Min	Max	Min	Public	190	115	355	250	700	550	Private ^{Note 1}	190	115	355	240	700	550	Stair details to be provided for further assessment
Stairway location	Riser (R)		Going (G) ^{Note 3}		Quantity (2R + G)																								
	Max	Min	Max	Min	Max	Min																							
Public	190	115	355	250	700	550																							
Private ^{Note 1}	190	115	355	240	700	550																							

	a) 270 mm in from the outer side of the unobstructed width of the stairway if the stairway is less than 1 m wide (applicable to a non-required stairway only); and b) 270 mm from each side of the unobstructed width of the stairway if the stairway is 1 m wide or more.	
D3D15 - Landings	The landings of the stairways are to be not less than 750mm in length (but maintain 1m width) and a gradient not steeper than 1:50. The landing is also to have a slip resistance surface not less than P3 when tested in accordance with AS4586-2013 for the internal stairs and P4 or higher for the external stairs.	Stair details to be provided to assess compliance with BCA stair geometry provisions.
D3D16 - Thresholds	A threshold of a doorway in the building must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless a ramp is provided with a maximum gradient of 1:8 for a maximum height of 25mm over the threshold. The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless (in a building required to be accessible by Part D4) the doorway opens to a road or open space; and is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or	Design Complies
D3D17 – Barriers to prevent falls.	A continuous barrier must be provided along the side of a floor, balcony, stairway, ramps etc. if the trafficable surface is 1m or more above the surface beneath.	Design Complies
D3D18 – Height of Barriers	A continuous barrier must be provided along the side of— a) a roof to which general access is provided; and b) a stairway or ramp; and c) a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and d) any delineated path of access to a building, if the trafficable surface is 1 m or more above the surface beneath. A minimum 865mm high barrier is required to the stair flights. A minimum of 865mm to landings of a stair where the barrier is provided along the inside edge of the landing and does not exceed 500mm in length. A minimum 1m for barriers to the balconies and all other areas. A barrier required by (1) must be constructed in accordance with D3D18, D3D19, D3D20 and, if a wire barrier is used, D3D21.	Design Complies

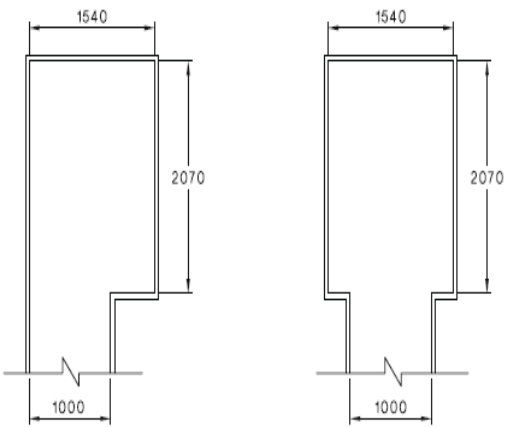
D3D19 – Openings in Barriers	Openings must not permit a 125mm sphere to pass through for the barriers to the balconies and walkways. Within the fire isolated stair, where a rail system is used, a 150mm sphere must not pass through the opening between the nosing line of the treads and the rail and the opening between rails must not be more than 460mm.	Balustrade details to be provided for review. Structural certification of the resistance to actions to be documented for all balustrades.
D3D20 – Barrier Climability	Where the floor of the balcony is more than 4m above the surface beneath, the barrier must not incorporate horizontal or near horizontal elements that could facilitate climbing between 150mm and 760mm above the floor.	Not Applicable
D3D21 – Wire Barriers	Not applicable	
D3D22 – Handrails	A handrail is required on one side of any stair or ramp, subject to compliance with D3.3 and AS1428.1-2009 – handrails to both sides of stairs and ramps. Handrails must be located at not less than 865mm and not more than 1m above the nosing of stairs or ramps. Handrails within fire isolated stairs are to be designed to comply with Clause 12 of AS1428.1-2009 as the building is required to be accessible.  SECTION A-A To maintain the handrail at a consistent height the lowest stair riser in the flight must be offset one tread width to the flight below. We note this is indicated in the latest drawings. The current design appears OK in this regard.	Handrail details to be provided for review.

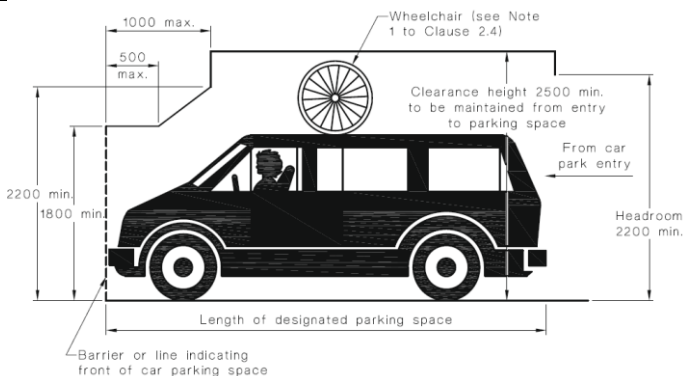
D3D23 – Fixed platforms, walkways, stairways and ladders.	Not Applicable	Note
D3D24 – Doorways and doors.	Doorways forming a required exit or part of a required exit if fitted with a door which is power operated, it must be able to be opened manually under a force of not more than 110N if there is a malfunction or failure of the power source and if it leads directly to a road or open space, it must open automatically if there is a power failure to the door or on the activation of a fire alarm anywhere within the fire compartment. A power operated door in a path of travel to a required exit must be able to be opened manually under a force of not more than 110N if there is a malfunction or failure of the power source.	No automated doors indicated.
D3D25 – Swinging doors	A swinging door in a required exit or forming part of a required exit must not encroach— (i) at any part of its swing by more than 500 mm on the required width (including any landings) of a required stairway, ramp or passageway if it is likely to impede the path of travel of the people already using the exit; and (ii) when fully open, by more than 100 mm on the required width of the required exit; and (iii) must swing in the direction of egress unless it serves a building or part of less than 200^{m2} and is fitted with a device for holding the door in the open position. The measurement of encroachment in each case is to include door handles or other furniture or attachments to the door.	Noted
D3D26 – Operation of latch	A door in a required exit, forming part of a required exit or a path of travel to a required exit must be openable without a key from the side that faces a person seeking egress by: - a.) a single hand downward action on a single device which is located between 900mm and 1.1m from the floor and if in a part of the building required to be accessible: - be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and - have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35mm and not more than 45mm.	Details to be provided for further assessment

	 (b) Plan view FIGURE 35(A) EXAMPLE OF ACCEPTABLE DOOR HARDWARE FOR HINGED DOORS - Alternatively a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor may be used ("Panic bar") <u>Location of manual door control for power operated doors:</u> Where power operated doors have manual push button controls which is not located on the door leaf itself- 1) a manual control to power operated doors must be at least 25mm wide, proud of the surrounding surface and located - not less than 500mm from an internal corner; and - for a hinged door, between 1m and 2m from the door leaf in any position; and - for a sliding door, within 2m of the doorway and clear of a surface mounted door in the open position. - Have braille and tactile signage complying with Clause 3 and 6 of Specification 15 must identify the latch operating device.	
D3D27 – Re-entry from fire isolated exits	Not Applicable	Not Applicable
D3D28 – Signs on doors	Not Applicable	Not Applicable
D3D29 – Protection of openable windows	Not Applicable	Not Applicable
D3D30 – Timber stairways: Concession	Not Applicable	Not Applicable
D4 – Access for people with a disability		
D4D2 – General building access requirements	Parts of the Building required to be accessible: Accessible: <i>Having features to enable use by people with a disability.</i> Class 6 Access must be provided to and within all areas normally used by the occupants.	Appendix A includes reference to AS1428.1-2009 set out issues. 1. Handrail to be reviewed against AS1428.1

	Applicable Legislative requirements: 1. Building Code of Australia – Volume One 2022 – Particularly Part D Access and Egress 2. AS1428.1 (2009) Design for Access and Mobility 3. AS1428.4.1 (2009) Tactile Indicators 4. AS4586 – Slip Resistance of Pedestrian Surface 5. Premises Standards - Disability Discrimination Act 1992 (Outside scope of report however noted to complement BCA requirements) General Requirements as Follows: Glazing: • Glazing that may be mistaken for an opening shall be provided with manifestation in accordance with AS1288 and AS1428.1:2009. • Glass doors and glazing capable of being mistaken for an opening are to be clearly marked with a solid contrasting strip a minimum 75mm wide with the lower edge located at a height of 900 -1000mm above FFL. • Strip must achieve 30% luminous contrast to the background against which it is viewed. Entry Threshold: • Design of the building's entry thresholds is to be in accordance with AS1428.1:2009 with either a flush transition or Clause 10.5 & FIGURE 21 THRESHOLD RAMP (pages 32-33).  FIGURE 21 THRESHOLD RAMP • Note: That changes in level are not permitted to exceed 35mm between internal floor and external ground at door thresholds. Level transitions are preferred. Doorways: • All doors within the accessible parts of the building must be designed to ensure that the clear widths and circulation spaces are provided in accordance with AS1428.1 (generally 920mm minimum door leaf required for swing doors and	2. Threshold details to entry to be documented 3. Handrail to be continuous through the mid landing of the non-fire isolated stairs unless TGIS are provided on the intermediate landing. 4. Lever action "D" type hardware to all accessible doors in common areas and unit entries, 5. Corridor width outside accessible toilet TBC – minimum of 1240mm clear width required.
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	up to 530mm latch side clearance front approach). - Doors are required to have a minimum luminance contrast of 30% to their adjacent surfaces in accordance with AS1428.1:2009. - Door furniture is to be of a lever action type with return to prevent a hand from slipping during operation of the handle. A clearance of 35mm-45mm required between the inside of the lever and the door face. - Detailed information will need to be developed as part of the design. - Frameless glass doors should be avoided.	
D4D3 – Access to buildings	Access for people with disabilities (i.e. in terms of compliance with AS1428.1-2009) to the main entrance of the building from: - - The main points of a pedestrian entry at the allotment boundary - Accessible carparking spaces.	Location of disabled car parking space in relation to the main entrance of the building to be assessed by the access consultant.
D4D4 – Parts of buildings to be accessible	All stairs and ramps (other than fire isolated stairs and ramps) must comply with AS1428.1-2009 and tactile ground surface indicators to AS1428.4.1-2009. Ensure all stairways are provided with 30% luminance contrasting stair nosing's that comply with AS1428.1-2009. Design team to note BCA DtS requirement for carpet pile heights and underlay in accessible parts of the buildings overrule that within AS1428.1-2009: - Maximum underlay thickness – 4mm - Maximum pile thickness – 11mm - Total carpark and underlay thickness – 15mm. All doors in accessible areas of the building must achieve a clear opening of 850mm, we find this requires a minimum 920mm door leaf to be documented in order to achieve the required clearance. Doorways on an accessway must achieve AS1428.1-2009 cl. 13 luminance contrast requirements of 30%, architect to take note when documenting colour schemes including unit entry door and wall contrast. Door circulation spaces are to be provided to all accessible doors in accordance with Figure 31 & 32 and turning spaces within accessways to figures 4 & 5 of AS1428.1-2009. The public corridors must contain a 180° turning space within 2m from the end of the accessway in accordance with AS1428.1-2009:-	Details required to be updated to reflect compliance. Door schedule to be provided to demonstrate the required 30% luminance contrast to all accessible doors.

	 (a) Space required in corridor (b) Space required in corridor	
D4D5 - Exemptions	The following areas are not required to be accessible: • An area 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. • Any path of travel providing access only to an area exempted above. Whilst access for persons with disabilities is generally required throughout the building to all areas normally used by the occupants, given the specialist nature of parts, there may be areas subject to exemption under D4D5 The design team/client will be requested to identify areas they wish to apply BCA D4D5 exemption to and provide sufficient documented reasons stating why it is not appropriate to provide people with disabilities access to a particular area where an exemption is being sought.	Generally all areas should be documented as accessible.
D4D6 – Accessible car parking	Dedicated accessible carparking spaces (DAPS) are required at the ratio specified under BCA D4D6 for the class 6 retail use: • 1 DAPS for every 50 carspaces up to 1000 spaces The DAPS is to comply with AS2890.6-2009 and have a minimum head height of 2.5m above the space (clear of services/roof etc) with 2.2m maintained from the entry of the carpark to the PWD spaces.	Design Complies, noting location query in clause D4D3 above

	 DIMENSIONS IN MILLIMETRES FIGURE 2.7 HEADROOM REQUIRED ABOVE CAR SPACES FOR PEOPLE WITH DISABILITIES An accessible path of travel is to be provided from the DAPS to the lift.	
D4D7 - Signage	Exit doors provided with an exit sign are required to have braille and tactile signage: 'Exit Ground Floor' (example below). The sign is to be installed in accordance with Specification 15. 	Signage to be nominated to the exit door.
D4D8 – Hearing Augmentation	TBC	TBC
D4D9 – Tactile Indicators	The building is required to be accessible, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching— a) a stairway, other than a fire-isolated stairway; and b) an escalator; and c) a passenger conveyor or moving walk; and d) a ramp other than a fire-isolated ramp, step ramp, kerb ramp or swimming pool ramp; and e) in the absence of a suitable barrier— (i) an overhead obstruction less than 2 m above floor level, other than a doorway; and (ii) an accessway meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D4D5, if there is no kerb or kerb ramp at that point, except for areas exempted by D4D5.	Note

D4D10 – Wheelchair seating spaces in Class 9b assembly buildings	Not Applicable	Not Applicable
D4D12 – Ramps	Noted	Design Complies
D4D13 – Glazing on an accessway	Glazing on accessways must be provided with manifestation marking to comply with AS1428.1-2009 requirements. This means a solid non-transparent band, not less than 75mm thick and extending the full width of the panel. The band must start between 900mm-1000mm above FFL and not have any cutouts within. The band is to achieve a minimum 30% luminance contrast between the band and the flooring surface to which it is viewed, measured 2m back from the glazing line.	Decals to be provided to all full height glazing not provided with transom or similar. Refer Clause 6.6 of AS1428.1-2009.
Specification 14 – Non required stairways, ramps and escalators	Not applicable	
Specification 15 – Braille and tactile Signs	Specific requirements for the selection and location of signage to accessible facilities, critical issues identified below: • Braille and tactile components of signs to be located 1200-1600mm above floor level • Signs with single lines of characters must have the line of tactile characters 1250-1350mm above floor level • Signs should be located on the wall, latch side of the door with the leading edge of the sign 50-300mm of the door frame (where this is not possible it may be placed on the door itself). Signs themselves: • BCA has prescriptive requirements for height, location and size of text • Sign must have rounded edges • Sign background/fill space must be low sheen • The background or a border with a minimum thickness of 5mm must achieve 30% luminous contrast to the surface on which it is mounted.	Architect to note regarding location of braille and tactile signage.

	located adjacent to every exit, provided system coverage can be achieved. Where system coverage is not achieved by compliance with (a) and (b), additional fire hose reels may be located in paths of travel to an exit to achieve the required coverage.	
E1D14 – Portable fire extinguishers	Class 2 building part of a building: Portable fire extinguishers must be provided to serve the whole Class 2/3 portion of the building where one or more internal fire hydrants are installed; or where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500 m², and for the purposes of this clause, a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building is considered to be a fire compartment; and subject to (2), selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444. Portable fire extinguishers provided in a Class 2 or 3 building or Class 4 part of a building must be— - an ABE type fire extinguisher; and - a minimum size of 2.5 kg; and - distributed outside a sole-occupancy unit to serve only the storey at 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 10 m. Class 6/7: In Class 2 to 9 buildings (except within sole-occupancy units of a Class 9c building), portable fire extinguishers must be provided as follows: - To cover Class AE or E fire risks associated with emergency services switchboards - To cover Class F fire risks involving cooking oils and fats in kitchens. - To cover Class B fire risks in locations where flammable liquids in excess of 50 litres are stored or used (not including that held in fuel tanks of vehicles). - To cover Class A fire risks in normally occupied fire compartments less than 500 m² not provided with fire hose reels (excluding open-deck carparks). - To cover Class A fire risks in classrooms and associated corridors in primary and secondary schools not provided with fire hose reels. - To cover Class A fire risks associated with a Class 2, 3 or 5 building or Class 4 part of a building.	Portable fire extinguishers to be provided in accordance with BCA E1D14 and AS2444-2001. Fire services consultant to review locations of PFE in retail tenancies to ensure location complies with AS2444-2001.

E1D15 – Fire controls centres	Not applicable.	
E1D16 – Fire precautions during construction.	The builder should note during construction not less than one fire extinguisher to suite Class A, B and C fire risks are required for each storey located adjacent to each exit.	Capable of complying – builder to action.
E1D17 – Provision for special hazards	Not Applicable	
E2 – Smoke Hazard Management		
E2D2 – Application of Part	Part applies to new areas.	
E2D3 – General requirements	An air-handling system which does not form part of a smoke hazard management system in accordance with 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— (a) to operate as a smoke control system in accordance with AS 1668.1; or such that it— (i) incorporates smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and (ii) is arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1.	Noted – see clause E2D16.
E2D9 – Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings	Not Applicable	Not Applicable
E2D16 Class 9b – assembly buildings: all (NSW Provisions)	A building or part of a building used as an assembly building must be provided with automatic shutdown of any air-handling system (other than non-ducted individual room units with a capacity not more than 1000 L/s and miscellaneous exhaust air systems installed in accordance with Sections 5 and 6 of AS 1668.1) which does not form part of the smoke hazard management system, on the activation of— i. smoke detectors installed complying with S20C6; and ii. any other installed fire detection and alarm system, including a sprinkler system (other than a FPAA101D or	Noted. Mechanical Engineer to review

	FPAA101H system) complying with Specification 17.	
E2D21 – Provision for special hazards	Not Applicable	Not Applicable
E3 – Lift Installations		
E3D2 – Lift Installations	Electric passenger lift and electrohydraulic lift must be installed in accordance with Specification 24	CIRD lift documentation to reflect compliance.
E3D3 – Stretcher facilities in lift	Not applicable – lift does not serve a storey above effective height of 12m.	Not Applicable
E3D4 – Warning against use of lifts in fire	Warning sign must be displayed where it can be readily seen near every call button for a passenger lift or group of lifts throughout the building. Sign must state: DO NOT USE LIFTS IF THERE IS A FIRE	CIRD lift documentation to reflect compliance.
E3D5 – Emergency Lifts	Not applicable	
E3D6 – Landings	Access to and from lift well landings must comply with Parts D2, D3 and D4	Lift documentation to reflect compliance.
E3D7 – Passenger lift types and their limitations	Lift serving this building must be either of the following: - An electric passenger lift, electrohydraulic passenger lifts or inclined lifts. - A small-sized, low-speed automatic lift must not travel more than 12 m.	Lift documentation to reflect compliance.
E3D8 – Accessible features required for passenger lifts	For the purposes of this clause the lift will require: - A handrail complying with AS1735.12 - Lift floor dimension not less than 1100x1400mm - Minimum clear door opening of 900mm - Passenger protection system - Lift landing doors at the upper landing - Lift car and landing control buttons complying with AS1735.12 - Lighting in accordance with AS1735.12 - Voice annunciation - Emergency hand free communication	Lift documentation to reflect compliance.
E3D9 – Fire service controls	Not Applicable	
E3D10 – Residential care buildings	Not Applicable	
E3D11 – Fire service recall switch	Not Applicable	

E3D12 – Lift car fire service drive control switch	Not Applicable	
E4 – Visibility in an emergency, exit signs and warning systems		
E4D2 – Emergency lighting requirements	The building requires emergency lighting to comply with BCA cl. E4D2: Class 5/9b: Throughout the class 5/9b parts as each storey has an area more than 300 m²— • in every passageway, corridor, hallway, or the like, that is part of the path of travel to an exit; and • in any room having a floor area more than 100 m² that does not open to a corridor or space that has emergency lighting or to a road or open space; and • in any room having a floor area more than 300 m²; and • in every required non-fire-isolated stairway	Electrical documentation to reflect compliance.
E4D3 – Measurements of distances	Designer to note method of measurement	Note
E4D4 – Design and operation of emergency lighting	Emergency lighting shall be provided throughout the building in accordance with the requirements of AS/NZS 2293.1-2018. Design Compliance certificate (CIRD) to reference compliance with BCA Part E and AS/NZS 2293.1-2018.	Note
E4D5 – Exit signs	An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each— a) door providing direct egress from a storey to— (i) an enclosed stairway, passageway or ramp serving as a required exit; and (ii) an external stairway, passageway or ramp serving as a required exit; and (iii) an external access balcony leading to a required exit; and b) door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space; and c) horizontal exit; and d) door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4D2.	CIRD electrical documentation to reflect compliance.
E4D6 – Direction signs	Where an exit is not readily apparent then exit signs with directional arrows must be installed in appropriate	CIRD electrical documentation to reflect compliance.

	positions in corridors, hallways, lobbies and the like indicating the direction to a required exit.	
E4D7 – Class 2 and 3 buildings and Class 4 parts: Exemptions	Not Applicable	Not Applicable
E4D8 – Design and operation of exit signs	The design and operation of exit signage must comply with AS/NZS 2293.1-2018 Required exit signs must be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	CIRD electrical documentation to reflect compliance.
Specification 24 – Lift installations	This Specification contains requirements for electric passenger lift installations and electrohydraulic passenger lift installations. Lift design consultant to confirm the design of the lift shaft, car, doors and foyer comply with Specification 24 of BCA 2022.	Lift consultant to provide design details for approval as part of the construction certificate application.

Section F – Services and Equipment		
BCA 2019 Clause	Comments	Compliance
F1 – Surface water management, rising damp and external waterproofing		
F1D2 – Application of Part	Noted	
F1D3 – Stormwater drainage	Stormwater drainage must be designed and constructed in accordance with AS/NZS3500.3-2018.	Hydraulic design required as part of the construction certificate application.
F1D4 – Exposed Joints	Exposed joints in the drainage surface on a roof, balcony, odium 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, wall feature or similar part of the building.	Design details required to confirm location of any joints.
F1D5 – External above ground membranes	Waterproofing membranes for external above ground use must comply with AS 4654.1/2. Note termination height requirements within the standard based on wind zone. This may impact on the threshold details at doors on the upper levels of the building where external balconies are waterproofed.	Waterproofing detail required which are to include these termination height details. Structural engineer to confirm wind region for design to meet.

	AS 4654.2—2012 18 NOTES: 1. Sub-sill is installed before door. 2. Seal between sill, packer and membrane before drilling fixing holes. NOTE: For falls, see Clause 2.5.2. (b) Option 2 Sill with sub-sill FIGURE 2.8 (in part) TYPICAL DETAILS OF MEMBRANE TERMINATION AT EXTERNAL OPENING DOORS <table><tr><th colspan="4">TABLE A1</th></tr><tr><th colspan="4">VERTICAL UPWARD TERMINATION HEIGHTS</th></tr><tr><th>Wind class Regions A and B (non-cyclonic) AS 4055</th><th>Wind class Regions C and D (cyclonic) AS 4055</th><th>Ultimate limit state wind speed (V_{AS}) AS/NZS 1170.2</th><th>Termination height mm</th></tr><tr><td>N1</td><td>—</td><td>34</td><td>40</td></tr><tr><td>N2</td><td>—</td><td>40</td><td>50</td></tr><tr><td>N3</td><td>C1</td><td>50</td><td>70</td></tr><tr><td>N4</td><td>C2</td><td>61</td><td>100</td></tr><tr><td>N5</td><td>C3</td><td>74</td><td>150</td></tr><tr><td>N6</td><td>C4</td><td>86</td><td>180</td></tr></table>	TABLE A1				VERTICAL UPWARD TERMINATION HEIGHTS				Wind class Regions A and B (non-cyclonic) AS 4055	Wind class Regions C and D (cyclonic) AS 4055	Ultimate limit state wind speed (V_{AS}) AS/NZS 1170.2	Termination height mm	N1	—	34	40	N2	—	40	50	N3	C1	50	70	N4	C2	61	100	N5	C3	74	150	N6	C4	86	180	
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N3	C1	50	70																																			
N4	C2	61	100																																			
N5	C3	74	150																																			
N6	C4	86	180																																			
F1D6 – Damp proofing	Moisture from the ground must be prevented from reaching the lowest floor timbers and the walls above the lowest floor joists and, 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. The damp-proof course must consist of a material that complies with AS/NZS2904 or impervious sheet material in accordance with AS3660.1.	Location of damp roof course must be provided on plan for construction certificate package.																																				
F1D7 – Damp-proofing of floors on the ground	Where a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS2870.	Details of vapour barrier must be provided on plan for construction certificate package.																																				
F1D8 – Subfloor ventilation	Not applicable – slab on ground	Not Applicable																																				
F2 – Wet areas and overflow protection																																						
F2D2 – Wet area construction	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— a.) be water resistant or waterproof in accordance with Specification 26; and b.) comply with AS 3740, as if they were in a Class 2 or 3 building or a Class 4 part of a building	Applies – architectural documentation to reflect compliance.																																				
F2D3 – Rooms containing urinals	Noted																																					

F3 – Wall and Roof Cladding		
F3D2 - Roof covering	The roof comprises of metal - it must comply with AS1562.1	Architects details for weatherproofing the roof of the building to reflect compliance.
F3D3 - Sarking	Architects CIRD details for wet areas and waterproofing to reflect compliance.	Architects CIRD details for wall details to reflect compliance.
F3D4 – Glazed assemblies	The following glazed assemblies in the external walls must comply with AS2047 requirements for resistance of water penetrations: • Windows • Siding and swinging glazed doors with a frame (including bi-folds) • Adjustable louvers • Shopfronts • Window walls with one piece framing	A glazing CIRD is to be provided for the construction certificate package.
F3D5 – Wall cladding	DTS BCA requires that external wall cladding must comply with one or a combination of the following: a.) Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. b.) Autoclaved aerated concrete: AS 5146.3. c.) Metal wall cladding: AS 1562.1.	Details to be provided for assessment
F4 – Sanitary and other facilities		
F4D4 – Facilities in Class 3 to 9 Buildings Table F4D4a	Except where permitted by (3) & (4), F4D5(a), F4D5(b) and F4D12(1), separate sanitary facilities for males and females must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Tables F4D4a & F4D4d as appropriate.	The unisex PWD facility can be 'allocated' once for each gender. Projected population to be confirmed for further assessment for compliance
F4D5 – Facilities for people with disabilities	An accessible sanitary compartment must be provided in the amenities associated with the class 6 part of the building in accordance with AS1428.1-2009. 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 not less than one sanitary compartment suitable for a person with an ambulant disability for use by females, each in accordance with AS 1428.1, must be provided. No ambulant toilets are currently indicated.	Design Complies

F4D6 – Accessible unisex sanitary compartments	For Class 5, 6, 7, 8 or 9 buildings, where F4D4 requires closet pans a USAT must be provided as follows — (i) 1 on every storey containing sanitary compartments; and (ii) where a storey has more than 1 bank of sanitary compartments containing male and female sanitary (ii)compartments, at not less than 50% of those banks.	Design Complies
F4D7 – Accessible Unisex shower	Not applicable – Showers not required by BCA.	Not Applicable
F4D8 – Construction of sanitary compartments	Unless there is a clear space of at least 1.2 m, measured in accordance with Figure F4D8, between the closet pan within the sanitary compartment and the doorway, the door to a fully enclosed sanitary compartment must— a.) open outwards; or b.) slide; or c.) be readily removable from the outside of the sanitary compartment Figure F4D8: Construction of sanitary compartments	WC doors to be removable where applicable. Architect to note on door schedule.
F4D9 – Interpretation: Urinals and washbasins	Not Applicable	
F4D10 – Microbial (legionella) control	Hot water, warm water and cooling water systems in the building must be installed in accordance with AS/NZS 3666.1. Hydraulic consultant to confirm design compliance	Hydraulic consultant to confirm compliance within CIRD.
F4D11 – Waste management	Not Applicable.	Not Applicable
F4D12 – Accessible adult change facilities	Not Applicable	Not Applicable
F5 – Room Heights		
F5D2– Heights of rooms and other spaces.	Minimum room heights BCA 2022 are as indicated below, noting the requirements of the Residential Flat Design Code in brackets: a) a kitchen, laundry, or the like — 2.1m (2.4m); and b) a corridor, passageway or the like — 2.1m (2.4m); and c) a habitable room excluding a kitchen — 2.4m (2.7m); and	Design Complies

	d) in a room or space with a sloping ceiling or projections below the ceiling line within— a habitable room— (aa) in an attic — a height of not less than 2.2 m for not less than two thirds of the floor area of the room or space; and (bb) in other rooms — a height of not less than 2.4 m for not less than two thirds of the floor area of the room or space; and e) a non-habitable room or space within a non-habitable room, with a sloping ceiling or projections below the ceiling line – a height of not less than 2.1m for not less than 2/3rds of the floor area of the room or space. A corridor, passageway, or the like – 2.1m.	
F6 – Light and Ventilation – Class 2 Parts		
F6D2 – Provision of natural light.	Natural light must be provided to all habitable rooms	Noted
F6D3 – Methods and extent of natural lighting.	Required natural lighting must be provided by a) windows, excluding roof lights, that— 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. b) roof lights that 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	Noted
F6D4 – Natural light borrowed from adjoining room.	Natural light may be borrowed from an adjoining room through a glazed panel or opening from an adjoining room (including an enclosed verandah) if— (i) both rooms are within the same sole-occupancy unit or the enclosed verandah is on common property; and (ii) the glazed panel or opening has an area of not less than 10% of the floor area of the room to which it provides light; and (iii) the adjoining room has— (A) windows, excluding roof lights, that— (aa) have an aggregate light transmitting area of not less than 10% of the combined floor areas of both rooms; and	Noted

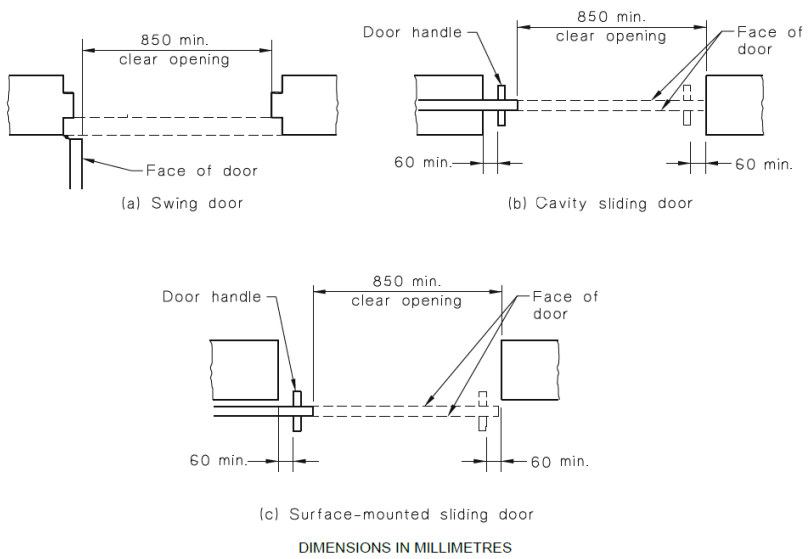
	(bb) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; In terms of borrowing light through a door, a glazed panel providing the minimum 10% transmission is required that transmits light in the closed position.	
F6D5 - Artificial lighting	Artificial lighting in required areas to comply with AS1680.0-2009: • In required stairways, passageways, and ramps; and • In all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress.	Electrical engineer to provide details confirming lighting design complies with AS1680.0-2009.
F6D6 - Ventilation of rooms	All classes: All habitable rooms, sanitary compartments, office space, workrooms etc. are to be provided with either: • Natural ventilation complying with F6D7 (i.e. through openings comprising 5% of the floor area of the room to be ventilated), or • Mechanically ventilated in accordance with AS1668.2 & AS/NZS 3666.1. Mechanical designer to confirm ventilation means proposed for all occupied rooms in design.	Mechanical Engineer to design compliance to accompany the construction certificate application.
F6D7 – Natural ventilation	Natural ventilation is an option for achieving BCA compliance. Should the design team wish to pursue natural ventilation as the means of demonstrating compliance with NCC cl. F6D7, evidence to be provided showing the window openings with an area not less than 5% of the floor area of the room being served.	Noted
F6D8 – Ventilation borrowed from adjoining rooms.	Not Applicable	Note
F6D9 – Restriction on location of sanitary compartments	A sanitary compartment must not open directly into— • a kitchen or pantry; or • a public dining room or restaurant; or • a dormitory in a Class 3 building; or • a room used for public assembly (which is not an early childhood centre, primary school or open spectator stand); • a workplace normally occupied by more than one person.	Design Complies
F6D10 - Airlocks	Not Applicable	

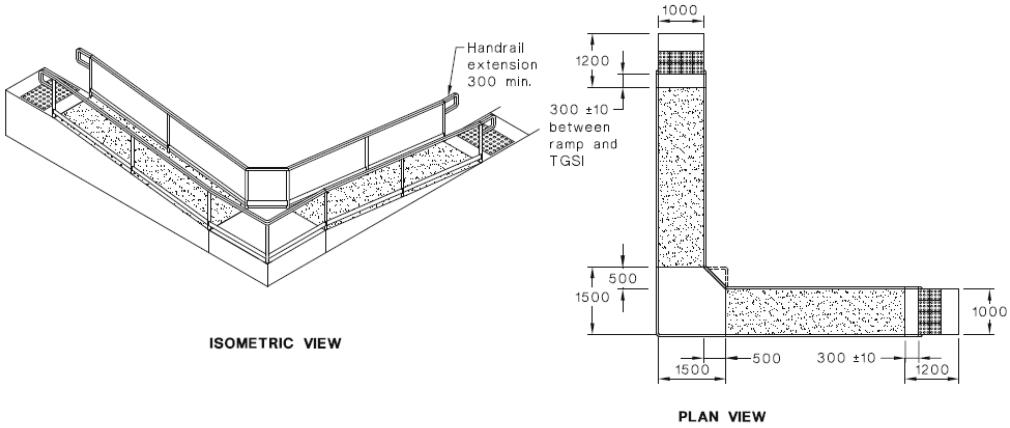
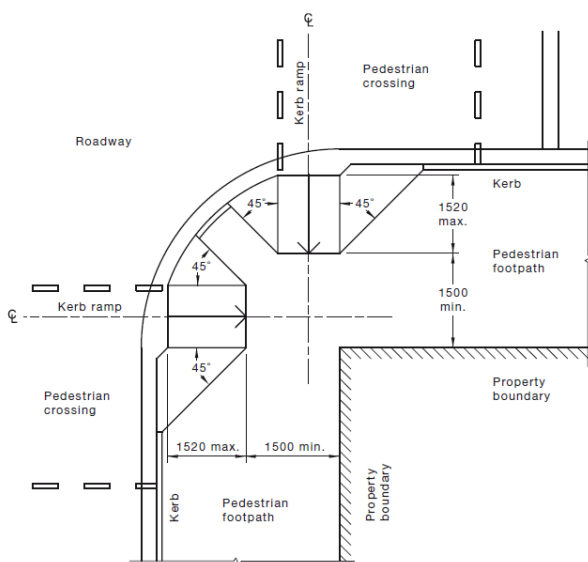
Section J – Energy Efficiency		
BCA 2022 Clause	Comments	Compliance
Section J – Energy Efficiency		
Part J2-J7 Energy Efficiency	Class 5/9b: An energy efficiency assessment against BCA 2022 Section J for the class 6 parts is to be prepared and submitted with the construction certificate application package.	Architect to note Section J assessment for class 6 part to be accompanied by CIRD (assume J1V3 verification method).
BCA 2022 Part J Remaining Matters		
Part J2 – Energy Efficiency		
Part J3 – Elemental provisions for an SOU of a Class 2 building	Noted	
Part J4 – Building Fabric	Noted	
Part J5 – Building Sealing	Noted	
Part J6 – Air conditioning and ventilation	The mechanical engineer is to provide design confirming the requirements of J6 have been met.	Mechanical Engineers design certificate to include compliance with BCA 2019 Amdt 1 Part J6.
Part J7 – Artificial lighting and power	The electrical engineer is to provide design confirming the requirements of J7 have been met.	Electrical Engineers design certificate to include compliance with BCA 2019 Amdt 1 Part J7.
Part J8 – Heated water supply	A heated water supply system for food preparation and sanitary purposes must be designed and installed in accordance with Part B2 of NSW Volume 3 – Plumbing code of Australia Note: the provisions of NSW J8D3 & J8D4 do not apply in NSW to a class 2 building.	Hydraulic Engineer design certificate required.
Part J9 – Energy Monitoring and on-site distributed energy resources	To be addressed by electrical consultant and confirmed in design compliance certificate. Note the provisions of this part do not apply within the SOUs. Applies to overall building. (1) A building or sole-occupancy unit with a floor area of more than 500m ² must have energy meters configured to record the time-of-use consumption of gas and electricity. (2) A building with a floor area of more than 2,500m ² must have energy meters configured to enable individual time-of-use energy data recording, in accordance with (3), of—	Electrical engineer design statement required.

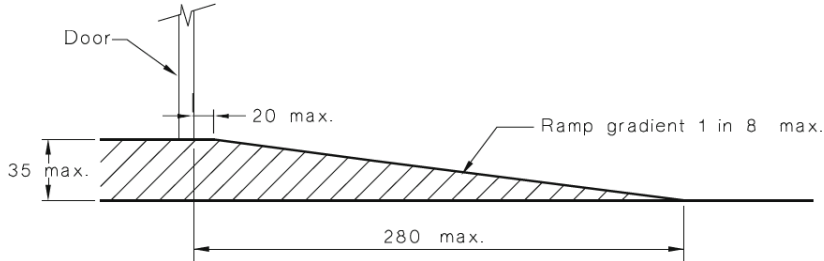
	(a) air-conditioning plant including, where appropriate, heating plant, cooling plant and air handling fans; and (b) artificial lighting; and (c) appliance power; and (d) central hot water supply; and (e) internal transport devices including lifts, escalators and moving walkways where there is more than one serving the building; and (f) on-site renewable energy equipment; and (g) on-site electric vehicle charging equipment; and (h) on-site battery systems; and (i) other ancillary plant. (3) Energy meters required by (2) must be interlinked by a communication system that collates the time-of-use energy data to a single interface monitoring system where it can be stored, analysed and reviewed. (4) The provisions of (2) do not apply to energy meters serving – a Class 2 building where the total floor area of the common areas is less than 500m².	
J9D4 - Facilities for electric vehicle charging equipment	Noted	
J9D5 - Facilities for solar photovoltaic and battery systems	The main electrical switchboard of a building must contain at least two empty three-phase circuit breaker slots and four DIN rail spaces labelled to indicate the use of each space for – i) a solar photovoltaic system, and ii) a battery system and be sized to accommodate the installation of solar photovoltaic panels producing their maximum electrical output on at least 20% of the building roof area. At least 20% of the roof area of a building must be left clear for the installation of solar photovoltaic panels, except for buildings with installed solar photovoltaic panels on at least 20% of the roof area or an equivalent generation capacity elsewhere onsite.	Noted

SUMMARY ACCESS FOR PERSONS WITH A DISABILITY DESIGN MATTERS

Accessible paths of travel	
Accessways	- An accessway must not have a step, stair, turnstile or moving walk. - Must have a width of not less than 1m wide. - Passing spaces at not more than 20m where direct line of sight is not provided. DIMENSIONS IN MILLIMETRES FIGURE 3 EXAMPLES FOR PASSING SPACE FOR WHEELCHAIRS - Turning space of 1540mm x 2070mm within 2m of the end of the accessways: 6.5.3 >90° to 180° The space required for a wheelchair to make a >90° to 180° turn shall be not less than 2070 mm in the direction of travel and not less than 1540 mm wide, as shown in Figure 5. NOTE: For landing dimensions, see Clause 10.8. (a) Space required in corridor (b) Space required in corridor
Circulation at doorways	Clear opening of all doorways is to be not less than 850mm and measured as indicated below:

	 DIMENSIONS IN MILLIMETRES FIGURE 30 CLEAR OPENING OF DOORWAYS Detailed door circulation dimensions are included at figure 31 of AS1428.1-2009.
Accommodating a change in level	
Walkways	Walkways are an inclined surface not exceeding 1:20 gradient. They are not a “ramp” as this is separately defined as being an incline of more than 1:20 but not more than 1:14 and attracts separate requirements. General considerations for walkways as follows: • Max gradient 1:20 • Edge treatment required of either a kerb, kerb rail and handrail (same as a ramp) or a wall not less than 450mm in height. • Alternative edge treatment may be a firm level surface not less than 600mm wide with a different material to that of the walkway (eg, grass, contrasting tiles etc) Landings (1200mm long straight line or 1500mm where a change in direction occurs) required at intervals as follows: • Not more than 25m where gradients are 1:33 • Not more than 15m where gradients are 1:20 • Landing intervals may be increased up to 30% where edge treatments include a handrail • See information on landings following.
Ramps	Ramps are an inclined surface steeper than 1:20- but not exceeding 1:14. Ramps generally require the following under AS1428.1-2009: • Maximum length of 9m unless landings provided • Maximum total rise of 3.6 on a connected series of ramps. • Handrails both sides with horizontal extensions and terminations as below. • Kerbs, kerbrails or a bounded by a wall

	• Tactile Ground Surface Indicators top and bottom of the ramp. • Landings at all changes in directions.  DIMENSIONS IN MILLIMETRES FIGURE 25(B) RAMPS AND LANDINGS—90° LANDING—INTERNAL
Kerb Ramps	Kerb ramps may be required where the accessway meets the road. • Max rise 190mm, max run 1520mm = 1:8 gradient • Located in or attached to a kerb • Aligned in the direction of travel • TGSI not required • Wings aligned at 45° • Non slip finish 
Threshold ramp	Used at a doorway on a landing to achieve a change in level of up to 35mm. Maximum gradient of 1:8 and max length of 280mm.

	 DIMENSIONS IN MILLIMETRES FIGURE 21 THRESHOLD RAMP
Landings	Landings are resting places on ramps/walkways and provide a level surface where someone may be operating a door or preparing to negotiate a change in level. • Not less than 1200mm long where there is no change in direction of travel • 1500mm long where there is a change in direction • Max gradient of 1:40 in any direction
Stairways	Stairs have the following general requirements under AS1428.1-2009 • Set back from wall or boundary to accommodate TGSI at the top and bottom • Opaque (solid) risers • Stair nosings – do not project beyond the face of the riser • At the nosings provide a 50-75mm wide non-slip contrasting strip that achieves 30% luminous contrast across the width of travel set back not more than 15mm from the front of the nosing. • Handrails both sides with horizontal extensions and returns at the terminations.

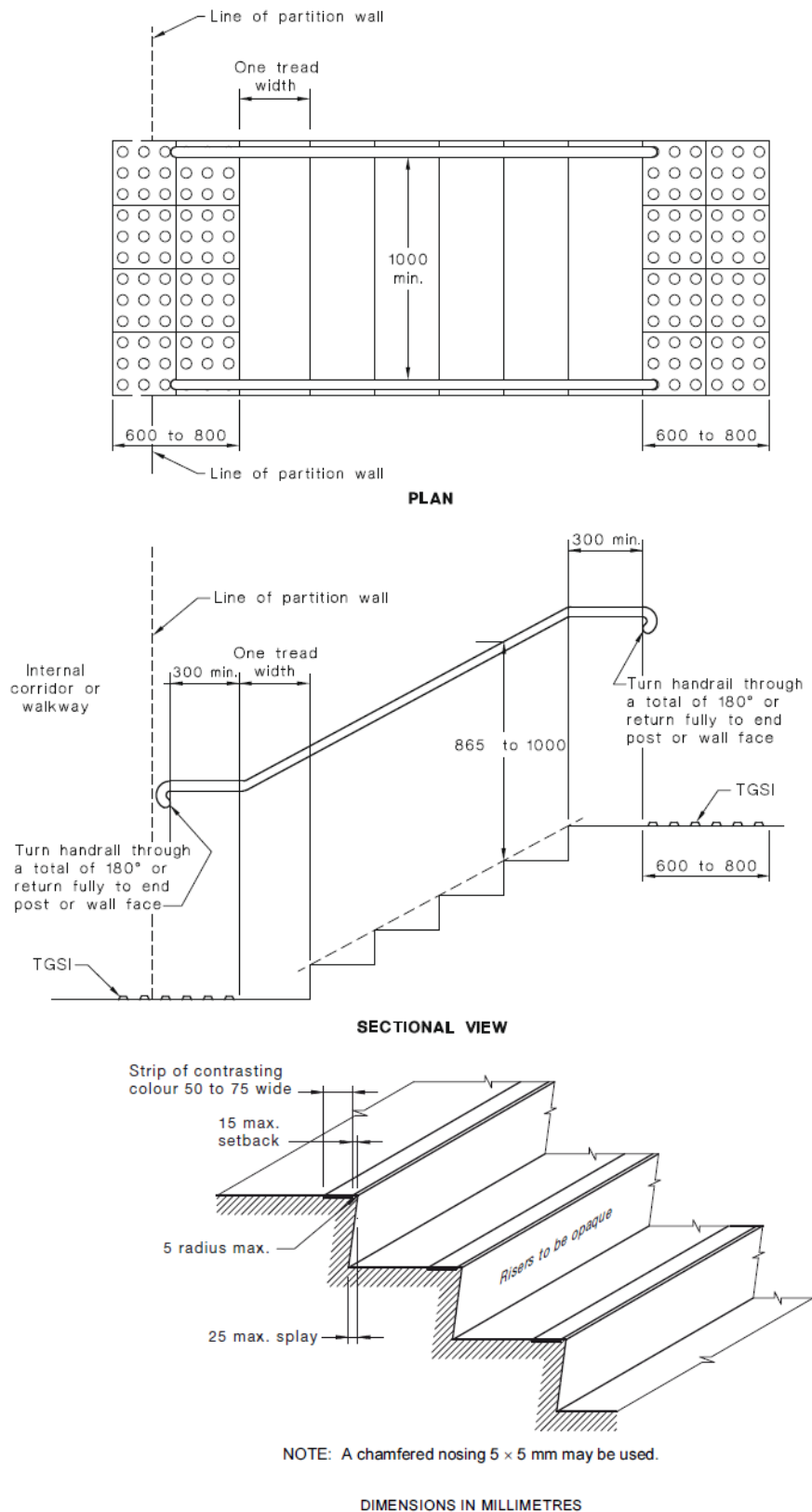
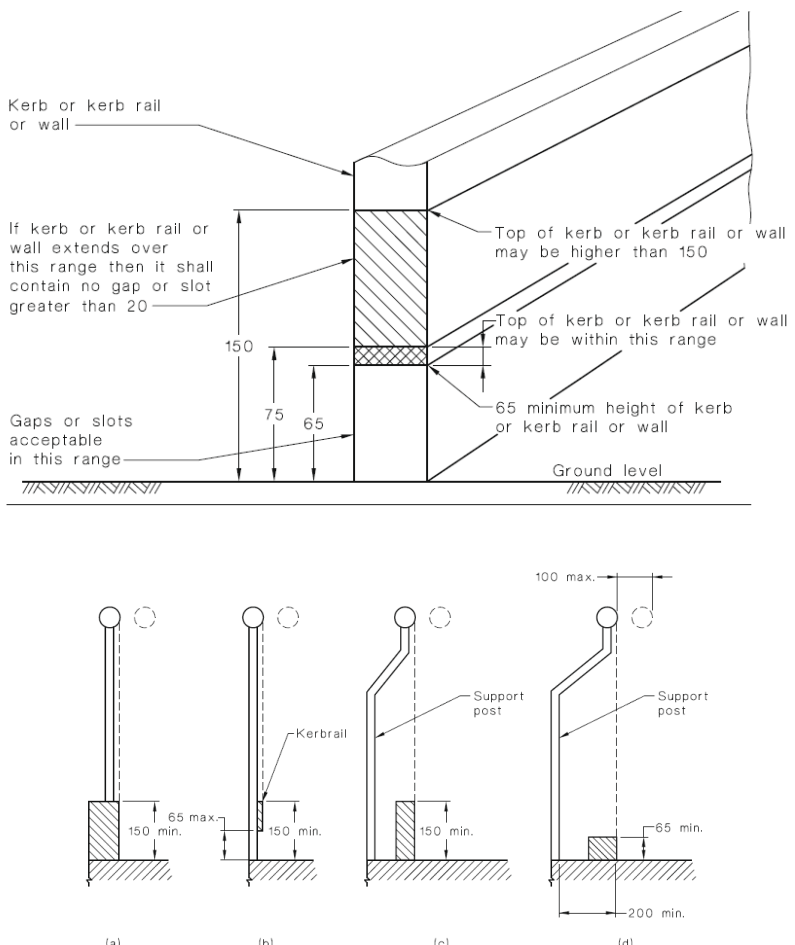
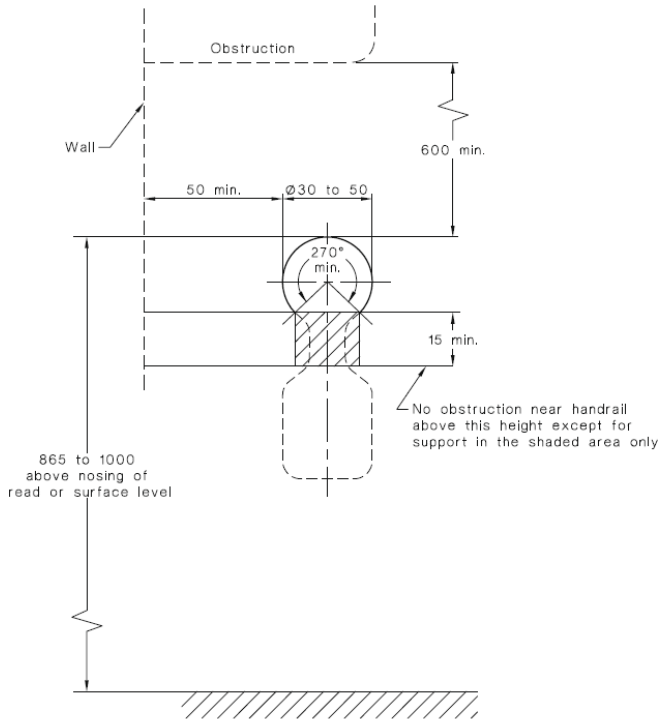
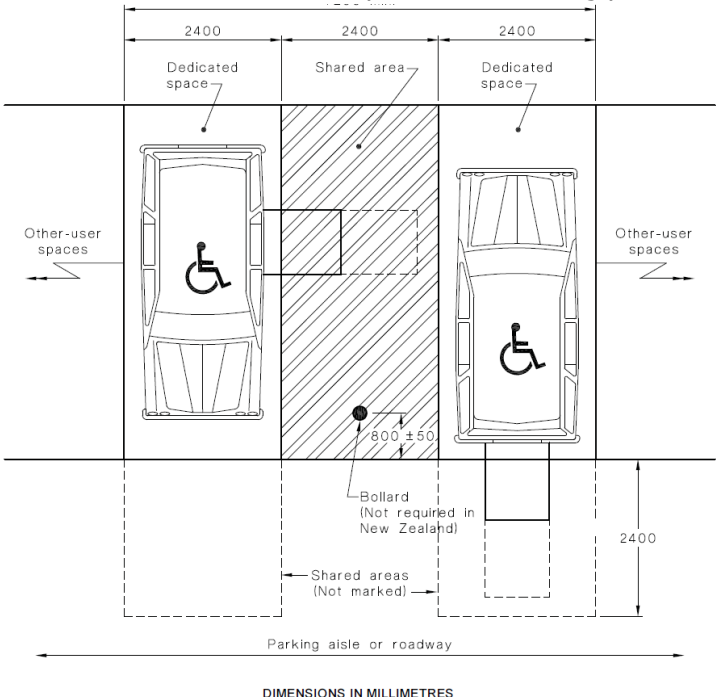
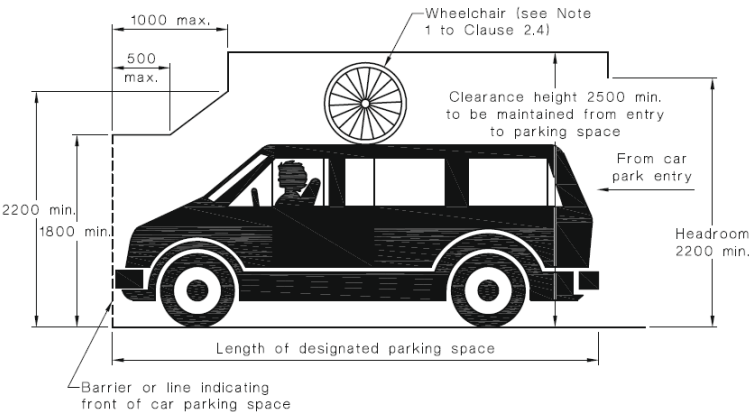


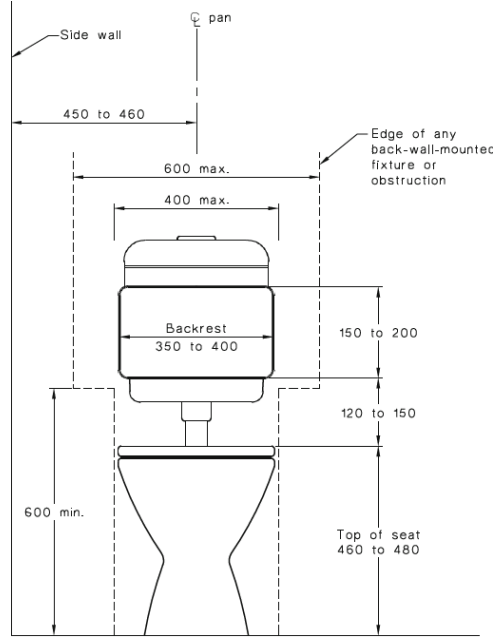
FIGURE 27(A) A TYPICAL STAIR NOSING PROFILE WITH NOSING STRIP

Kerbs and kerbrails	Kerbs associated with a walkway or ramp should follow the below diagrams:  NOTE: See Appendix A for further clarification. DIMENSIONS IN MILLIMETRES
Handrails	Handrails to a ramp or stair are to have the following attributes: • Cross section either elliptical or round, 30-50mm in diameter • Minimum 270⁰ graspable area as below. • Exposed edges radiused to 5mm • Top of handrails 865-1000mm above the ramp or stair nosing and maintained consistent throughout the ramp or stair and any landings • Securely fixed or rigid • Clearance not less than 50mm to the wall or obstruction

	
Accessible car parking	Any required accessible carspace provided for the site to be fully compliant with the design standards set out in AS2890.6-2009. Note requirements for bollard to shared space and an accessible path of travel from the accessible carspace to the building part.  FIGURE 2.3 EXAMPLE OF TWO PARKING SPACES WITH A COMMON SHARED AREA—DIMENSIONS FOR AUSTRALIA ONLY*

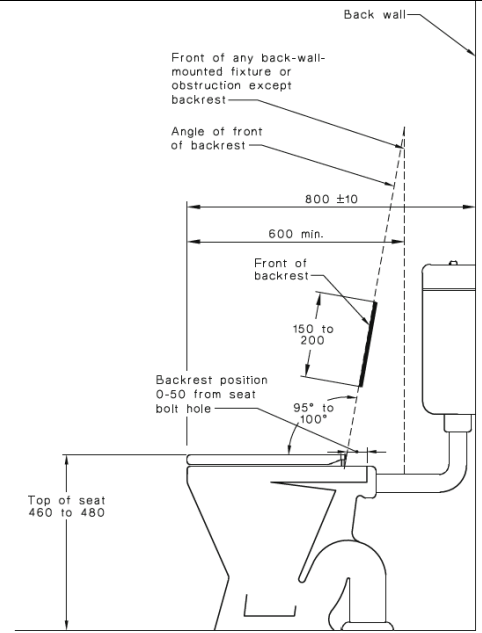
	 DIMENSIONS IN MILLIMETRES FIGURE 2.7 HEADROOM REQUIRED ABOVE CAR SPACES FOR PEOPLE WITH DISABILITIES
Signage	Braille and tactile signage is required in accordance with BCA Specification D3.6. See following summary of issues for location and type of signage. Accessible common sanitary facilities are required to be provided with tactile signage to satisfy D3.6 of the BCA. Signage must also indicate if the facilities are for left or right-handed transfer to the pan (example sign from AS1428 below).  Note requirements in BCA D3.6 for braille and tactile signage to all required exit doors provided with an exit sign per E4.5 and state: “Exit”; and “Level” followed by the floor number  MCG request a statutory signage package be provided as part of the Building Approval application set.
BCA Specification D3.6 – Braille and Tactile Signs	Specific requirements for the selection and location of signage to accessible facilities, critical issues identified below: Braille and tactile components of signs to be located 1200-1600mm above floor level

	• Signs with single lines of characters must have the line of tactile characters 1250-1350mm above floor level • Signs should be located on the wall, latch side of the door with the leading edge of the sign 50-300mm of the door frame (where this is not possible it may be placed on the door itself). Signs themselves: • BCA has prescriptive requirements for height, location and size of text • Sign must have rounded edges • Sign background/fill space must be low sheen • The background or a border with a minimum thickness of 5mm must achieve 30% luminous contrast to the surface on which it is mounted. Leading edge to be between 50mm and 300mm from architrave Only where it is not possible to place on wall may sign be installed to the face of the door 1200mm 1600mm FLOOR Signs with single lines of characters must have the line of tactile characters between 1250mm and 1350mm above the floor or ground surface. Unisex Toilet LH 1250mm 1350mm FLOOR
Unisex Accessible Amenities Setout	Detailed set out information for an accessible sanitary compartment is contained in part 15 of AS1428.1-2009. Summary of key aspects is below:



(a) Front view
DIMENSIONS IN MILLIMETRES

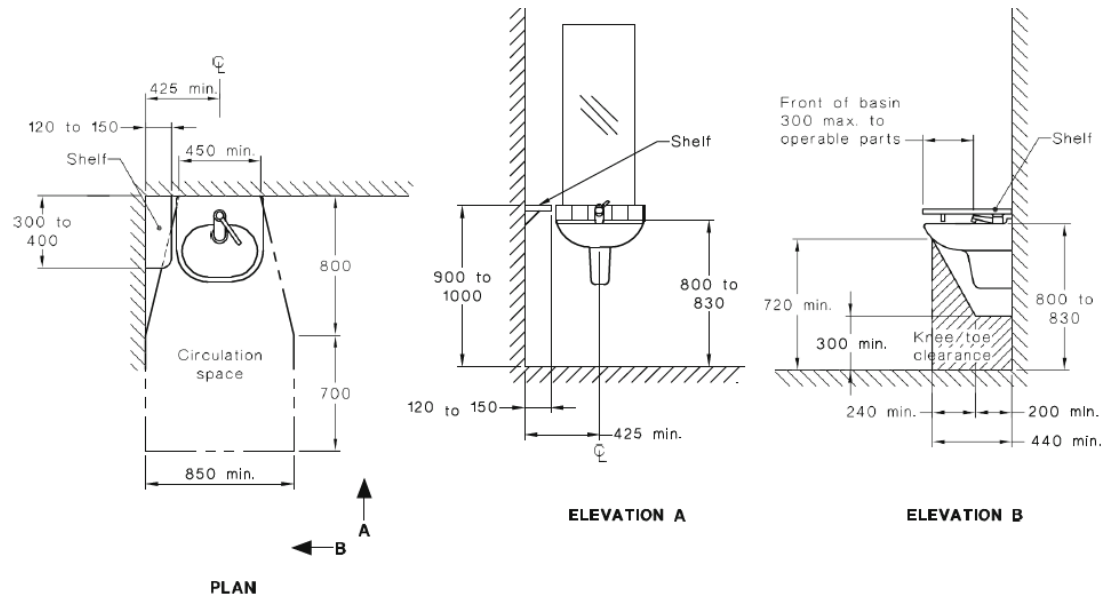
FIGURE 39 (in part) WATER CLOSET INSTALLATION



(b) Side view

DIMENSIONS IN MILLIMETRES

FIGURE 39 (in part) WATER CLOSET INSTALLATION



NOTE: 'Operable parts' means the centre-line of the tap or, where a level handle is provided, the end point of the level measure throughout its arc of movement, or where a sensor is provided where the sensor is reliably activated.

DIMENSIONS IN MILLIMETRES

FIGURE 44(B) WALL-MOUNTED WASHBASIN INSTALLATION—OTHER THAN FOR SOLE-OCCUPANCY UNIT

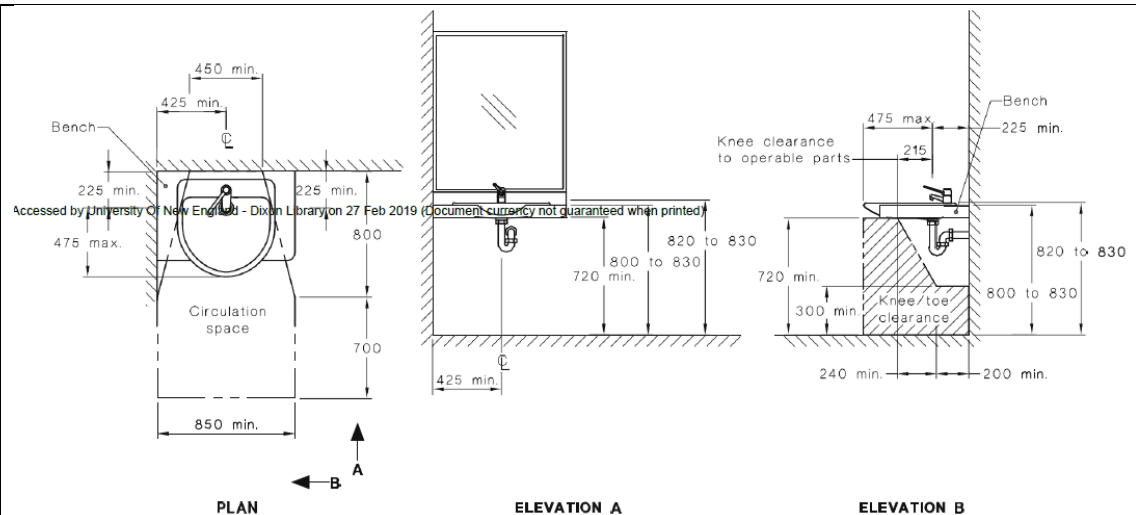


FIGURE 45 WASHBASIN FOR ACCESSIBLE SOLE-OCCUPANCY UNIT

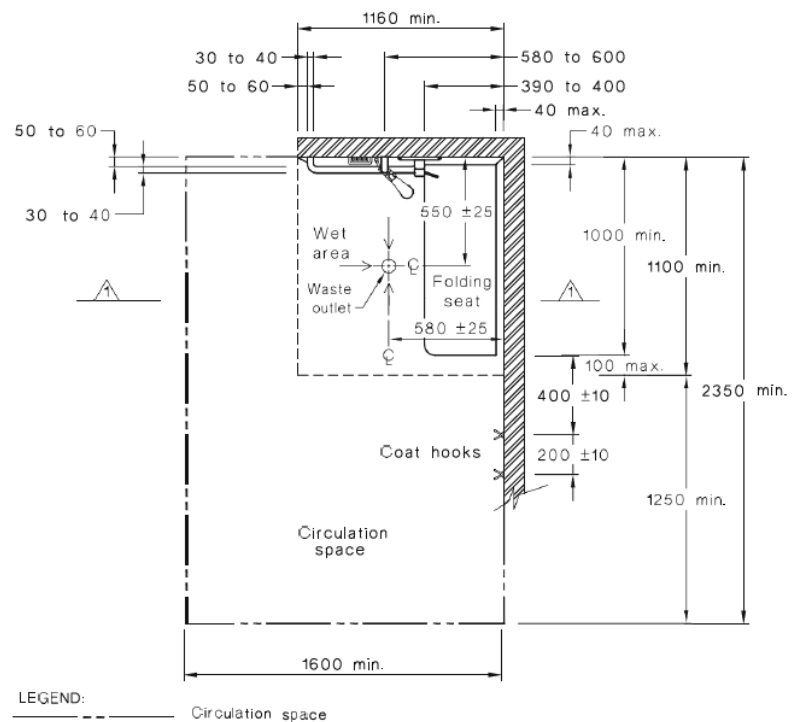
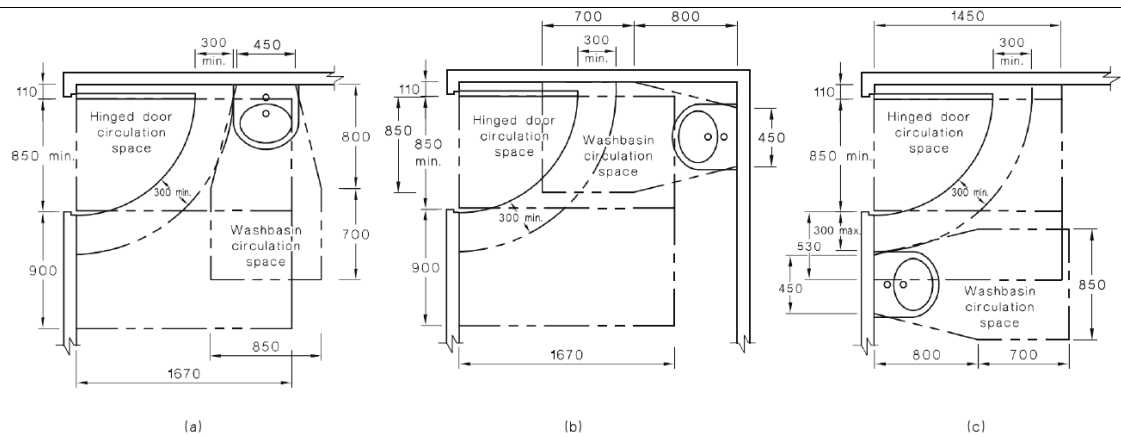


FIGURE 47 (in part) SHOWER RECESS AND CIRCULATION SPACE—PLAN



DIMENSIONS IN MILLIMETRES

FIGURE 51(A) ALLOWABLE ENCROACHMENT OF A WASHBASIN INTO HINGED DOOR CIRCULATION SPACE

Ambulant cubicle
circulation spaces

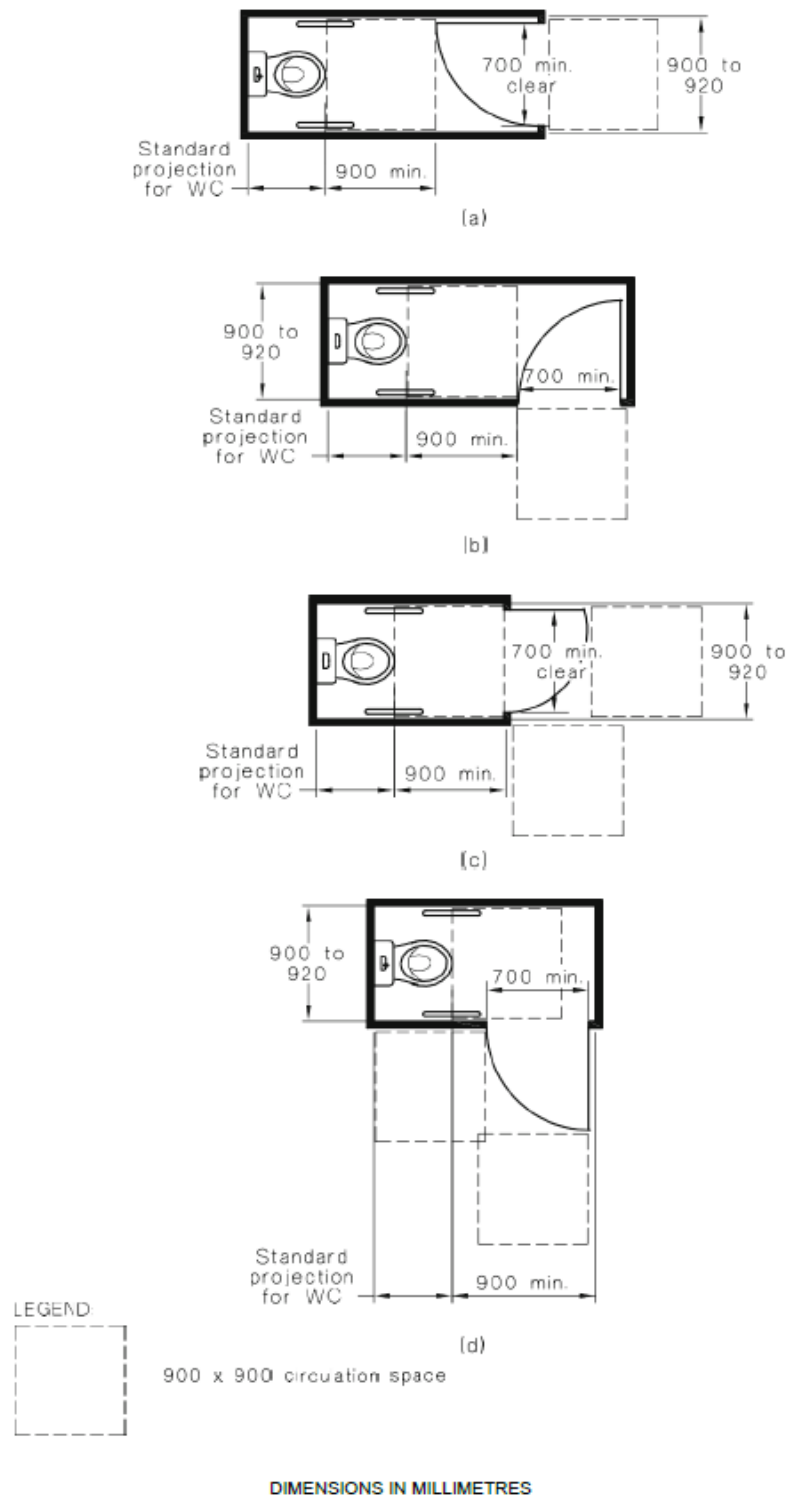


FIGURE 53(B) SANITARY COMPARTMENT FOR PEOPLE WITH AMBULANT
DISABILITIES—DOORWAY OPTIONS

Ambulant cubicle
setout

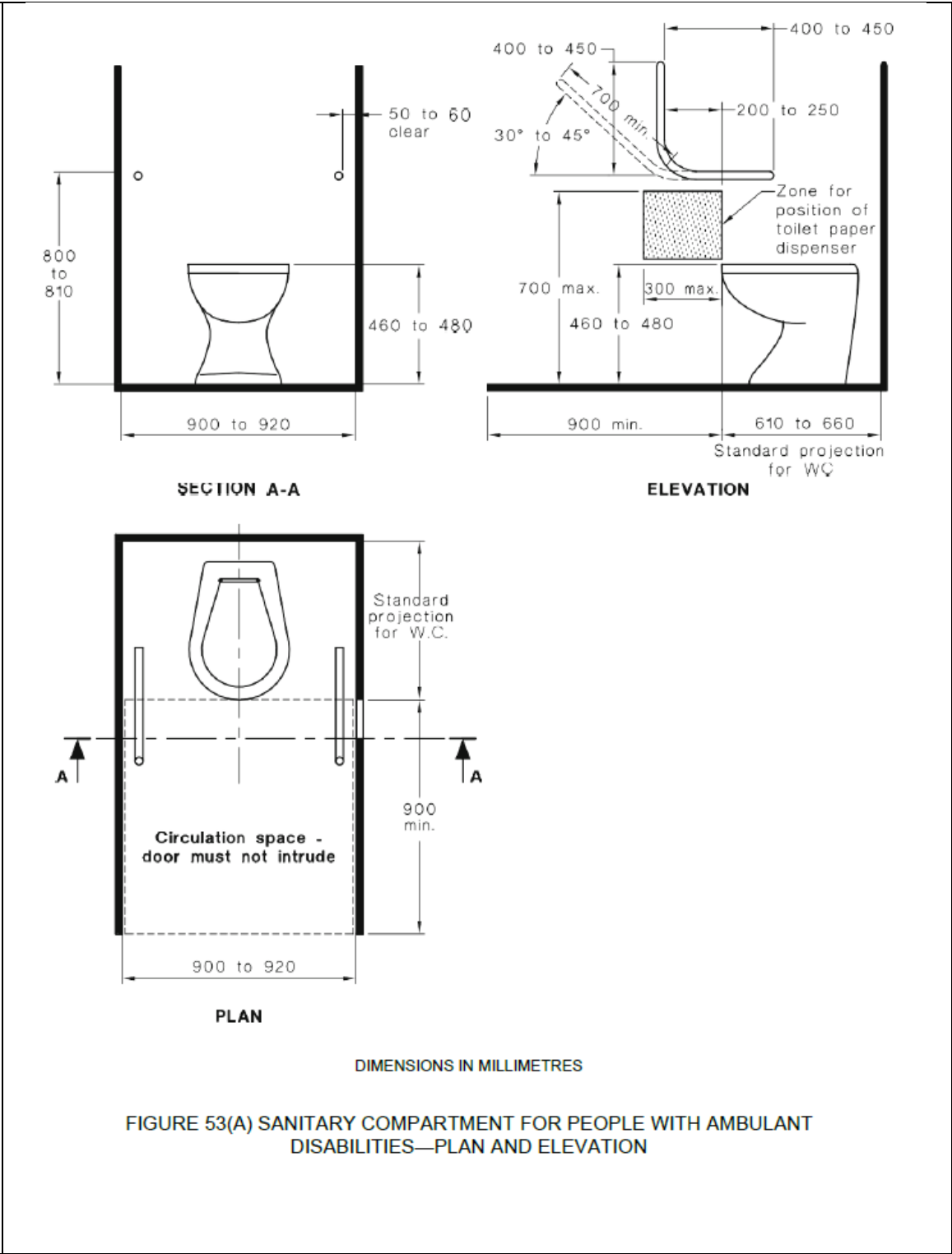


FIGURE 53(A) SANITARY COMPARTMENT FOR PEOPLE WITH AMBULANT DISABILITIES—PLAN AND ELEVATION

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