PERCEPTION PLANNING

BUILDING CODE OF AUSTRALIA (BCA) ASSESSMENT FOR

PROPOSED RESTAURANT AND BAR

at 29 Grey Street, Clarence Town, NSW, 2321
(Lot: 1; Section: 3; DP: 758250)

Prepared by Perception Planning Pty Ltd on behalf of Williams River Steel

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Contact:
Cooper Ashton
Building and Development Planner, Perception Planning Pty Ltd
PO Box 107,
Clarence Town, NSW, 2321
Phone: 0456 804 867
Email: cooper@perceptionplanning.com.au

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EXECUTIVE SUMMARY

The following items should be noted, however do not constitute a full and comprehensive BCA assessment of the building;

The subject of this BCA review is based largely on the subject of the proposed use of the facilities and their relation to existing facilities. The existing, unmodified structure is assumed to have been in compliance before any additions are made.

Any previous uses of the as noted within this report have been used to determined what has been approved and works that may have been subject to the current use of the premises. These are noted where known however, there exists limitations on what can be extracted by the information sourced from previous files, if available.

The key matters for BCA consideration and potential works, upgrades or similar are referenced below. The items listed below do not constitute all items however attempts to provide a snapshot of issues noted.

i. The external Western and Northern walls, and some other walls of the building are within 3m of the boundary and require an FRL of 90/90/90 (if within 1.5 m) or 60/60/60 (if within 3.0 m) in accordance with Specification 5.

ii. The openings on the eastern wall of the building that are within 3 m of the lot boundary require protection in accordance with C4D5, or a wing wall/similar construction to prevent the exposure of the window to the fire source feature. Acceptable methods of protection could include wall wetting sprinklers, automatic closing/fixed fire windows, or fire shutters.

    If a wing wall is proposed to prevent exposure of the window to the boundary, it will need to be of sufficient length and height such that no part of the window or it's surrounds are within 3 metres of the lot boundary. Based on preliminary scaled plan measurements, the wall would seemingly need to be at least 2.35 metres in length, measured from the north-eastern corner of the building. The exact measurement should be confirmed and checked with the certifying authority to confirm compliance.

iii. Fire Hydrants and hose reels are required due to the building having a floor area of more than 500 m^2. It appears that a street hydrant is within a suitable distance to the south-eastern corner of the site. It is recommended that confirmation of the pressure and flow capacity of this feed hydrant be investigated, so that it may be utilised in lieu of a newly constructed hydrant system. See part E1D2 of the assessment table or AS 2419 for further requirements regarding the use of street hydrants.

    Note that, where it could be implemented properly and realistically considering the use of the building, a fire wall could serve to separate the building into separate fire compartments to reduce fire load and remove the requirement for fire hydrants and hose reels.

iv. While the furniture/table layout presented in the plans is likely to be indicative at this stage of development, it has been assessed as part of this development regardless. It is noted that the northernmost table in the eastern wing of the building prevents egress of the building to the carpark in a distance of 30 m.

It is recommended that, during the finalisation of the seating layout, that consideration is given to exit travel distance requirements – noting that the exit travel distance is required to be measured to the edge of the awning provided over the entry. An awning does not constitute open space under the NCC, as it is not open to the sky.

v. As above, it is understood that the furniture layout is likely to be indicative at this stage, however consideration must also be given to the exit pathway dimensions. The dimensions of a pathway to an exit must be 2m aggregate width (can be through multiple pathways). This may become relevant when considering an airlock for the accessible sanitary facility, as recommended below.

vi. The accessible sanitary facility in the current design opens directly into the main restaurant area of the building. An airlock similar to that implemented in the male and female toilets is required, or alternatively a mechanical exhaust ventilation system must be provided with the doorway to the room adequately screened from view. When implementing an airlock, consideration should be given to accessibility requirements and the 2 m exit width requirements when exiting the function/dining area.

vii. Emergency lighting is required to serve the main room of the building, as it has a floor area of more than 300 m^2. The emergency lighting system is required to comply with the coverage and luminance standards set out in AS 2293.1.

viii. At least one of each of the male and female sanitary facilities are required to be an ambulatory facility (a facility which allows use by people with a disability which does not require the space afforded by an accessible sanitary facility – such as an arthritis victim or someone using crutches/a walking frame).

ix. One of the female toilet stalls requires confirmation as being compliant with the sanitary compartment construction requirements of F4D8 – being clear space of 1.2m from the entry doorway (inclusive of the door width). See F4D8 for further detail.

x. Using the seating arrangements and other methods of estimation, the number of total occupants expected within the building is 180. This accounts for 170 patrons, and 10 staff. Whilst it is not expected that this many people would occupy the building at any one time, the NCC requires that the theoretical maximum occupancy is assessed against.

Where a more accurate or genuine estimate can be provided, requirements such as exit pathway widths can be reduced.

xi. It is assumed that the existing shed/butchers shop building on site is **not** included in this assessment.

TERMS & ABBREVIATIONS

Ambulatory Disability	an impairment that prevents, or impedes walking
Accessible	means having features to enable use by people with a disability.
Accessway	means a continuous *accessible* path of travel (as defined by AS1428.1) to, into or within a building
AS	Australian Standard
BCA	Building Code of Australia
Building Works	means any physical activity involved in the erection of a building. *(S 6.1 EP and A Act 1979)*
Critical flux index	is an index tabling the lowest thermal load per unit area capable of initiating a combustion reaction on a given material (either flame or smoulder ignition).
DTS	Deemed to satisfy (prescriptive provisions of the BCA)
EP and A	Environmental Planning and Assessment Act and Regulations
Fire Source Feature	the far side of a boundary of a **road**; the rear or side boundary of an allotment or the external wall of another building on the same allotment.
FRL	Fire Resistance Level
Fire Isolated Stairs (FI)	A stairway within a fire-resisting shaft and includes the floor and roof or top enclosing structure.
Lightweight Construction	construction that incorporates, sheet or board material, concrete containing pumice, perlite, vermiculite or the like and masonry less than 70mm thick
Mezzanine	An intermediate floor within a room
NCC	National Construction Code
Photoluminescent	the light produced by the absorption of infrared radiation, visible light, or ultraviolet radiation *("glow in the dark")*
Smoke-Developed Index	means the index number for smoke as determined by AS/NZS 1530.3.
Spread-of-Flame Index	means the index number for spread of flame as determined by AS/NZS 1530.3.
Waterproof	Does not allow moisture to penetrate through it *(when tested in accordance with AS4858)*
Water Resistant	Restricts moisture movement and will not degrade under conditions of moisture.

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1.0 INTRODUCTION

This report is an assessment of the proposed use and associated plans for the use of a structure as a restaurant and bar to determine how the proposal generally complies with the (NCC/BCA) Building Code of Australia 2022. The building and its proposed uses are considered, being assessed against the Deemed-to-Satisfy (DTS) Provisions of the BCA as applicable.

The sections of the BCA addressed are generally limited to the items required to be addressed by this class of building and is based off a review of the architectural plans for the structures identified as:

PROPOSED RESTAURANT AND BAR – WILLIAMS RIVER STEEL INVESTMENTS; Sheets 1-6 ; as prepared by The Williams River Steel Group and dated 30/03/2023.

The assessment predominantly relates to the BCA/NCC 2022, and NSW Environmental Planning and Assessment legislation current at the time. The assessment is based on review of the architectural plans only. The assessment generally relates to the specific works noted on associated plans or applications noted and should not be considered to be an assessment of any existing structures unless noted otherwise.

Cooper Ashton
Building and Development Planner

1.1 SITE DETAILS AND ANALYSIS

The site is located at 29 Grey Street, Clarence Town, NSW 2321; and is legally identified as Lot: 1, Section: 3, DP: 758250 (the site) (FIGURE 1). The site has a total area of approximately 1788 m² and is accessible directly from both Grey Street and Queen Street. The site is zoned E1: Local Centre. The subject site contains an existing shed. The site is located within a local heritage conservation area – Clarence Town Grey Street Precinct. The site has reticulated water and sewer available.

1.2 PROPERTY ZONING

The site of the proposed development is zoned E1: Local Centre.

1.3 DESCRIPTION OF BUILDING

Location:	29 Grey Street, Clarence Town
Proposed Use of Building:	Restaurant and Bar
NCC/ BCA Use Classification:	*Class 6 [A6G7 (2)(a)(b)] –* *(2a) an eating room, café, restaurant, milk or soft drink bar.* *(2b) A dining room, bar area that is not an assembly building, shop or kiosk part of a hotel or motel.*
Rise in Storeys:	1 (C2D3)
Type of Construction:	Type C [Table C2D2]
Effective Height:	Less than 12m
Floor Area/s (approx.):	Ground Floor area - 610 m²
Known previous uses:	Existing butchery

FIGURE 1 – Locality Map *(Source: Mecone Mosaic 2023)*

2.0 NCC/BCA ASSESSMENT

The following table provides an assessment of the building against the relevant parts of the (NCC/BCA) Building Code of Australia 2022;

Table 1 – NCC/BCA Assessment

BCA CLAUSE	DESCRIPTION	ASSESSMENT COMMENTS	
A GOVERNING REQUIREMENTS			
Part A6 Building Classification			
A6G9	Building Classification	Classification is a Class 6 (restaurant/bar)	*Note*
B STRUCTURE			
Part B1 Structural provisions			
Part B1	Structural Provisions	The structural provisions have not been assessed. It is understood that the building will be subject to separate structural engineering at the construction stage, demonstrating compliance with the performance requirement BP1.1 (structural reliability) • permanent actions (dead loads); and • imposed actions (live loads arising from occupancy and use); and • wind action; and • earthquake action; and • liquid pressure action; and • ground water action; and • rainwater action (including ponding action); and • earth pressure action; and • differential movement; and • time dependent effects (including creep and shrinkage); and • thermal effects; and • ground movement caused by- (a) swelling, shrinkage or freezing of the subsoil; and (b) landslip or subsidence; and	*Note* *Engineering anticipated under separate cover*

		(c) siteworks associated with the building or structure; and • construction activity actions; and • termite actions. And BP1.2 (structural resistance)- With the materials and forms of construction used at the time of construction, demonstrating appropriate materials and forms of construction utilised to provide adequate structural resistance. The performance requirements can be further satisfied through DTS provisions B1.1 and B1.2 or assessment against AS1170.1; AS1170.2; AS1170.3; AS1170.4 as appropriate. There have been a number of extensions and renovations since that timeframe and it is assumed these works have bee appropriately designed, engineered and appropriately inspected. It is also assumed that the new works will be appropriately supported by relevant engineering design and certification.	

C FIRE RESISTANCE

Part C2 Fire resistance and stability			
C2D2	Type of construction required	Type C construction is required. See Specification 5	*Note*
C2D3	Calculation of rise of storeys	The building has a rise in stories of 1.	*Note*
C2D4	Buildings of multiple classification	N/A – The building is of singular class 6 construction.	*Note*
C2D5	Mixed types of construction	N/A – The building is of singular Type C construction.	*Note*
C2D6	Two story Class 2, 3 or 9c buildings	N/A	
C2D9	Lightweight construction	Where installed, Lightweight construction must comply with Specification 6 if it is used in a wall system that is required to have an FRL.	*Note*

		Note 1: *Most plasterboard manufacturers have tested systems listed for compliance for most situations. This clause (and associated Specification 6) is satisfied by using a tested system.*	*External walls appear to be tilt-up pre-cast concrete construction.*
C2D10	Non-combustible building elements	No requirements for Type C Construction	*Note*
C2D11	Fire hazard properties	(1) Materials used will require compliance with spec. 7; materials noted below (where used) should comply with Spec. 7 The fire hazard properties of the following internal linings, materials and assemblies within a Class 2 to 9 building must comply with Specification 7: (a) Floor linings and floor coverings. (b) Wall linings and ceiling linings. (c) Air-handling ductwork. (d) Lift cars. (e) In Class 9b buildings used as a theatre, public hall or the like- (i) fixed seating in the audience area or auditorium; and (ii) a proscenium curtain required by Specification 32 (f) Escalators, moving walkways and non-required non fire-isolated stairways or pedestrian ramps subject to Specification 14. (g) Sarking-type materials. (h) Attachments to floors, ceilings, internal walls, common walls, fire walls and to internal linings of external walls. (i) Other materials including insulation materials other than sarking-type materials. (2) Paint or fire-retardant coatings must not be used to achieve compliance with the required fire hazard properties (3) The requirements of (1) do not apply to a material or assembly if it is- (a) plaster, cement render, concrete, terrazzo, ceramic tile or the like; or (b) a fire-protective covering; or (c) a timber-framed window; or (d) a solid timber handrail or skirting; or	*Note; materials, fittings and finishes must comply with this clause*

		(e) a timber-faced door; or (f) an electrical switch, socket-outlet, cover plate or the like; or (g) a material used for- (i) a roof insulating material applied in continuous contact with a substrate; or (ii) an adhesive; or (iii) a damp-proof course, flashing, caulking, sealing, ground moisture barrier, or the like; or (h) a paint, varnish, lacquer or similar finish, other than nitro-cellulose lacquer; or (i) a clear or translucent roof light of glass fibre-reinforced polyester if- (i) the roof in which it is installed forms part of a single storey building required to be Type C construction; and (ii) the material is used as part of the roof covering; and (iii) it is not closer than 1.5 m from another roof light of the same type; and each roof light is not more than 14 m2 (iv) in area; and the area of the roof lights per 70 m2 of roof surface is not more than 14 m2 (v); or (j) a face plate or neck adaptor of supply and return air outlets of an air handling system; or (k) a face plate or diffuser plate of light fitting and emergency exit signs and associated electrical wiring and electrical components; or (l) a joinery unit, cupboard, shelving, or the like; or (m) an attached non-building fixture and fitting such as- (i) a curtain, blind, or similar decor, other than a proscenium curtain required by Specification 32; and (ii) a whiteboard, window treatment or the like; or (n) timber treads, risers, landings and associated supporting framework installed in accordance with D3D30 where the Spread-of-Flame Index and the Smoke-Developed Index of the timber does not exceed 9 and 8 respectively; or (o) any other material that does not significantly increase the hazards of fire.	

Specification 7		Fire hazard properties	
S7C2	*Application*	*Linings, materials and assemblies must comply with the appropriate requirement described in Table S7C2.*	

Table S7C2: Fire hazard property requirements

Lining, material or assembly	Requirement
Floor linings and floor coverings	S7C3
Wall linings and ceiling linings	S7C4
Air-handling ductwork	S7C5
Lift cars	S7C6
In fire control rooms subject to Specification 6 and fire isolated *exits*	S7C7
In Class 9b buildings used as a theatre, public hall or the like — fixed seating in the audience area or auditorium; and a proscenium curtain *required* by Specification 32	S7C7
Escalators, moving walkways and non-*required* non-*fire-isolated stairways* or pedestrian ramps subject to Specification 14	S7C7
Sarking-type material	S7C7
Attachments to internal floors, walls and ceilings	S7C7
Other materials including insulation	S7C7

S7C3	*Floor linings and floor coverings*	*A floor lining or floor covering must have-* *(a) a critical radiant flux not less than that listed in Table S7C3; and* *(b) in a building not protected by a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17, a maximum smoke development rate of 750 percent-minutes; and* *(c) a group number complying with S7C6(b), for any portion of the floor covering that is continued more than 150mm up a wall.*	

Table S7C3: Critical radiant flux (CHF in kW/m²) of floor linings and floor coverings

Class of building	Building not fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17	Building fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17	Fire-isolated *exits* and fire control rooms
Class 2, 3, 5, 6, 7, 8 or 9b, excluding Class 3 accommodation for the aged and Class 9b as specified below	2.2 kW/m²	1.2 kW/m²	2.2 kW/m²
Class 3 accommodation for the aged	4.5 kW/m²	2.2 kW/m²	4.5 kW/m²
Class 9a *patient care areas*	4.5 kW/m²	2.2 kW/m²	4.5 kW/m²
Class 9a areas other than *patient care areas*	2.2 kW/m²	1.2 kW/m²	4.5 kW/m²
Class 9b auditorium or audience seating area used mainly for indoor swimming or ice skating	1.2 kW/m²	1.2 kW/m²	2.2 kW/m²
Class 9b auditorium or audience seating area used mainly for other sports or multi-purpose functions	2.2 kW/m²	1.2 kW/m²	2.2 kW/m²
Class 9c *resident use area*	N/A	2.2 kW/m²	4.5 kW/m²
Class 9c areas other than *resident use areas*	N/A	1.2 kW/m²	4.5 kW/m²

Note 1: *Specification 7- Fire Hazard Properties sets out the procedures for determining the fire hazard properties of assemblies tested to AS/NZS 1530.3. Any floor covering should clearly define testing against these measures and Australian Standards and meet the levels specified above.*

S7C4	*Wall and ceiling linings*	*(1) A wall or ceiling lining system must comply with the group number specified in Table S7C4 and for buildings not fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 have-* *(a) a smoke growth rate index not more than 100; or* *an average specific extinction area less than 250 m2 (b) /kg.* *(2) A group number of a wall or ceiling lining and the smoke growth rate index or average specific extinction area must be determined in accordance with AS 5637.1.*	

Table S7C4: Wall and ceiling lining materials (material groups permitted)

Class of building	Fire-isolated *exits* and fire control rooms	Public corridors	Specific areas	Other areas
Class 5, 6, 7, 8 or 9b *schools*, unsprinklered	Walls: 1	Walls: 1, 2	Walls: 1, 2, 3	Walls: 1, 2, 3
	Ceilings: 1	Ceilings: 1, 2	Ceilings: 1, 2	Ceilings: 1, 2, 3

Table Notes

(1) "Sprinklered" means a building fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17.

(2) "Specific areas" means within—

(i) for Class 2 and 3 buildings, a *sole-occupancy unit*; and

(ii) for Class 5 buildings, open plan offices with a minimum floor dimension/floor to ceiling height ratio > 5; and

(iii) for Class 6 buildings, shops or other building with a minimum floor dimension/floor to ceiling height ratio > 5; and

(iv) for Class 9a *health-care buildings*, *patient care areas*; and

(v) for Class 9b theatres and halls, etc, an auditorium; and

(vi) for Class 9b *schools*, a classroom; and

(vii) for Class 9c buildings, *resident use area*.

S7C5	*Air-handling ductwork*	*Rigid and flexible ductwork in a Class 2 to 9 building must comply with the fire hazard properties set out in AS 4254.1 and AS 4254.2*	*Note*
S7C6	*Lift Cars*	*Materials used as-* *(a) floor linings and floor coverings must have a critical radiant flux not less than 2.2; and* *(b) wall and ceiling linings must be a Group 1 material or a Group 2 material in accordance with AS 5637.1.*	*N/A*
S7C7	*Other materials*		

Material or assembly location	*Flammability Index*	*Spread-of-Flame Index*	*Smoke-Developed Index*
Other materials or locations and insulation materials other than *Sarking-type materials*. Notes 2 and 3	N/A	9	8 if the *Spread-of-Flame Index* is more than 5

Table Notes

(2) A material, other than one located within a fire-isolated exit or fire control room, may be covered on all faces by concrete or masonry not less than 50 mm thick, as an alternative to meeting the specified indices.

(3) In the case of a composite member or assembly, the member or assembly must be constructed so that when assembled as proposed in a building-

(a) any material which does not comply with this Table is protected on all sides and edges from exposure to the air; and

(b) the member or assembly, when tested in accordance with Specification 3, has a Spread-of-Flame Index and Smoke-Developed Index not exceeding those prescribed in this Table; and

(c) the member or assembly retains the protection in position so that it prevents ignition of the material and continues to screen it from access to free air for a period of not less than 10 minutes.

C2D12	Performance of external walls in fire	Concrete external walls that could collapse as complete panels (e.g., tilt-up and pre-cast concrete), in a building having a rise in storeys of not more than 2, must comply with Specification 8.	*Note: see requirements of Spec. 8*
C2D13	Fire-protected timber: Concessions	Fire-protected timber may be used wherever an element is required to be non-combustible, provided- (a) the building is- (i) a separate building; or (ii) a part of a building- (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or (B) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and (b) the building has an effective height of not more than 25 m; and (c) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification 17; and (d) any insulation installed in the cavity of the timber building element to have an FRL is non-combustible; and (e) cavity barriers are provided in accordance with Specification 9.	*Note*
C2D14	Ancillary elements	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 2 m2 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.	*None noted outside of allowable encroachments*

		(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 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 relevant requirements of Table S7C7 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 AS 4654.2 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 gaps complying with AS 3959.	
C2D15	Fixing of bonded laminated cladding panels	(1) In a building required to be of Type A or B construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame. (2) An externally located bonded laminated cladding panel need not comply with (1) if it is one of the following: (a) A laminated glass system. (b) Layered plasterboard product. (c) Perforated gypsum lath with a normal paper finish. (d) Fibrous-plaster sheet. (e) Fibre-reinforced cement sheeting. (f) A component of a garage door.	*N/A building is Type C construction.*

Specification 5 Fire-resisting construction			
S5C2	Exposure to fire-source features	(1) A part of a building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that- (a) has an FRL of not less than 30/–/–; and (b) is neither transparent nor translucent. (2) A part of a building element is not exposed to a fire-source feature if the fire-source feature is— (a) an external wall of another building that stands on the allotment and the part concerned is more than 15 m above the highest part of that external wall; or (b) a side or rear boundary of the allotment and the part concerned is below the level of the finished ground at every relevant part of the boundary concerned. (3) If various distances apply for different parts of a building element- (a) the entire element must have the FRL applicable to that part having the least distance between itself and the relevant fire-source feature; or (b) each part of the element must have the FRL applicable according to its individual distance from the relevant fire-source feature. (4) The requirements of (3) do not override or permit any exemption from S5C3.	*Note*
S5C3	Fire protection for a support of another part	(1) Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part, subject to (2), must- (a) have an FRL not less than that required by other provisions of this Specification; and (b) if located within the same fire compartment as the part it supports have an FRL in respect of structural adequacy the greater of that required- (i) for the supporting part itself; and (ii) for the part it supports; and (c) be non-combustible- (i) if required by other provisions of this Specification; or (ii) if the part it supports is required to be non-combustible.	*Note*

		(2) The following building elements need not comply with (1)(b) and (1)(c)(ii): (a) An element providing lateral support to an external wall complying with S5C24(1)(b) or C2D12. (b) An element providing support within a carpark and complying with S5C19, S5C22 or S5C25. (c) A roof providing lateral support in a building- (i) of Type A construction if it complies with S5C15(a), (b) or (d); and (ii) of **Type B** and C construction. (d) A column providing lateral support to a wall where the column complies with S5C6(1) and (2). (e) An element providing lateral support to a fire wall or fire-resisting wall, provided the wall is supported on both sides and failure of the element on one side does not affect the fire performance of the wall.	
S5C4	Lintels	(1) A lintel must have the FRL required for the part of the building in which it is situated. (2) A lintel need not comply with (1) if it does not contribute to the support of a fire door, fire window or fire shutter, and- (a) it spans an opening in- (i) a wall of a building containing only one storey; or (ii) a non-loadbearing wall of a Class 2 or 3 building; or (b) it spans an opening in masonry which is not more than 150 mm thick and- (i) not more than 3 m wide if the masonry is non-loadbearing; or (ii) not more than 1.8 m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall.	*Note*
S5C5	Method of attachment not to reduce the fire-resistance of building elements	The method of attaching or installing a finish, lining, ancillary element or service installation to the building element must not reduce the fire-resistance of that element to below that required.	*Note*
S5C6	General concessions	(1) Steel columns — A steel column, other than one in a *fire wall* or *common wall*, need not have an FRL in a building that contains- (a) only 1 storey; or	*Note*

		(b) 2 storeys in some of its parts and 1 storey only in its remaining parts if the sum of the floor areas of the upper storeys of its 2 storey parts does not exceed the lesser of— (i) 1/8 of the sum of the floor areas of the 1 storey parts; or (ii) in the case of a building to which one of the maximum floor areas specified in Table C3D3 is applicable - 1/10 of that area; or (iii) in the case of a building to which two or more of the maximum floor area specified in Table C3D3 is applicable - 1/10 of the lesser of those areas.	
Spec. 5; Type C fire-resisting construction — fire-resistance of building elements			
S5C11	Type C fire-resisting construction - fire-resistance of building elements	(1) In a building required to be of Type C construction- (a) a building element listed in Tables S5C24a, S5C24b, S5C24c, S5C24d and S5C24e 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; and (b) an external wall that is required by Table S5C24a to have an FRL need only be tested from the outside to satisfy the requirement; and (c) a fire wall or an internal wall bounding a sole-occupancy unit or separating adjoining units must comply with Specification 6 if it is of lightweight construction and is required to have an FRL; and (d) in a Class 2 or 3 building, an internal wall which is required by Table 5C24c or S5C24d to have an FRL must extend- (i) to the underside of the floor next above if that floor has an FRL of at least 30/30/30 or a fire-protective covering on the underside of the floor; or (ii) to the underside of a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or (iii) to the underside of the roof covering if it is non-combustible, and except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or	

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

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

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

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

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

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

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

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

Note: *The northern and western walls of the building are within 1.5 metres of the lot boundaries, and as such require an FRL of 90/90/90 in accordance with the class 6 column of Table S5C24a below (first row).*

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

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

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

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

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

Wall type	FRL (in minutes): *Structural adequacy* / *Integrity* / *Insulation*			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Loadbearing or non-*loadbearing*	90/90/90	90/90/90	90/90/90	90/90/90

Table S5C24d: Type C construction: FRL of internal walls

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

Table S5C24e: Type C construction: FRL of roof

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

Specification 6 Structural tests for lightweight construction

Walls generally	*N/A no lightweight walls noted* *An internal (or external) wall of lightweight construction that is required to be fire resisting must comply with this Specification [Specification 6]* *Most tested systems specified as fire resisting from companies such as CSR, Boral or similar will comply with Spec 6 of the NCC Vol. 1 when the appropriates FRL for the wall is selected and the as built construction is identical in construction to the test sample.*	*Note*

Specification 8	*Performance of external walls in fire*		
S8C2	*Application*	*This specification applies to buildings having a rise in storeys of not more than 2 with concrete external walls that could collapse as complete panels (e.g. tilt-up and precast concrete) which –* *(a) Consist of either single or multiple panels attached by steel connections to lateral supporting members; and* *(b) Depend on those connections to resist outward movement of the panels relative to the supporting members; and* *(c) Have height to thickness ratio not greater than 50.*	*Note* *Confirmation from Manufacturer of wall system is required to confirm application of Spec. 8*
S8C3	General requirements for external wall panels	(1) Cast-in inserts and fixings must be anchored into the panel with welded bars or be fixed to the panel reinforcement. (2) Cast-in inserts for top connections and fixings acting together must be able to resist an ultimate load of two times the larger of the forces required to develop— (a) the ultimate bending moment capacity of the panel at its base; or (b) the overturning moment at the base of the panel arising from an outwards lateral displacement at the top of the panel equal to one tenth of the panel height. (3) Top connections of the panel exposed to fire, such as clips and drilled-in inserts, acting together must be able to resist an ultimate load of six times the larger of the forces required to develop the moment specified in (2)(a) or (b). (4) Lateral supporting members and their connections must be designed to resist the connection forces specified in (2) and (3) and in the case of an eaves tie member the force in the member must be determined assuming that it deforms in a manner compatible with the lateral displacement of the wall panels, and that it acts in tension only. (5) External wall panels that span vertically must have at least two upper connections per panel to the supporting member, except that where a number of panels are designed to act as one unit, (e.g. tongue and groove hollow-core panels), only two upper connections are required for each unit.	*Note* *See adjacent requirements for construction stage*

		6. External wall panels that span horizontally between columns must have at least two connections at each column. Connections providing lateral support to a panel must be designed to remain engaged to the supported panel both before and during a fire.	
S8C4	Additional requirements for vertically spanning external wall panels adjacent to columns	(1) Where vertically spanning external wall panels are located adjacent to columns, connections to the panels must be located and/or detailed to minimise forces that may develop between the panels and columns arising from the restraint of differential displacement. (2) The requirements of (1) are satisfied by-- (a) Detailing the connections and/or the supporting member to sustain a relative outward displacement of (d) between the panels and columns at the connection height where d(m) is calculated as- i. The square of the connection height (m) divided by one hundred and twenty-five, when the connection height is less than 5 m; or ii. The connection height (m) divided by twenty-five, when the connection height is less than 5m; or (b) In situations where an eaves tie member is used to provide lateral support to external wall panels, the tie member is connected to the panels no closer than a distance (s) from the column where s (m) is taken as one quarter of the panel height (m).	*Note*
Part C3 Compartmentation and separation			
C3D3	General floor area and volume limitations	The size of fire compartments must not exceed the maximum floor area nor volume set out in table C3D3. Class 6; Type C construction Floor area under 2000m² Volume under 12,000m³	*Complies*

C3D4	Large isolated buildings	N/A – The proposed building is below the thresholds in C3D3 and as such does not require the exemptions of this clause.	*N/A*
C3D5	Requirements for open spaces and vehicular access	N/A – Only applies to spaces required by C3D4 Large Isolated Buildings.	*N/A*
C3D6	Class 9 Buildings	N/A relates to 9a health care buildings and 9b early child centres and 9c	
C3D7	Vertical separation of openings in external walls	N/A only applies to a building of Type A construction	
C3D8	Separation by fire walls	(1) Construction - A fire wall must be constructed in accordance with the following: (a) The fire wall has the relevant FRL prescribed by Specification 5 for each of the adjoining parts, and if these are different, the greater FRL, except where S5C19(3)(c)(i), S5C22(3)(c)(i) and S5C25(3)(c)(i) permit a lower FRL on the carpark side. (b) Any openings in a fire wall must not reduce the FRL required by Specification 5 for the fire wall, except where permitted by the Deemed-to-Satisfy Provisions of Part C4. (c) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire-resisting performance of the fire wall is maintained. (2) Separation of buildings - A part of a building separated from the remainder of the building by a fire wall may be treated as a separate building for the purposes of the Deemed-to-Satisfy Provisions of Sections C, D and E if it is constructed in accordance with (1) and the following: (a) The fire wall extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building. (b) The fire wall is carried through to the underside of the roof covering. (c) Where the roof of one of the adjoining parts is lower than the roof of the other part, the fire wall extends to the underside of-	*No firewalls are provided in the current design.* *For information only, see note adjacent*

		(i) the covering of the higher roof, or not less than 6 m above the covering of the lower roof; or (ii) the lower roof if it has an FRL not less than that of the fire wall and no openings closer than 3 m to any wall above the lower roof; or (iii) the lower roof if its covering is non-combustible and the lower part has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. (3) Separation of fire compartments - A part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of- (a) a floor having an FRL required for a fire wall; or (b) the roof covering. ***Note:*** *Firewalls can be provided to reduce the effective fire load of the building, potentially lessening the NCC requirements for fire-resistance. If a firewall were implemented in the building to split it into multiple compartments, each of which under 500 m^2, there would be no requirements for fire hydrants under section E.*	
C3D9	Separation of classifications in the same storey	N/A – Building is of singular class 6 construction.	*Note*
C3D10	Separation of classifications in different storeys	N/A – Building is of singular class 6 construction.	Note
C3D11	Separation of lift shafts	Applicable to buildings with more than 2 stories	N/A
C3D13	Separation of equipment	Note: While there is no note of such equipment to be installed, items such as on-site fire pumps, a battery system that has a voltage of more than 12 volts and a capacity of 200kWh or more, boilers, or an emergency generator will need separation by a 120/120/120 FRL wall. ***Note:*** *Other items are listed as requiring separation under this clause however it is not considered they would be installed on this site*	*Note*

Part C4 Protection of openings			
C4D3	Protection of openings in external walls	(1) Subject to (2), openings in an external wall that is required to have an FRL must be protected in accordance with C4D5, and if wall-wetting sprinklers are used, they must be located externally. (2) The requirements of (1) only apply if the distance between the opening and the fire-source feature to which it is exposed is less than- (a) 3 m from a side or rear boundary of the allotment; or (b) 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or (c) 6 m from another building on the allotment that is not Class 10. (3) Openings required to be protected under (1), must not occupy more than 1/3 of the area of the external wall of the storey in which they are located unless they are in a Class 9b building used as an open spectator stand. ***Note:*** *Windows can be protected by either a method in C4D5, or by a wing wall which blocks projections up to 3m from the lot boundary.*	*Windows on North-eastern wall near the boundary require protection.*
C4D4	Separation of external walls and associated openings in different fire compartments	The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must not be less than that set out in Table C4D4, unless- (a) those parts of each wall have an FRL not less than 60/60/60; and (b) any openings are protected in accordance with C4D5.	*Note only; Building is not currently separated by fire walls.*

Table C4D4: Distance between external walls and associated openings in different fire compartments

Angle between walls	Minimum distance (m)
0° (walls opposite)	6
more than 0° to 45°	5
more than 45° to 90°	4
more than 90° to 135°	3
more than 135° to less than 180°	2
180° or more	Nil

C4D5	Acceptable methods of protection	Where protection is required, doorways, windows, and other openings must be protected as follows: (a) Doorways- (i) Internal or external wall-wetting sprinklers as appropriate, used with doors that are self-closing or automatic closing; or (ii) -/60/30 Fire doors that are self-closing or automatic closing. (b) Windows (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 (iii) -/60/- automatic closing fire shutters. (c) Other openings- (i) Excluding voids – internal or external wall-wetting sprinklers, as appropriate; or (ii) Construction having an FRL of not less than -/60/-.	Note – One of the methods in (b), or a wing wall is required to protect the north-eastern windows.
C4D6	Doorways in fire walls	N/A – No fire walls as of the current design.	*N/A*
C4D13	Openings in floors and ceilings for services	(1) Where a service passes through- (a) a floor that is required to have an FRL with respect to integrity and insulation; or (b) a ceiling required to have a resistance to the incipient spread of fire, the service must be installed in accordance with (2). (2) A service must be protected- (a) in a building of Type A construction, by a shaft complying with Specification 5; or (b) in a building of Type B or C construction, by a shaft that will not reduce the fire performance of the building elements it penetrates; or (c) in accordance with C4D15. (3) Where a service passes through a floor which is required to be protected by a fire-protective covering, the penetration must not reduce the fire performance of the covering.	*Note only*

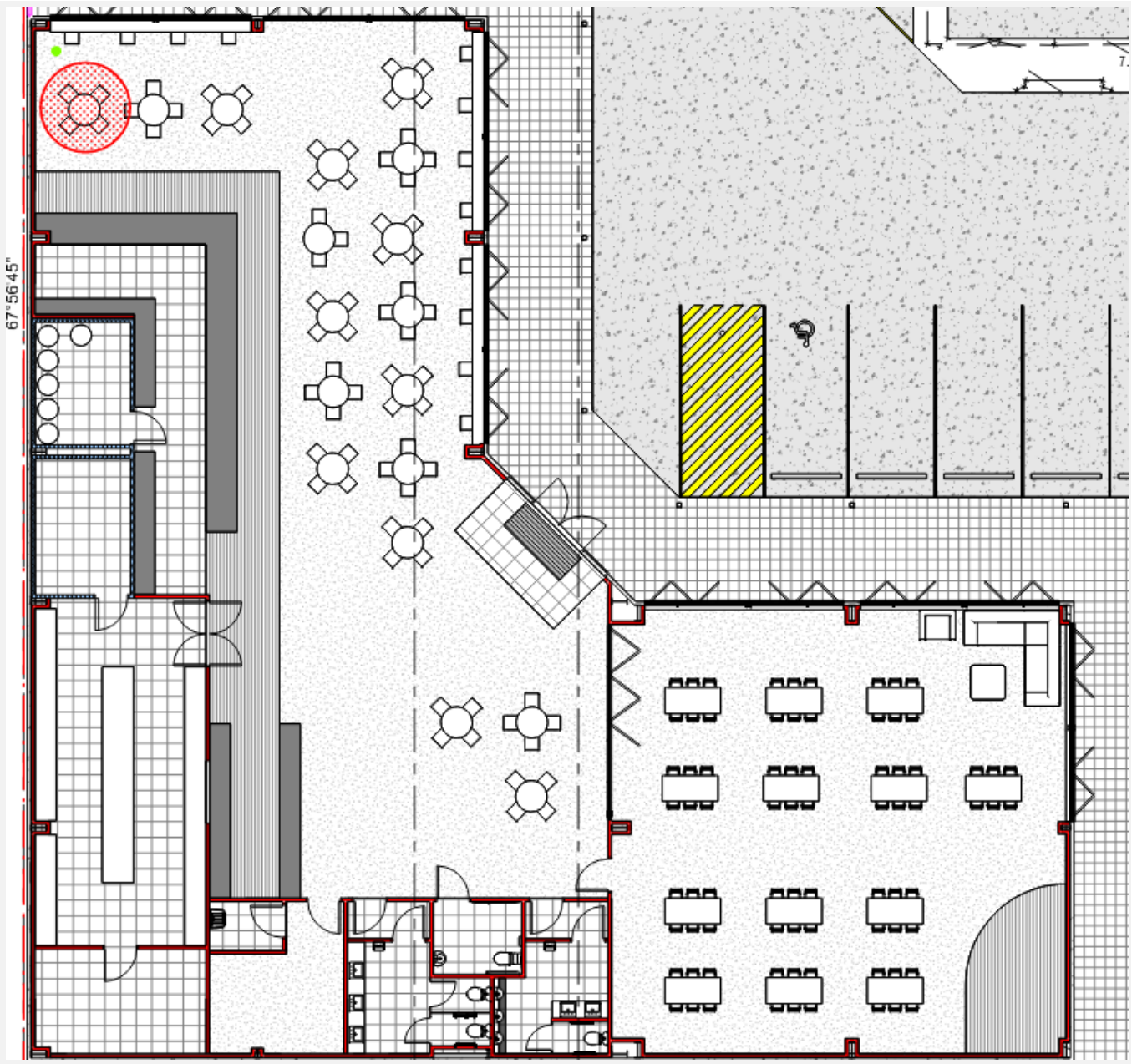
C4D15	Openings for service installations	(1) The requirements of (2) apply where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire. (2) An installation mentioned in (1) must comply with any one of the following: (a) Tested systems - the following applies: (i) The service, building element and any protection method at the penetration- (A) are identical with a prototype assembly of the service, building element and protection method which has been tested in accordance with AS 4072.1 and AS 1530.4 and has achieved the required FRL or resistance to the incipient spread of fire; or (B) differ from a prototype assembly of the service, building element and protection method in accordance with Section 4 of AS 4072.1. (ii) It complies with (i) except for the insulation criteria relating to the service if- (A) the service is a pipe system comprised entirely of metal (excluding pipe seals or the like); and (B) any combustible building element is not located within 100 mm of the service for a distance of 2 m from the penetration; and (C) combustible material is not able to be located within 100 mm of the service for a distance of 2 m from the penetration; and (D) it is not located in a required exit. (iii) The determination of the required FRL must be confirmed in a report from an Accredited Testing Laboratory in accordance with Specifications 1 and 2. (b) Ventilation and air-conditioning - in the case of ventilating or air-conditioning ducts or equipment, the installation is in accordance with AS 1668.1. (c) Compliance with Specification 13 - the following applies:	*Note* *No service installations are expected in building elements requiring an FRL.*

		(i) The service is a pipe system comprised entirely of metal (excluding pipe seals or the like) and is installed in accordance with Specification 13 and it- (A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and (B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts; and (C) does not contain a flammable or combustible liquid or gas. (ii) The service is sanitary plumbing installed in accordance with Specification 13 and it- (A) is of metal or UPVC pipe; and (B) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and (C) is in a sanitary compartment separated from other parts of the building by walls with the FRL required by Specification 5 for a stair shaft in the building and a self-closing –/60/30 fire door. (iii) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification 13 and it- (A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and (B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts. (iv) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification 13.	
C4D16	Construction joints	Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be identical to a prototype tested against AS 4072.1 and AS 1530.4 to achieve the required FRL, or must differ while still achieving the required FRL in accordance with Section 4 of AS 4072.1	*Note*

C4D17	Columns protected with lightweight construction to achieve an FRL	A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire.	*Note*
D ACCESS AND EGRESS			
Part D2 Provision for escape			
D2D3	Number of exits required	(1) Complies; every building must have at least one exit. (2) Class 2 to 8 buildings- *N/A; has additional requirements over 25m or inclusion of a residential class* *(3) N/A relates to basements* (4)[NSW] Class 9 buildings *N/A to this building use/ Class* *(5) N/A to this building Class and use* *(6) N/A to this building Class and use* (7) Access to exits - Without passing through another sole-occupancy unit every occupant of a storey or part of a storey must have access to- (a) an exit; or (b) at least 2 exits if 2 or more exits are required.	*Complies*
D2D4	When fire-isolated stairways and ramps and required	(1) N/A – relates to Class 2 and 3 buildings (2) Class 5, 6, 7, 8 or 9 buildings - Every stairway or ramp serving as a required exit must be fire-isolated unless- (a) N/A to this building Class and use (b) N/A to this building Class and use; or (c) in any other case, except in a Class 9b early childhood centre or a Class 9c building, it connects, passes through or passes by not	*N/A – no stairs*

		more than 2 consecutive storeys and one extra storey of any classification may be included if- (i) the building has a sprinkler system (other than a FPAA101D system) complying with Specification 17 installed throughout; or (ii) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having- (A) an FRL of –/60/60, if non-loadbearing; and (B) an FRL of 90/90/90 for Type A construction or 60/60/60 for Type B or C construction, if loadbearing; and (C) no opening that could permit the passage of fire or smoke	
D2D5	Exit travel distances	(1) N/A to this building Class and use (2) N/A to this building Class and use (3) Class 5, 6, 7, 8 or 9 buildings - Subject to (4), (5) and (6)- *(note that clauses 4 and 5 as noted at left are not applicable to this classification of building)* (a) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m; and (b) in a Class 5 or 6 building, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30 m. (4) N/A (5) N/A (6) N/A ***Note 1:*** *As part (b) applies, no point on a floor can by further than 30m from an exit.* *The current design has 1 exit, serving the storey at the level of access to open space.*	Confirmation required. See Notes 1, 2 and 3

		Note 2: *Where the term 'exit is used it refers to the definition below.* *Exit: Means-* *(a) Any, or any combination of the following if they provide egress to a road or open space:* *(i) An internal or external stairway.* *(ii) A ramp.* *(iii) A fire-isolated passageway.* *(iv) A doorway opening to a road or open space; or* *(b) A horizontal exit or a fire-isolated passageway leading to a horizontal exit.* ***Note 3:*** *Due to the provision of the awning over the front exit, exit travel distances are calculated to the edge of the awning where it meets the car park. This is because the space under the awning does not constitute 'open space' as per the NCC, which requires that such spaces be open to the sky. This requirement notwithstanding, exit travel distances are compliant with the exception of the below area mentioned in Note 4.* ***Note 4:*** *The table in the North-Eastern corner of the building (highlighted in red below) prevents egress from that corner of the building (green dot below) to open space within 30 metres. This table should be removed or reconfigured such that egress from this corner can be achieved within 30 m.*	

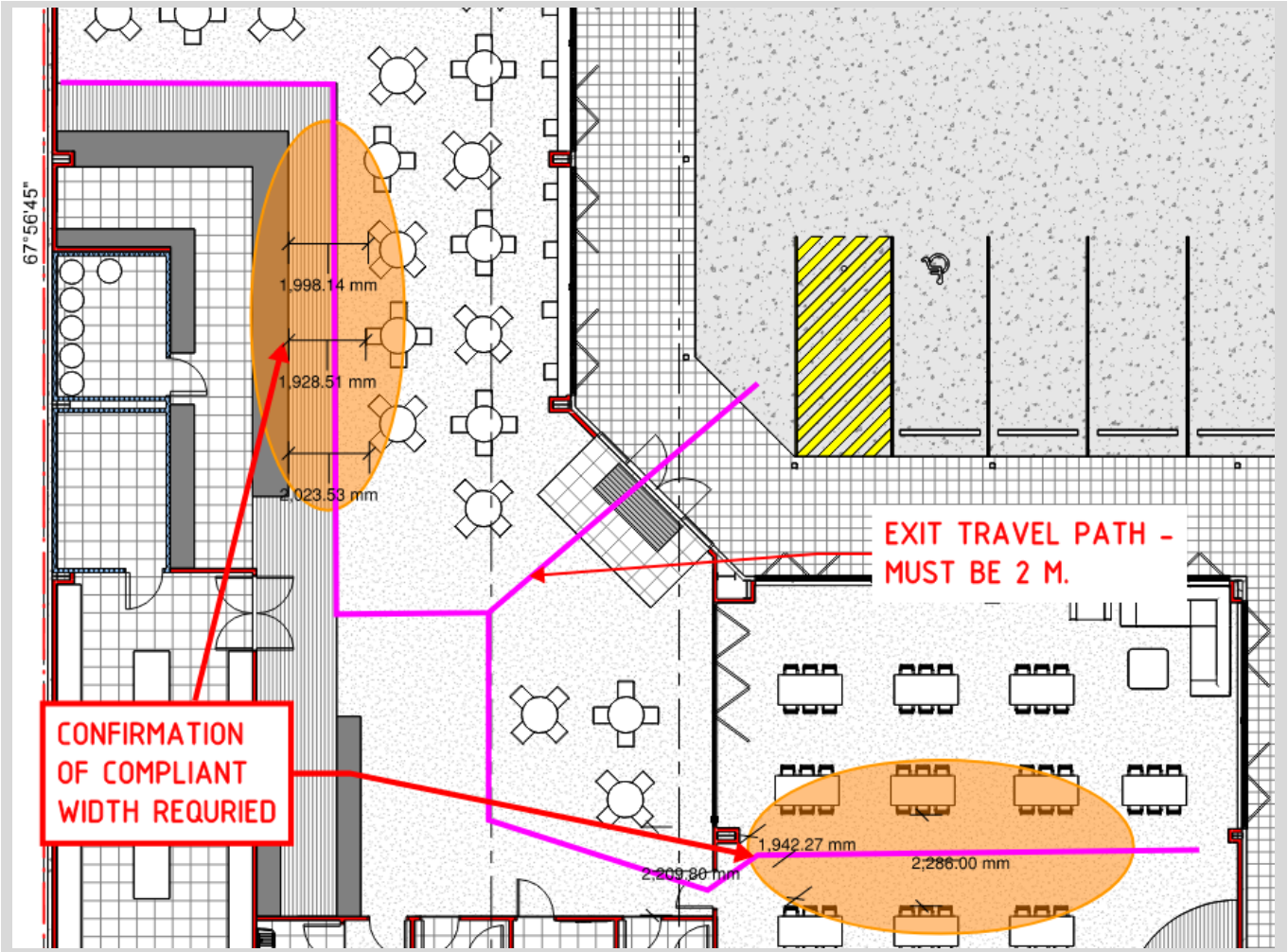


Floor Plan – Table blocking egress path in top corner

D2D6	Distance between alternative exits	Exits that are required as alternative means of egress must be- (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than- (i) N/A or (ii) N/A (iii) in all other cases - 60 m apart; and	*Complies*

		(d) located so that alternative paths of travel do not converge such that they become less than 6 m apart.	
D2D7	Height of exits, paths of travel to exits and	Heights of each exit and path of travel to exits in each unit are greater than 2m, with doorways being in excess of 1.98m.	*Note*
D2D8	Width of exits and paths of travel exits	(1) The unobstructed width of each required exit or path of travel to an exit, except for ladders provided in accordance with D2D21, D3D23 or I3D5, and doorways, must be not less than- (a) 1 m; or (b) N/A to this class of building (c) N/A to this class of building (2) If the storey, mezzanine or open spectator stand accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width of required exits or paths of travel to an exit, except for doorways, must be not less than- (a) 1 m plus 250 mm for each 25 persons (or part) in excess of 100; or (b) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area. (3) If the storey, mezzanine or open spectator stand accommodates more than 200 persons, the aggregate unobstructed width of required exits or paths of travel to an exit, except for doorways, must be not less than- (a) 2 m plus 500 mm for every 60 persons (or part) in excess of 200 persons if egress involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12; or (b) in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200. (4) N/A to this class of building *[NSW variation]* (NSW 5) N/A to this Class of building ***Note 1:*** *Dimensions of exits and paths of travel to exits- the unobstructed height should be no less than 2m (doorways no less than 1980mm) with a width (not including doorways) of 1m.*	*Compliance of exit travel paths should be confirmed as having compliant widths.* *See Notes adjacent*

		- If the storey, or mezzanine accommodates more than 200 persons, the aggregate unobstructed width, except for doorways, must be increased to- *(i) 2 m plus 500 mm for every 60 persons (or part) in excess of 200 persons if egress involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12; or* *(ii) in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200* *Using the number of occupants listed, being 180 based on the current furniture arrangements (See D2D18), the width requirement for paths of travels to exits is required to be 2 m in width, except at doorways.* ***Note 2:** Widths throughout the entire egress path is required to be no less than 2m, this includes stairs and corridors. (The egress pathway is considered to be the most logical exit taken to the exit points.)* *There are some areas with very minor discrepancies (60-70mm) to this 2m requirement, which should be amended prior to finalisation. While the variation to the NCC requirement is quite minor, it is recommended that it be rectified if possible to avoid delays with the assessing authority.* ***Note 3:** It is noted that an airlock may be required for the accessible sanitary facility. It is recommended that mechanical ventilation is considered in lieu of an airlock, or that if an airlock is proposed, it does not impose on the 2m required exit pathway. The adjacent dining tables could also be moved to achieve compliance where an airlock is proposed.*	



NSW D2D9	Width of doorways in exits or paths of travel to exits	*[NSW variation]* In a required exit or path of travel to an exit, the unobstructed width of a doorway must be not less than- (a) N/A (b) N/A (c) the unobstructed width of each exit provided to comply with D2D8(1), (2), (3) or (4), minus 250 mm; or (d) N/A to this class of building (e) N/A to this class of building (f) in any other case except where it opens to a sanitary compartment or bathroom - 750 mm wide. ***Note:*** *Exit doorway should be confirmed as having a clear width of 1750mm. The existing front doorway is noted to be approx. 1950mm width using scaled measurements.*	*Assumed compliance* *See note.*

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).	*Note* *Unable to confirm based on current plan revision*
D2D14	Travel by non-fire-isolated stairways or ramps	(1) 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. *(2) N/A clause relates to- Class 2, 3 or 4 buildings* (3) In a Class 5, 6, 7, 8 or 9 building, the distance from any point on a floor to a point of egress to a road or open space by way of a required non-fire-isolated stairway or non-fire-isolated ramp must not exceed 80 m. *(4) N/A clause relates to- Class 2, 3 or 9a buildings* (5) In a Class 5 to 8 or 9b building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than- (a) 20 m from a doorway providing egress to a road or open space or from a fire-isolated passageway leading to a road or open space; or (b) 40 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions. *(6) N/A clause relates to- Class 2 or 3 buildings*	*N/A – no stairways or ramps*
D2D15	Discharge from exits	(1) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it. (2) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than- (a) the minimum width of the required exit; or (b) 1 m, whichever is the greater. (3) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by-	*Note* *Complies*

		(a) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to-Satisfy Provisions of Part D4; or (b) N/A to this building class (4) The discharge point of alternative exits must be located as far apart as practical. (5) N/A *[NSW variation]* (6) N/A to this class of building (7) The number of persons accommodated must be calculated according to D2D18.	
D2D17	Non-required stairways, ramps or escalators	An escalator, moving walkway or non-required non fire-isolated stairway or pedestrian ramp- (a) must not be used between storeys in- (i) N/A (ii) N/A; and (b) may connect any number of storeys if it is- (i) N/A; or (ii) in a carpark or an atrium; or (iii) outside a building; or (iv) in a Class 5 or 6 building that is sprinklered throughout, where the escalator, walkway, stairway or ramp complies with Specification 14; and (c) except where permitted in (b) must not connect more than- (i) 3 storeys if- (A) each of those storeys is provided with a sprinkler system (other than a FPAA101D system) complying with Specification 17 throughout; and (B) at least one of those storeys is situated at a level at which there is a direct egress to a road or open space; or (ii) 2 storeys, provided that those storeys are consecutive, and one of the storeys is situated at a level at which there is direct egress to a road or open space; and (d) except where permitted in (b) or (c), must not connect, directly or indirectly, more than 2 storeys at any level in a Class 5, 6, 7, 8 or 9 building and those storeys must be consecutive.	*N/A – no stairways, ramps, or escalators present.*

D2D18	Number of persons accommodated	For the purposes of the Deemed-to-Satisfy Provisions, the number of persons accommodated in a storey, room or mezzanine must be determined with consideration to the purpose for which it is used and the layout of the floor area by- (a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in Table D2D18 according to the use of that part, excluding spaces set aside For- (i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and (ii) service ducts and the like, sanitary compartments or other ancillary uses; or (b) reference to the seating capacity in an assembly building or room; or (c) any other suitable means of assessing its capacity. ***Note:*** *Using the furniture provided in the buildings, an occupancy rating can be calculated as below:* *13 x 6 (78) seat dining tables* *18 x 4 (72) seat dining tables* *12 seats along windows* *5 seats in corner of dining/function area* *3 people on stage* *10 employees; 5 front of house, 5 back of house* *TOTAL - 180*	*Note*
Part D3 Construction of exits			
D3D3	Fire-isolated stairways and ramps	A stairway or ramp (including any landings) that is required to be within a fire-resisting shaft must be constructed- (a) of non-combustible materials; and (b) so that if there is local failure it will not cause structural damage to, or impair the fire-resistance of, the shaft.	*N/A*
D3D4	Non-fire-isolated stairways and ramps	In a building having a rise in storeys of more than 2, required stairs and ramps (including landings and any supporting building elements) which are	*N/A; single storey building*

		not required to be within a fire-resisting shaft, must be constructed according to D3D3, or only of- (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that- (i) has a finished thickness of not less than 44 mm; and has an average density of not less than 800 kg/m3 (ii) at a moisture content of 12%; and (iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue.	
D3D5	Separation of rising and descending stair flights	If a stairway serving as an exit is required to be fire-isolated- (a) there must be no direct connection between- (i) a flight rising from a storey below the lowest level of access to a road or open space; and (ii) a flight descending from a storey above that level; and (b) any construction that separates or is common to the rising and descending flights must be- (i) non-combustible; and (ii) smoke proof in accordance with S11C2.	*N/A; single storey building*
D3D8	Installations in exits and paths of travel	(1) Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the Deemed to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp. (2) An opening to any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like, must not be located in any part of a required exit or any corridor, hallway, lobby or the like leading to a required exit. (3) Gas or other fuel services must not be installed in a required exit. (4) Except for in a fire-isolated exit specified in (1), services or equipment enclosed in accordance with (5) may be installed in a required exit, or in any corridor, hallway, lobby or the like leading to a required exit, where that service or equipment comprises-	*Note only*

		(a) electricity meters, distribution boards or ducts; or (b) central telecommunications distribution boards or equipment; or (c) electrical motors or other motors serving equipment in the building. (5) An enclosure for the purposes of (4) must be suitably sealed against smoke spreading from the enclosure and be- (a) non-combustible construction; or (b) a fire-protective covering. (6) Electrical wiring may be installed in a fire-isolated exit if the wiring is associated with- (a) a lighting, detection, or pressurisation system serving the exit; or (b) a security, surveillance or management system serving the exit; or (c) an intercommunication system or an audible or visual alarm system in accordance with D3D27; or (d) the monitoring of hydrant or sprinkler isolating valves.	
D3D9	Enclosure of space under stairs and ramps	(1) Fire-isolated stairways and ramps - If the space below a required fire-isolated stairway or fire-isolated ramp is within the fire-isolated shaft, it must not be enclosed to form a cupboard or similar enclosed space. (2) Non fire-isolated stairways and ramps - The space below a required non fire-isolated stairway (including an external stairway) or non fire-isolated ramp must not be enclosed to form a cupboard or other enclosed space unless- (a) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and (b) any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door.	*Note* *For information only*
D3D10	Width of required stairways and ramps	A required stairway or ramp that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2 m	*Note*
D3D14	Goings and risers	(a) The goings of all straight treads must be constant throughout the same flight. The dimensions of goings is considered constant if the variation between adjacent goings, is no	*Note*

		greater than 5 mm and the largest and smallest going within a flight, does not exceed 10 mm. (b) The risers must not have any openings that would allow a 125 mm sphere to pass through between the treads. (c) The treads must have a surface with a slip resistance classification not less than P3 or R10 when tested in accordance with AS 4586 or a nosing strip with a slip-resistance classification not less than P3 when tested in accordance with AS 4586.	
	Table D3D14: Riser and going dimensions **Table Notes** (1) Private stairways are— (a) stairways in a *sole-occupancy unit* in a Class 2 building or Class 4 part of a building; and (b) in any building, stairways which are not part of a *required exit* and to which the public do not normally access. (2) *Going* and *riser* dimensions must be measured in accordance with Figure D3D14. (3) The *going* in tapered treads (except *winders* in lieu of a quarter or half *landing*) in a curved or spiral stairv measured— (a) 270 mm in from the outer side of the unobstructed width of the stairway if the stairway is less than 1 m (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	Landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must – (i) Be not less than 750mm long, and where this involves a change in direction, the length is measured 500mm from the inside edge of the landing. (ii) Have- a. A surface with a slip-resistance classification not less than that listed in table D2.14 when tested in accordance with AS 4586; or b. A strip at the edge of the landing with a slip-resistance classification not less than that listed in table D2.14 when tested in accordance with AS 4586, where the edge leads to a flight below.	*Note*

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

Table D3D15: Slip-resistance classification

Application	Dry surface conditions	Wet surface conditions
Ramp steeper than 1:14	P4 or R11	P5 or R12
Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11
Tread or *landing* surface	P3 or R10	P4 or R11
Nosing or *landing* edge strip	P3	P4

D3D16	Thresholds	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.	*Note*
D3D17	Barriers to prevent falls	(1) 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. (2) The requirements of (1) do not apply to- (a) the perimeter of a stage, rigging loft, loading dock or the like; or (b) areas referred to in D3D23; or (c) a retaining wall, unless the retaining wall forms part of, or is directly associated with a delineated path of access to a building from the road, or a delineated path of access between buildings; or (d) a barrier provided to an openable window covered by D3D29. (3) A barrier required by (1) must be constructed in accordance with D3D18, D3D19, D3D20 and, if a wire barrier is used, D3D21.	*Note only; No areas noted where barriers would be required*

D3D18	Height of barriers	A barrier required by D3D17 must not be less than the following: (a) For stairways or ramps with a gradient of 1:20 or steeper – 865mm. (b) For landings to a stair or ramp where the barrier is provided along the inside of the landing and does not exceed 500mm in length – 865mm. (c) For all other locations – 1m. For a barrier provided under this clause: (a) Barrier heights are measured vertically from the surface beneath, except that for stairways, the height must be measured above the nosing line of the stair treads; and (b) A transition zone may be incorporated where the barrier height changes from 865mm on a stair flight or ramp to 1m at a landing or floor.	*Note – no requirement as of the current design.*
D3D19	Openings in barriers	Openings in a required barrier must not allow for a 125mm sphere to pass through.	*Note*
D3D20	Barrier climbability	(1) A barrier required by D3D17, located on a floor more than 4 m above the surface beneath, must not incorporate horizontal or near horizontal elements that could facilitate climbing between 150 mm and 760 mm above the floor. (2) The requirements of (1) do not apply to- (a) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, other than- (i) external stairways; and (ii) external ramps; and (b) Class 7 (other than carparks) and Class 8 buildings.	*Note*
D3D22	Handrails	Handrails along stairs must be at least 865mm height from the nosing of the tread and have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like.	Note

D3D24	Doorways and doors	(1) N/A to this class of building [NSW variation] (2) A doorway serving as a required exit or forming part of a required exit, or a doorway in a patient care area of a Class 9a health-care building- (a) must not be fitted with a revolving door; and (b) must not be fitted with a roller shutter or tilt-up door unless- (i) it serves a Class 6, 7 or 8 building or part with a floor area not more than 200 m^2; and (ii) the doorway is the only required exit from the building or part; and (iii) it is held in the open position while the building or part is lawfully occupied; and (c) must not be fitted with a sliding door unless- (i) it leads directly to a road or open space; and (ii) the door is able to be opened manually under a force of not more than 110 N; and (d) if fitted with a door which is power-operated- (i) it must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and (ii) if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door; and (e) in a Class 9b building used as an entertainment venue- (i) must not be fitted with a collapsible gate, accordion door, turnstile or rigid barrier; and (ii) if fitted with a door, must be- (A) a swing door which opens in the direction of egress; and (B) doors hung in two folds where the unobstructed width of the doorway is more than 1 m; and	*Complies*

		(iii) a doorway or opening within sight of the audience but not intended for egress must have a notice displayed clearly indicating its purpose and such a notice must not be internally illuminated; and (iv) notwithstanding (2)(c), a sliding door may be fitted where- (A) it leads directly to a road or open space and forms a main entrance; and d(B) it is capable of swinging in the direction of egress when pressure is applied to the inside face of the door; and (C) the door is provided with signage that clearly indicates to persons seeking egress, the potential for swinging the door open in an emergency (3) A power-operated door in a path of travel to a required exit, except for a door in a patient care area of a Class 9a health-care building as provided in (2), must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source.	
D3D25	Swinging doors	(1) A swinging door in a required exit or forming part of a required exit- (a) 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 (b) must swing in the direction of egress unless- (i) it serves a building or part with a floor area not more than 200 m², it is the only required exit from the building or part and it is fitted with a device for holding it in the open position; or (ii) it serves a sanitary compartment or airlock (in which case it may swing in either direction); and	*Note* See Note adjacent

		(c) must not otherwise impede the path or direction of egress. (2) The measurement of encroachment referred to in (1)(a) in each case is to include door handles or other furniture or attachments to the door. ***Note 1:*** *Swinging doors in required exits should not impede the path of travel of people using the exit, and swing in the direction of egress [i.e. out of the building]. The double door installation serving as the required exit from the building should be confirmed as being compliant with the measurements of (1).*	
D3D26	Operation of latch	(1) A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by- (a) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area required to be accessible by Part D4- (i) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and (ii) have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35 mm and not more than 45 mm; or (b) a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor. (2) Where the latch operation device referred to in (1)(b) is not located on the door leaf itself- (a) manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and Located- (i) not less than 500 mm from an internal corner; and (ii) for a hinged door, between 1 m and 2 m from the door leaf in any position; and (iii) for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position; and	*Can comply* *See Notes adjacent*

		(b) braille and tactile signage complying with S15C3 and S15C6 must identify the latch operation device. (3) The requirements of (1) and (2) do not apply to a door that- (a) serves a vault, strong-room, sanitary compartment, or the like; or (b) serves only, or is within- (i) a sole-occupancy unit in a Class 2 building or a Class 4 part of a building; or (ii) a sole-occupancy unit in a Class 3 building (other than an entry door to a sole-occupancy unit of a boarding house, guest house, hostel, lodging house or backpacker accommodation); or (iii) a sole-occupancy unit with a floor area not more than 200 m2 (iii) in a Class 5, 6, 7 or 8 building; or (iv) a space which is otherwise inaccessible to persons at all times when the door is locked; or (c) complies with (4) and serves- (i) Australian Government Security Zones 4 or 5; or (ii) the secure parts of a bank, detention centre, mental health facility, early childhood centre or the like; or (d) is fitted with a fail-safe device which automatically unlocks the door upon the activation of any sprinkler system (other than a FPAA101D system) complying with Specification 17 or smoke, or any other detector system deemed suitable in accordance with AS 1670.1 installed throughout the building, and is readily openable when unlocked; or (e) is in a Class 9a or 9c building and- (i) is one leaf of a two-leaf door complying with D2D9(a) or D2D9(d) provided that it is not held closed by a locking mechanism and is readily openable; and with D2D9(a) or D2D9(d) provided that it is not held closed by a locking mechanism and is readily openable; and (ii) the door is not required to be a fire door or smoke door (4) A door referred to in (3)(c) must be able to be immediately unlocked-	

		(a) by operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or (b) by hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire. *[NSW variation]* (5) The requirements of (1) and (2) do not apply in a Class 9b building (other than a school, an early childhood centre or a building used for religious purposes) to a door in a required exit, forming part of a required exit or in the path of travel to a required exit serving a storey or room accommodating more than 100 persons, determined in accordance with D2D18, in which case it must be readily openable- (a) without a key from the side that faces a person seeking egress; and (b) by a single hand pushing action on a single device such as a panic bar located between 900 mm and 1.2 m from the floor; and (c) where a two-leaf door is fitted, the provisions of (a) and (b) need only apply to one door leaf if the appropriate requirements of D2D9 are satisfied by the opening of that one leaf; and (d) where the door is a door in a path of travel providing re-entry to the building from a balcony, terrace or the like, it may be fitted with key-operated fastenings only, the tongues of which must be locked in the retracted position whenever the building is occupied by the public, so the door can yield to pressure. *[NSW variation]* (6) The requirements of (1), (2) and (5) do not apply to a door serving a Class 9b building used as an entertainment venue where the following provisions apply to a door or gate used by the public- (a) on a door, the single device operating the latch or bolts must be a panic bar if those doors are to be secured; or (b) an exit door or gate used by the public as the main entrance may be fitted with key-operated fastenings only, the tongues of	

		which must be locked in the retracted position whenever the building is occupied by the public so the door or gate can yield to pressure from within; or (c) a door from a balcony, terrace or the like, being a door in a path of travel providing re-entry to the building, may comply with the locking provision of (b) above. ***Note 1:*** *Latches must operate by a single hand downward action on a single device which is located between 900mm and 1100mm from the floor (where required to be accessible by D3; 1.2m in other circumstances)* ***Note 2:*** *the building is Class 6*	
D3D28	Signs on doors	(1) A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to- (a) a required- (i) fire door providing direct access to a fire-isolated exit, except a door providing direct egress from a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; and (ii) smoke door; and (b) any door which is a- (i) fire door forming part of a horizontal exit; and (ii) smoke door that swings in both directions; and (iii) door leading from a fire isolated exit to a road or open space. (2) A sign required by (1)(a) must be fixed on the side of the door that faces a person seeking egress and, if the door is fitted with a device for holding it in the open position, either a sign must be fixed on the wall adjacent to the doorway, or signs must be fixed to both sides of the door. (3) A sign required by (1)(b) must be fixed on each side of the door. (4) A sign referred to in (1) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state the following:	*Note* *N/A in current design; no doors to which this clause applies.*

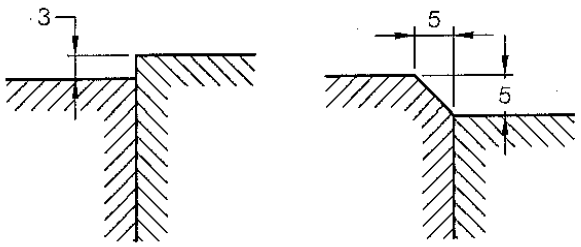
		(a) For an automatic door held open by an automatic hold-open device— **FIRE SAFETY DOOR — DO NOT OBSTRUCT** (b) For a self-closing door- **DO NOT OBSTRUCT** **DO NOT KEEP OPEN** **FIRE SAFETY DOOR** (c) For a door discharging from a fire-isolated exit- **FIRE SAFETY DOOR — DO NOT OBSTRUCT**	
D3D30	Timber stairways: Concession	(1) Notwithstanding D3D3(a), timber treads, risers, landings and associated supporting framework within a required fire isolated stairway or fire-isolated passageway may be constructed from fire-protected timber in accordance with C2D13- (a) if the timber- (i) has a finished thickness of not less than 44 mm; and (ii) has an average density of not less than 800 kg/m3 (ii) at a moisture content of 12%; and (b) subject to- (i) the building being protected throughout by a sprinkler system (other than a FPAA101D system) complying with Specification 17 which extends to within the fire-isolated enclosure; and (ii) fire protection being provided to the underside of stair flights and landings located immediately above a landing level which- (A) is at or near the level of egress; or (B) provides direct access to a carpark. (2) Fire protection required by (1) must be not less than one layer of 13 mm fire-protective grade plasterboard fixed in accordance with the system requirements for a fire-protective covering.	*Note* *N/A; No timber stairways observed.*
NSW D3D31	Doors in paths of travel to an entertainment venue	In a Class 9b building used as an entertainment venue, a doorway in a path of travel must comply with NSW D3D24(2)(e).	*N/A*

Part D4 Access for people with a disability			
D4D2	General building access requirements	For Class 5, 6, 7b, 8 and 9a buildings, access must be provided to and within all areas normally used by the occupants. Unless rendered exempt due to D3.4, all Class 8 and 5 buildings are required to be accessible to and within all areas normally used by the occupants. Entrance and path of travel from an accessible car park needs to be graded to comply with AS1428. The path is required to be no less than 1m wide. Transitions between surfaces should have a step of no more than 5mm if edges are chamfered at 45°. ***Note 1: a continuous path of travel requires a slip resistant surface. The texture of the surface needs to be able to be easily used by people who use a wheelchair and those with an ambulant or sensory disability.***	*Note* *A continuous accessible path of travel from the accessible carpark on the site should be confirmed*
D4D3	Access to buildings	An accessway must be provided to the building- (i) From the main points of a pedestrian entry at the allotment boundary *(where applicable)*; and (ii) From another accessible building connected by a pedestrian link; and (iii) From any required accessible carparking space on the allotment. (iv) Where a doorway on an accessway has multiple leaves, one of those leaves must have a clear opening width of not less than 850mm in accordance with AS1428.1. ***Note 1:*** *Entrance and path of travel from any accessible carpark (where installed) needs to be graded to comply with AS1428 the path is required to be no less than 1m wide. Transitions between surfaces should have step of no more than 5mm if edges are chamfered at 45°. See below detail.*	*Note*

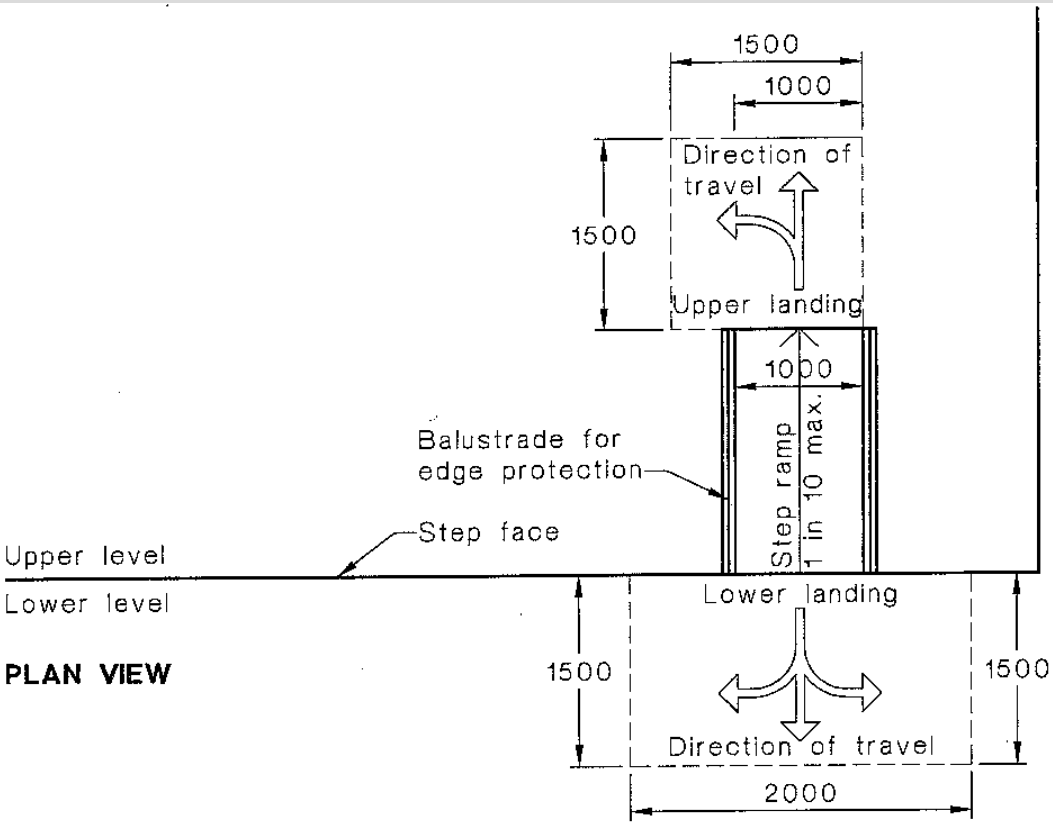
Note 2: *a continuous path of travel requires a slip resistant surface. The texture of the surface needs to be able to be easily used by people who use a wheelchair and those with an ambulant or sensory disability.*

The images below from AS1428.1 demonstrates how a step ramp can be constructed if required

Tolerances for raked joint pavers shall be as shown in Figure 7.

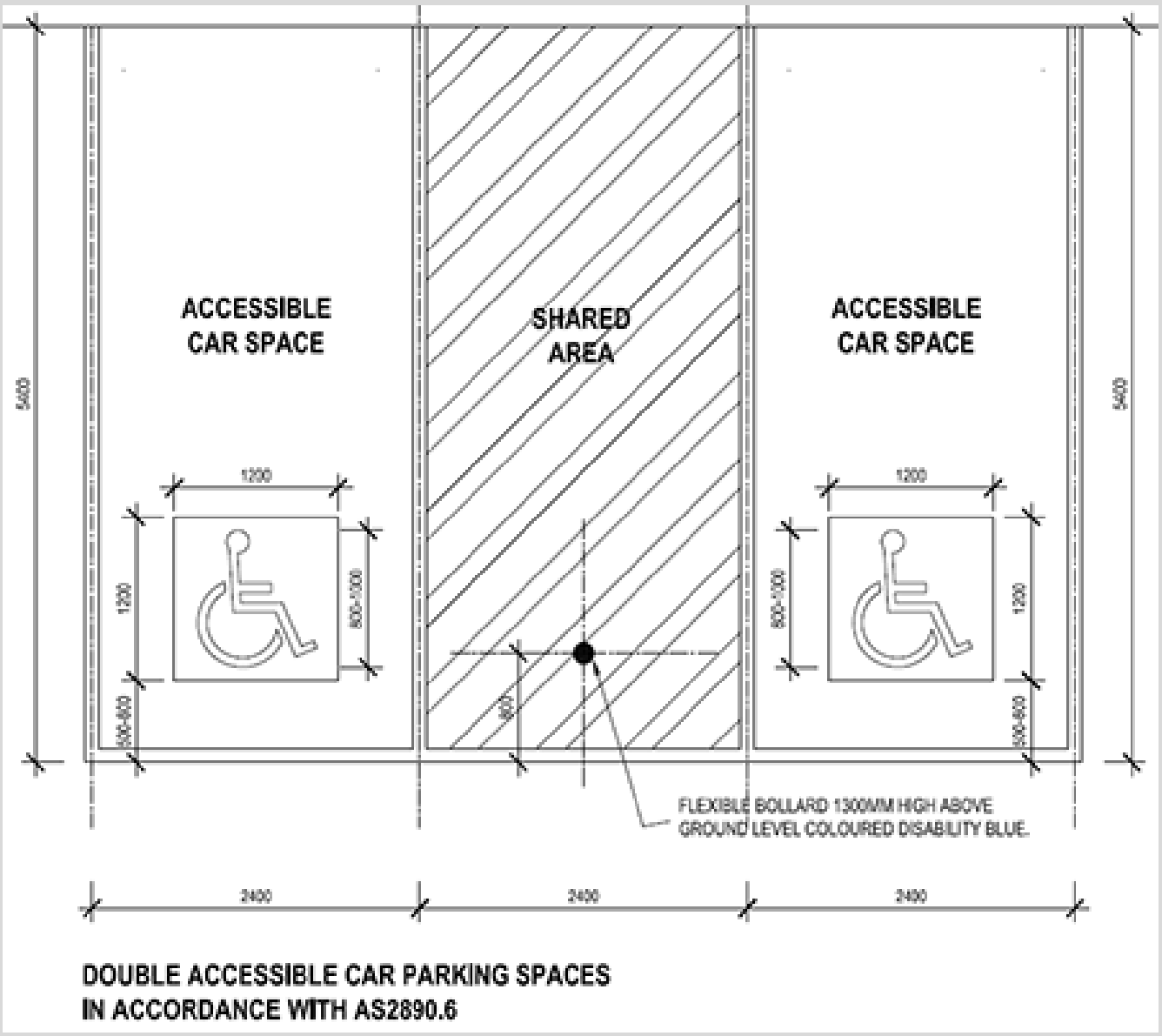


(a) Change in level



D4D4	Parts of buildings to be accessible	In a building required to be accessible- (a) every ramp and stairway, except for ramps and stairways in areas exempted by D4D5, must comply with- (i) for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and (ii) for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1; and (iii) for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1; and (b) every passenger lift must comply with E3D7 and E3D8; and (c) accessways must have- (i) passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an accessway where a direct line of sight is not available; and (ii) turning spaces complying with AS 1428.1- (A) within 2 m of the end of accessways where it is not possible to continue travelling along the accessway; and (B) at maximum 20 m intervals along the accessway; and (d) an intersection of accessways satisfies the spatial requirements for a passing and turning space; and (e) a passing space may serve as a turning space; and (f) a ramp complying with AS 1428.1 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- (i) containing not more than 3 storeys; and (ii) with a floor area for each storey, excluding the entrance storey, of not more than 200 m2 (ii) ; and (g) clause 7.4.1(a) of AS 1428.1 does not apply and is replaced with 'the pile height or pile thickness shall not exceed 11 mm and the carpet backing thickness shall not exceed 4 mm'; and (h) 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 and are replaced with 11 mm, 4 mm and 15 mm respectively	*Note*

D4D5	Exemptions	The following areas are not required to be accessible: (a) An area where access would be inappropriate because of the particular purpose for which the area is used. (b) An area that would pose a health of safety risk for people with a disability. (c) Any path of travel providing access only to an area exempted by (a) or (b). ***Note 1:*** *Examples given by the ABCB of areas to which this exemption would apply are: rigging lofts, waste containment areas, foundry floors, loading docks, fire lookouts, plant, equipment rooms, and electricity network substations, and other similar areas.* *It is not anticipated that any exemptions would apply to the proposed use of the building.*	*Note- provided for information only.*
D4D6	Accessible carparking	Class 6 buildings: 1 Accessible car park is required for every 50 carparking spaces or part thereof. ***Note 1:*** *An accessible carparking space is required to have an area the size of the space itself to one side, to allow for circulation of the vehicle. The required dedicated areas for accessible carparks can be utilised between 2 adjacent carparking spaces, so as to save area on site. See figure below for reference.*	*Complies – one accessible carparking space required.*



Double Accessible Car Parking Spaces – Image Courtesy of Equal Access Group

D4D7	Signage	Braille and tactile signage complying with Specification 15 must – (a) Incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 and identify each – a. Sanitary facility, except a sanitary facility associated with a bedroom in a class 1b building or a sole-occupancy unit in a class 3 or class 9c building; and b. Space with a hearing augmentation system; and (b) Identify each door required by E4D5 to be provided with an exit sign and state – a. "Exit"; and b. "Level"; and	*Note*

		c. The floor level number of floor level descriptor, or a combination of the two. Signage in accordance with AS 1428.1 must be provided for accessible unisex sanitary facilities to identify if the facility is suitable for left or right-handed use. Signage to identify ambulant accessible sanitary facility in accordance with AS1428.1 must be located on the door of the facility.	
D4D9	Tactile indicators	TGSIs must be located at the top and bottom of the internal mezzanine stairs of each unit. (1) For a building 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. (2) Tactile ground surface indicators required by (1) must comply with sections 1 and 2 of AS/NZS 1428.4.1. *(3) N/A for this Class of building*	*Note* *Complies where installed in accordance with AS1428.4* *Required where awning meets carpark in accordance with (e)(i).*
D4D12	Ramps	On an accessway- (a) a series of connected ramps must not have a combined vertical rise of more than 3.6 m; and (b) a landing for a step ramp must not overlap a landing for another step ramp or ramp.	*Note*
D4D13	Glazing on an accessway	On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of	*Note*

		being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.	

E SERVICES AND EQUIPMENT

Part E1 Firefighting equipment

E1D2	Fire hydrants	Fire hydrant coverage is required as the floor area of the building exceeds 500m². ***Note:*** *A street hydrant is positioned at the Southeast of the lot and appears to have adequate coverage to service the development.* *Pressure and coverage in compliance with AS2419 should be confirmed.* *Where the street hydrant cannot service the development, a fire hydrant system will need to be installed compliant with AS 2419.*	*Fire hydrant coverage required* *Confirmation of suitability of street feed hydrant should be confirmed.*

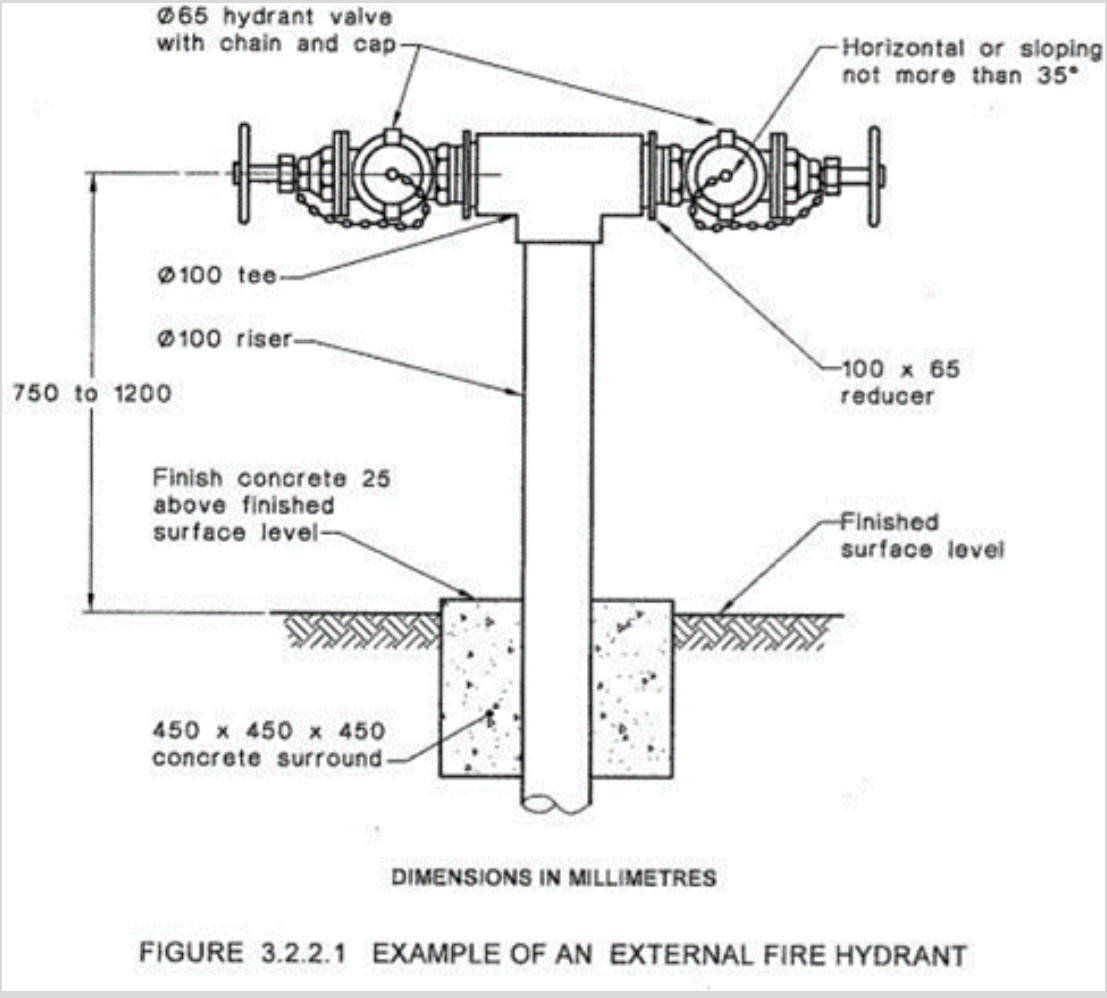
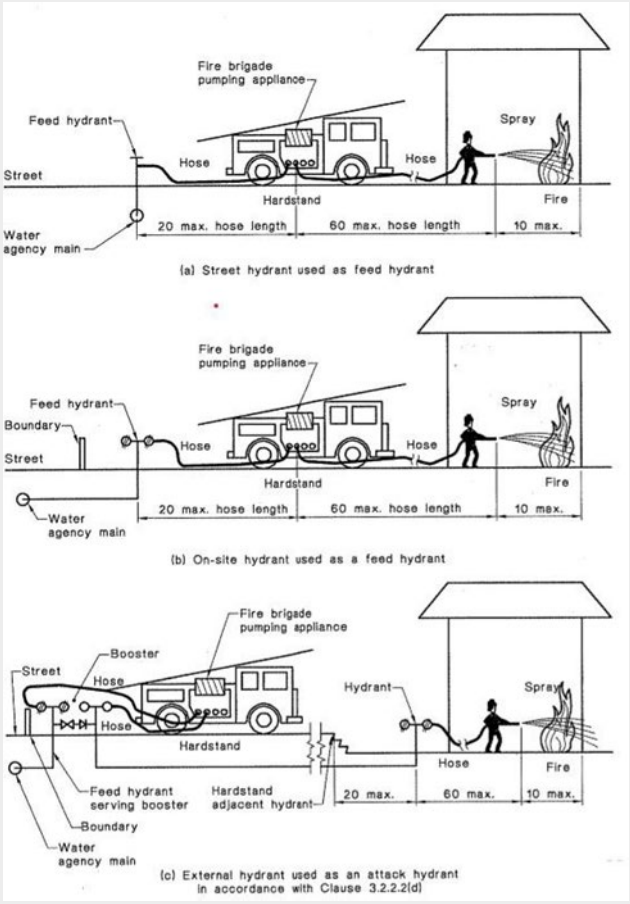


FIGURE 3.2.2.1 EXAMPLE OF AN EXTERNAL FIRE HYDRANT



Source AS2419.1

Hydrant pressures to be achieved are highlighted below

TABLE 2.2

MINIMUM FIRE HYDRANT OUTLET FLOW RATES AND PRESSURES

Fire hydrant type	Minimum required flow rate (L/s)	Minimum required residual pressure (kPa)	
		NSW	All other states and territories
Feed fire hydrant, unassisted	10	150	200
Attack fire hydrant, unassisted	10	250	350
Internal and external fire hydrants when boosted by a fire brigade pumping appliance	10	700	700

NOTES:

1 'Unassisted' specifies the system performance characteristics achieved by a water agency's system or other elevated reservoir, before a fire brigade pumping appliance is connected to the system. On-site pumps must not be used to achieve this performance. If pumps are required, then fire hydrants will need to have attack fire hydrant performance and be located in accordance with Clause 3.2.2.2(c).

2 In a system that incorporates a fire brigade booster assembly, external above-ground fire hydrants, accessible by a fire brigade pumping appliance, if located as attack fire hydrants, need only have feed fire hydrant unassisted performance (see Clause 3.2.2.2(d)).

TABLE 2.3

FIRE HYDRANT OUTLET FLOW RATES AND PRESSURES

Fire hydrant type	Minimum required flow rate (L/s)	Minimum required residual pressure (kPa)
Attack fire hydrant performance achieved without the use of a fire brigade pumping appliance	5	700
Internal and external fire hydrants when boosted by a fire brigade pumping appliance	10	700

NOTE: Where the supply from a water agency's reticulated water system does not meet the requirements of this Standard and tanks and pumps are installed, the performance requirements for feed fire hydrants at a booster assembly fed by that water supply may be waived.

Source AS2419

(b) The fire hydrant system-

(i) must be installed in accordance with AS 2419.1, except-

(A) **where a sprinkler system is installed throughout a building in accordance with AS 2118.1, AS 2118.4, AS2118.6, FPAA101H or FPAA101D the fire hydrant booster protection requirements of clauses 7.3(c)(ii) and 7.3(d)(iii) of AS 2419.1 do not apply; and**

(B) a fire hydrant booster assembly may be located between 3.5 m and 10 m of the building, and need not comply with clause 7.3(d)(iii) of AS 2419.1 where the assembly is protected by an adjacent fire-rated freestanding wall that-

(aa) achieves an FRL of not less than 90/90/90; and

(bb) extends not less than 1 m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3 m wide; and (cc) extends to a height of not less than 2 m above finished ground level; and

(ii) where internal fire hydrants are provided, they must serve only the storey on which they are located except that a sole-occupancy unit-

(A) of not more than 2 storeys in a Class 5, 6, 7, 8 or 9 building may be served by a single fire hydrant located

at the level of egress from that sole-occupancy unit provided the fire hydrant can provide coverage to the whole of the sole-occupancy unit.

Note 1: *it is possible in this location that the pressure in the street hydrant will not provide an adequate pressure and the system may require boosting. Location of street hydrants should be no more than 90m from all points of the building.*

Note 2: *Internal hydrants are required where the external hydrants to protect those parts of the building not able to be covered by external hydrants. Based on a preliminary review, the street hydrant should be able to cover all areas of the building.*

E1D3	Fire hose reels	Fire hose reels are required as the floor area exceeds 500m² (a) The fire hose reel system must- (i) have fire hose reels installed in accordance with AS 2441; and (ii) provide fire hose reels to serve only the storey at which they are located, except a sole-occupancy unit of not more than 2 storeys in a Class 6, 7, 8 or 9 building may be served by a single fire hose reel located at the level of egress from that sole-occupancy unit provided the fire hose reel can provide coverage to the whole of the sole-occupancy unit. (b) Fire hose reels must be located internally, externally or in combination, to achieve the system coverage specified in AS 2441. (c) In achieving system coverage, one or a combination of the following criteria for individual internally located fire hose reels must be met in determining the layout of any fire hose reel system: (i) Fire hose reels must be located adjacent to an internal fire hydrant (other than one within a fire-isolated exit), except that a fire hose reel need not be located adjacent to every fire hydrant, provided system coverage can be achieved. (ii) Fire hose reels must be located within 4 m of an exit, except that a fire hose reel need not be located adjacent to every exit, provided system coverage can be achieved. (iii) Where system coverage is not achieved by compliance with (i) and (ii), additional fire hose reels may be located in paths of travel to an exit to achieve the required coverage. (d) Fire hose reels must be located so that the fire hose will not need to pass through doorways fitted with fire or smoke doors, except- (i) doorways in walls referred to in C2.5(a)(v) in a Class 9a building and C2.5(b)(iv) in a Class 9c building, separating ancillary use areas of high potential fire hazard; and (ii) doorways in walls referred to in C2.12 or C2.13 separating equipment or electrical supply systems; and	*Installation required*

		(iii) doorway openings to shafts referred to in C3.13. (e) Where the normal water supply cannot achieve the flow and pressures required by AS 2441, or is unreliable- (i) a pump; or (ii) water storage facility; or (iii) both a pump and water storage facility, must be installed to provide the minimum flow and pressures required by clause 6.1 of AS 2441 ***Note:*** *Part 10.2 – System Coverage of AS 2441-2005 requires that all points on a floor should be within reach of a 4m hose stream issuing from a nozzle at the end of the hose laid on the floor. The hose length shall not exceed 36 m.*	
E1D4	Sprinklers	N/A – Sprinklers are not required in consideration of the below clauses.	*N/A*
E1D5	Where sprinklers are required: all classifications	N/A – Sprinklers are only required where a building or any part of a building had an effective height of more than 25 m.	*N/A*
E1D8	Where sprinklers are required: Class 6 building	N/A – Sprinklers are required in class 6 buildings where they have a floor area of more than 3500 m^2 or a volume of more than 21,000 m^3.	*N/A*
E1D13	Where sprinklers are required: occupancies of excessive hazard	N/A – Sprinklers are required in buildings which contain hazardous processes where they have a floor area of more than 2000 m^2 or a volume of more than 12,000 m^3. ***Note:*** *It is not anticipated that the building will house occupancies of excessive hazard.*	*N/A*
E1D14	Portable fire extinguishers	(1) Portable fire extinguishers must be- (a) provided as listed in (3) and (4); and (b) N/A for this class of building (c) subject to (2), selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444. (2) N/A for this class of building (3) In Class 2 to 9 buildings (except within sole-occupancy units of a Class 9c building), portable fire extinguishers must be provided as follows: (a) To cover Class AE or E fire risks associated with emergency services switchboards.	*A class F fire extinguisher of a rating suitable to the proposed kitchen facilities is required.* *As a guide, Fire extinguishers with a 1A or 2A rating could be appropriately located to ensure coverage throughout the building.*

(b) To cover Class F fire risks involving cooking oils and fats in kitchens.

(c) 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).

(d) 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).

(e) N/A for this class of building

(f) N/A for this class of building

(4) In addition to the requirements of (3), portable fire extinguishers must be provided to cover Class A and E fire risks in the following occupancies in buildings, or parts of a building:

(a) N/A for this class of building

(b) N/A for this class of building

(c) N/A for this class of building

(d) N/A for this class of building.

(5) For the purposes of (3) and (4):

(a) Fire risks are defined in accordance with AS 2444.

(b) An emergency services switchboard is one which sustains emergency equipment operating in the emergency mode.

(c) Additional extinguishers may be required to cover fire risks in relation to special hazards provided for in E1D17.

(d) N/A for this class of building

(6) N/A for this class of building

Complimentary protection required to cover F fire risks, supplied and installed in accordance with AS2444-2001

AS2444- 2001

For Class F fire risks, a fire extinguisher should not be between 2 and 20m from any point and should have a rating applicable to the surface area of the hazard.

In Class 2 to 9 buildings, portable fire extinguishers must be provided as follows:

(a) To cover class AE or E risks associated with emergency services switchboards.

(b) To cover class F fire risks involving cooking oils and fats in kitchens.
(c) To cover class B fire risks in locations where flammable liquids in excess of 50 litres are stored or used (excluding that held in fuel tanks of vehicles)
(d) To cover class A fire risks in fire compartments less than 500 m^2 that are not provided with fire hose reels.

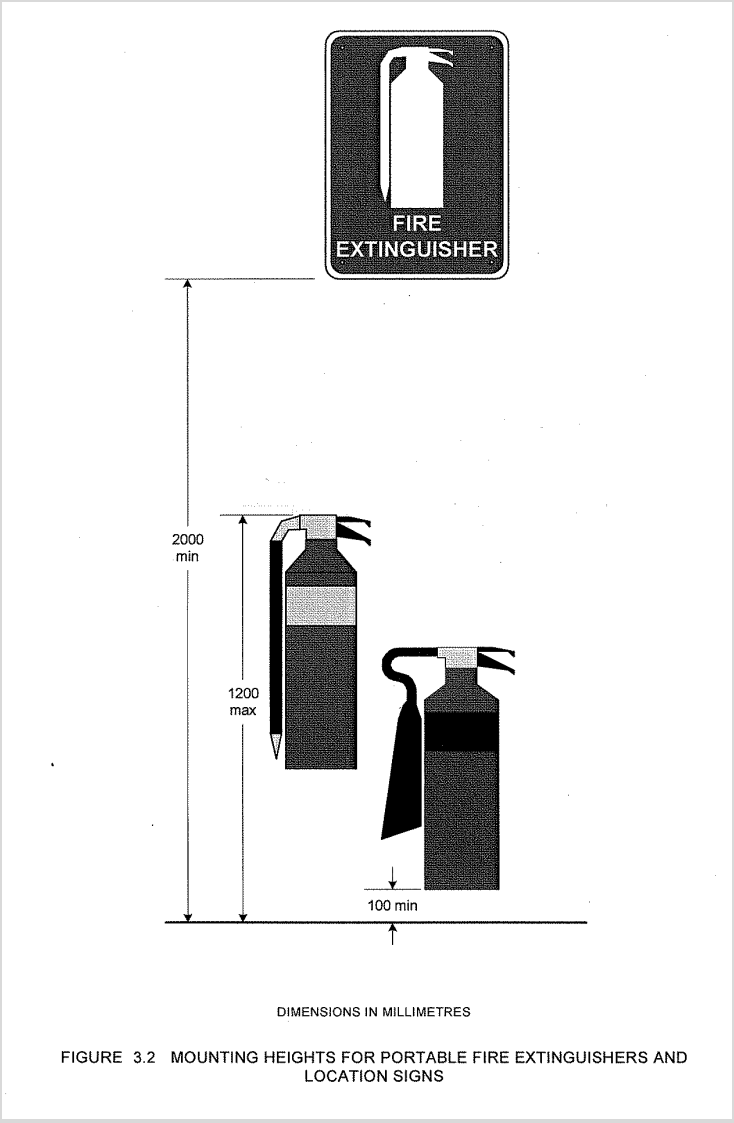
For Class A fire risks, a fire extinguisher should not be more than 15m from any point and should have a 2A rating (covers up to 300m²) to cover the 'ordinary fire hazard' and the floor area limitations.

Note 1: *A fire extinguisher for class F fire risks (fires involving cooking oils and fats) should be provided in the kitchen area. As the plans do not currently detail the kitchen facilities, a minimum rating for this extinguisher cannot be determined. An appropriate rating for the proposed facilities should be selected from the available ratings:*

1F (0.07 m^2)
2F
3F
4F (0.5 m^2)

Where the area rating relates to the surface area (pot/pan/tray) to be extinguished.

Note 2: *While not required for compliance, Class A fire extinguishers can assist in dealing with small fires without the need for using a hydrant.*

		General location and height of fire extinguishers and signs Source: AS2444	
		 FIGURE 3.2 MOUNTING HEIGHTS FOR PORTABLE FIRE EXTINGUISHERS AND LOCATION SIGNS	
E1D16	Fire precautions during construction	During construction not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit.	*Note*
E1D17	Provision for special hazards	It is considered that no special hazards exist. This assumes no particularly hazardous chemicals or equipment are intended to be stored in the building.	*Note*

Part E2 Smoke hazard management			
E2D2	Application of part	(1) N/A (2) In addition to the Deemed-to-Satisfy Provisions of E2D3 to E2D13, the following specific Deemed-to-Satisfy Provisions apply to the following Class 6 and Class 9b buildings: (a) **For Class 6 buildings**, in fire compartments **more than 2000 m²**- (i) not containing an enclosed common walkway or mall serving more than one Class 6 sole-occupancy unit - must comply with E2D14; or (ii) containing an enclosed common walkway or mall serving more than one Class 6 sole-occupancy unit - must comply with E2D15. (b) For Class 9b assembly buildings- (i) nightclubs, discotheques and the like - must comply with E2D16; and (ii) exhibition halls - must comply with E2D17; and (iii) theatres and public halls - must comply with E2D18; and (iv) theatres and public halls (not covered by E2D18) including lecture theatres and cinema/auditorium complexes - must comply with E2D19; and (v) other assembly buildings (not listed in (i) to (iv)) excluding schools - must comply with E2D20. (3) The smoke exhaust and smoke-and-heat vent provisions of this Part do not apply to any area not used by occupants for an extended period of time such as a storeroom with a floor area less than 30 m², sanitary compartment, plant room or the like.	*Note* *No requirement*
E2D3	General Requirements	(1) 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, subject to (2), be designed and installed- (a) to operate as a smoke control system in accordance with AS 1668.1; or	*Note* *No Requirement*

		(b) 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. (2) For the purposes of (1), each sole-occupancy unit in a Class 2 or 3 building is treated as a separate fire compartment. (3) Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with these Sections of the Standard. (4) A smoke detection system must be installed in accordance with S20C6 to operate AS 1668.1 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated exits. ***Note 1:*** *The building is one singular fire compartment.*	
E2D4	Fire-isolated exits	(1) A part of a building listed in (2) must be provided with- (a) an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1; or (b) open access ramps or balconies in accordance with D3D6. (2) The requirements of (1) apply to- (a) a required fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp serving- (i) any storey above an effective height of 25 m; or (ii) more than 2 below ground storeys, not counted in the rise in storeys in accordance with C2D3; or (iii) an atrium to which Part G3 applies; or (iv) a Class 9a building with a rise in storeys of more than 2; or	*N/A*

		(v) a Class 9c building with a rise in storeys of more than 2; or (vi) a Class 3 building used as a residential care building with a rise in storeys of more than 2; and (b) a required fire-isolated passageway or fire-isolated ramp with a length of travel more than 60 m to a road or open space. (3) An automatic air pressurisation system for a fire-isolated exit must serve the entire exit.	
E2D9	Buildings not more than 25m in effective height: Class 5, 6, 7b, 8, and 9b buildings	(1) A building not more than 25 m in effective height that- (a) is a Class 5 or 9b school building or part of a building having a rise in storeys of more than 3; or (b) is a Class 6, 7b, 8 or 9b building (other than a school) or part of a building having a rise in storeys of more than 2; or (c) has a rise in storeys of more than 2 and contains- (i) a Class 5 or 9b school part; and (ii) a Class 6, 7b, 8 or 9b (other than a school) part, must meet the requirements of (2). (2) A building referred to in (1) must be provided with- (a) in each required fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp, an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1; or (b) a zone pressurisation system between vertically separated fire compartments in accordance with AS 1668.1, if the building has more than one fire compartment; or (c) an automatic smoke detection and alarm system complying with Specification 20; or (d) a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. (3) For the purposes of (2), vertically separated fire compartments are fire compartments above and below each other, and not fire compartments within the same storey.	*N/A* *Rise of stories is 1; requirements apply at a rise of stories of more than 2*

NSW E2D10	Buildings not more than 25 m in effective height: large isolated buildings subject to C3D4	N/A not a large isolated building	
E2D21	Provision for special hazards	It is not considered that any special functions or uses exist.	*N/A*
Part E4 Visibility in an emergency, exit signs and warning systems			
E4D2	Emergency lighting requirements	Emergency lighting is required in every storey of a Class 6 building with a floor area (of that storey) of more than 300 m^2, and must be located in every passageway, corridor, hallway, or the like, every fire isolated stairway, that is part of the path of travel to an exit.	*Installation required.*
E4D4	Design and operation of emergency lighting	Every required emergency lighting system must comply with AS2293.1 Must comply with this clause where emergency lighting is required by E4D2 above.	*Note*
E4D5	Exit signs	Exit signs must be clearly visible to persons approaching the exit, and must be installed on, above, or adjacent to each door serving as a required exit.	*Note*
NSW E4D6	Direction signs	If an exit is not readily apparent to persons occupying or visiting the building, then exit signs must be installed- (a) in appropriate positions in corridors, hallways, lobbies, foyers, auditoria, and the like, indicating the direction to a required exit; and (b) in a Class 9b building used as an entertainment venue - in any external egress path to a road where the exit does not open directly onto a road. ***Note 1:*** *Consideration should be given to the provision of exit signs in either wing of the building.*	*Note* *See note adjacent*

E4D8	Design and operation of exit signs	Every required exit sign must comply with- (a) AS/NZS 2293.1; or (b) for a photoluminescent exit sign, Specification E4.8; and be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	*Note*

F HEALTH AND AMENITY

Part F1 Surface water management, rising damp

F1D3	Stormwater drainage	Stormwater drainage must comply with AS 3500.3	*Note* *Compliance of drainage is ensured by the builder*
F1D4	Exposed joints	Exposed joints in the drainage surface on a roof, balcony, podium, or similar horizontal surface part of a building must – (a) be protected in accordance with section 2.9 of AS 4654.2; and (b) not be located beneath or run through a planter box, water feature, or similar part of the building.	*Note* *Compliance of drainage is ensured by the builder*
F1D5	External waterproofing membranes	A roof, balcony, podium, or similar horizontal surface part of a building must be provided with a waterproofing membrane – (a) consisting of materials complying with AS4654.1; and (b) Designed and installed in accordance with AS4654.2.	*Note* *Compliance of waterproofing membranes is ensured by the builder*
F1D6	Damp-proofing	Moisture from the ground must be prevented from reaching- (a) the lowest floor timbers and the walls above the lowest floor joists; and (b) the walls above the damp-proof course; and (c) The underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders.	*Note* *Compliance of damp-proofing is ensured by the builder*

F1D7	Damp-proofing of floors on the ground	If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870.	*Note* *Compliance of damp-proofing is ensured by the builder*
F1D8	Subfloor ventilation	(1) Subfloor spaces must (a) Be provided with openings in external walls and internal subfloor walls in accordance with Table F1D8 (below); and (b) Have clearance between the ground surface and the underside of the lowest horizontal member in the subfloor in accordance with Table F1D8. (2) In addition to the above, a subfloor space must – (a) Be cleared of all building debris and vegetation; and (b) Have the ground beneath the suspended floor graded to prevent surface water ponding under the building; and (c) Contain no dead air spaces; and (d) Have openings evenly spaced as far as practicable; and (e) Have openings placed not more than 600mm from corners. (3) In double leaf masonry walls, openings specified in (1) must be provided in both leaves of masonry, with openings being aligned to allow an unobstructed flow of air. (4) Openings in internal subfloor walls specified in (1) must have an unobstructed area equivalent to that required for the adjacent external openings. (5) Where the ground or subfloor space is excessively damp or subject to frequent flooding, in addition to the requirements of (1) to (4)- (a) The subfloor ventilation required in (1) must be increased by 50%; or (b) The ground within the subfloor space must be sealed with an impervious membrane; or (c) Subfloor framing must be appropriate above/below ground durability class 1 or	*N/A – no subfloor; slab on ground*

		2 timbers or H3 or H5 timbers in accordance with AS 1684, or steel. ***Note:*** *The site is located within Climatic zone C.*	

Table F1D8: Subfloor openings and ground clearance

Climatic zone (see Figure F1D8)	Minimum aggregate subfloor ventilation openings without a *membrane* (mm^2/m of wall)	Minimum aggregate subfloor ventilation openings having the ground sealed with an impervious *membrane* (mm^2/m of wall)	Minimum ground clearance height where termite inspection or management system is not required (mm)	Minimum ground clearance height where termite inspection is required (mm) Note 1
A	2000	1000	150	400
B	4000	2000	150	400
C	6000	3000	150	400

Part 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 must – (a) Be water resistant or waterproof in accordance with Spec. 26; and (b) Comply with AS3740 As if they were in a class 2 or 3 building.	*Note* *Wet areas appear to be tiled.*
F2D3	Rooms containing urinals	Where a slab or stall type urinal is installed – (a) The floor surface of the room containing the urinal must be an impervious material; and (i) Where no step is installed, must- (A) Be graded to the urinal channel for a distance of 1.5 m from the urinal channel; and (B) Have the remainder of the floor graded to a floor waste; and (ii) Where a step is installed- (A) The step must have an impervious surface and be graded to the urinal channel; and (B) The floor behind the step must be graded to a floor waste; and (b) The junction between the floor surface and the urinal channel must be impervious. Where a wall hung urinal is installed – (a) The wall must be surfaced with impervious material extending from the floor to not less than 50 mm above the top of the urinal and not less than 225 mm on each side of the urinal; and	*N/A*

		(b) The floor must be surfaced with an impervious material and be graded to a floor waste. In a room with timber or steel-framed walls and containing a urinal- (a) The wall must be surfaced with an impervious material extending from the floor to not less than 100 mm above the floor surface; and (b) The junction of the floor surface and the wall surface must be impervious.	
F2D4	Floor Wastes	Where a floor waste is installed, the continuous fall of a floor plane to the waste must be between 1:50 and 1:80. ***Note**: Only required in residential building classes or by F2D3 above.*	*N/A*
Part F3 Roof and wall cladding			
F3D2	Roof Coverings	Based on drawing A300, the building appears to have a sheet metal roof. Metal sheet roofing must comply with AS 1562.1.	Note *Compliance of roof coverings is ensured by the builder*
F3D3	Sarking	Sarking-type material used for weatherproofing of roofs and walls must comply with AS4200.1 and AS4200.2	*Note* *Compliance of weatherproofing is ensured by the builder*
F3D4	Glazed Assemblies	Windows, glazed (framed) doors, louvres, and windows walls must comply with AS2047 requirements for resistance to water penetration. Where the above glazed assemblies are: (a) Not in an external wall (b) A revolving door (c) Fixed louvres (d) Skylights, or other horizontal windows (e) One-off architectural windows (f) Second-hand, reused windows, and recycled windows.	*Note* *Compliance of windows is ensured by the builder/ manufacturer*

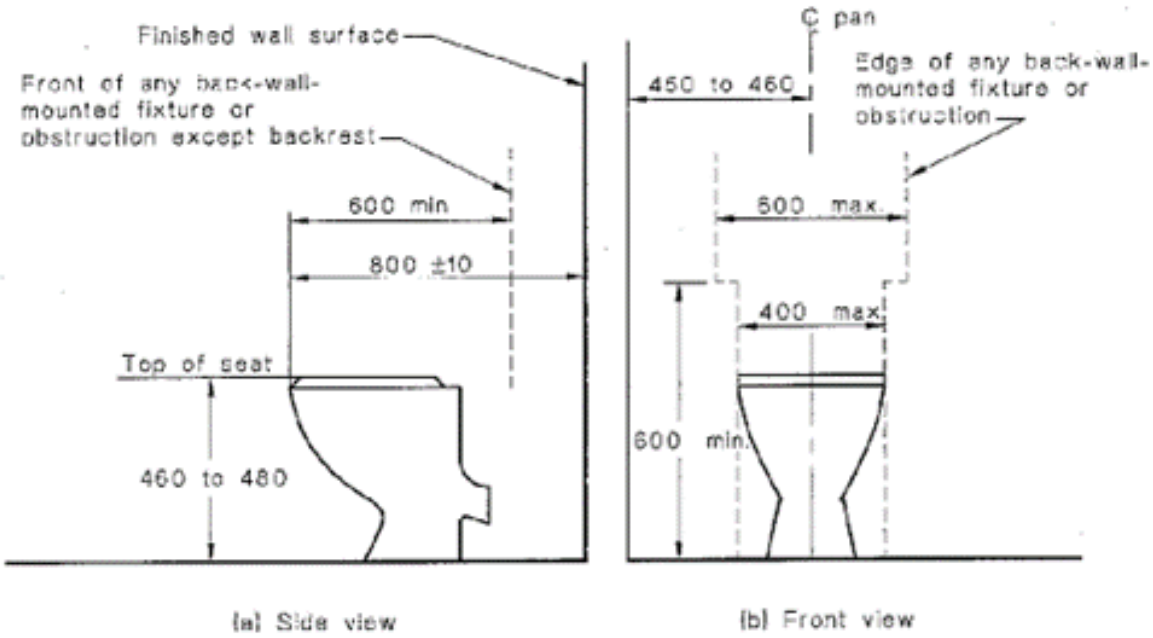
F3D5	Wall Cladding	External wall cladding must comply with one or a combination of the following: (a) Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. (b) Autoclaved aerated concrete: AS 5146.3. (c) Metal wall cladding: AS 1562.1.	Note *Compliance of cladding is ensured by the builder*
Part F4 Sanitary and other facilities			
F4D3	Calculation of number of occupants and	The number of persons accommodated must be calculated according to D2D18 if it cannot be more accurately determined by other means. In the case of this class 6 building, the occupancy rating is less than 600 as assessed by D2D18 (180). ***Note 1:*** *In calculating the number of sanitary facilities to be provided, a unisex facility required for people with a disability may be counted once for each sex.* ***Note 2:*** *Unless the premises are used by predominantly one sex, sanitary facilities must be provided on the basis of equal numbers of males and females*.	*Note*
F4D4	Facilities in Class 3 to 9 buildings	(3) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex. (4) If the majority of employees are of one sex, not more than 2 employees of the other sex may share toilet facilities if the facilities are separated by means of walls, partitions and doors to afford privacy. (5) Employees and the public may share the same facilities in a Class 6 and 9b building (other than a school or early childhood centre) provided the number of facilities provided is not less than the total number of facilities required for employees plus those required for the public. (6) Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by females. (7) Separate sanitary facilities for males and females need not be provided for patients in a ward area of a Class 9a building (8) N/A to this Class of building (9) N/A to this Class of building	Can comply. See notes adjacent.

		(10) N/A to this Class of building (11) Not less than one washbasin must be provided where closet pans or urinals are provided. ***Note 1:*** *The facilities currently provided are:* *1 Unisex accessible sanitary facility* *2 female toilets* *1 male toilet and 3 urinals* *Counting the unisex accessible facility once for each sex, the current facilities account for 150 male patrons and 100 female patrons.* *Based on an even number of male and female patrons, the current facilities can support a maximum occupancy of 200 patrons and employees. The current expected maximum occupancy of the building is calculated at 180.* ***Note 2:*** *Note requirements of F4D5 and unisex accessible and ambulatory cubicle requirements.*	
F4D5	Accessible sanitary facilities	In a building required to be accessible- (a) accessible unisex sanitary compartments must be provided in accessible parts of the building in accordance with F4D6; and (b) accessible unisex showers must be provided in accordance with F4D7; and (**c) 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;** and (d) an accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary products; and (e) the circulation spaces, fixtures and fittings of all accessible sanitary facilities provided in accordance with F4D6 and F4D7 must comply with the requirements of AS 1428.1; and	See Note adjacent – ambulatory facilities required

		(f) an accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and (g) 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; and (h) where male sanitary facilities are provided at a separate location to female sanitary facilities, accessible unisex sanitary facilities are only required at one of those locations; and (i) an accessible unisex sanitary compartment or an accessible unisex shower need not be provided on a storey or level that is not required by D4D4(f) to be provided with a passenger lift or ramp complying with AS 1428.1. ***Note 1:*** *At least one of each of the male and female sanitary facilities are required to be ambulant facilities in accordance with AS1428.1 (F4D5 (c)).*	
F4D6	Accessible unisex sanitary compartments	(1) Where required by F4D5(a), the minimum number of accessible unisex sanitary compartments for each class of building is as follows: (a) N/A applies Class 1b buildings (b) N/A applies Class 2 buildings (c) N/A applies Class 3 and Class 9c buildings **(d) For Class 5, 6, 7, 8 or 9 buildings, where F4D4 requires closet pans-** **(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 compartments, at not less than 50% of those banks.** (e) Class 10a building (2) The requirements of (1)(d) do not apply within a ward area of a Class 9a health-care building. (3) The requirements of (1)(e) do not apply to- (a) a Class 10a appurtenant to another class of building; or (b) a sanitary compartment dedicated to a single caravan/camping site.	*Note* *Accessible facilities are compliant where installed/constructed in accordance with AS 1428.1-2009*

WC Pan clearances- Source AS1428.1-2009

WC pan clearances, including set-out, seat height and seat width shall be as shown in Figure 38.



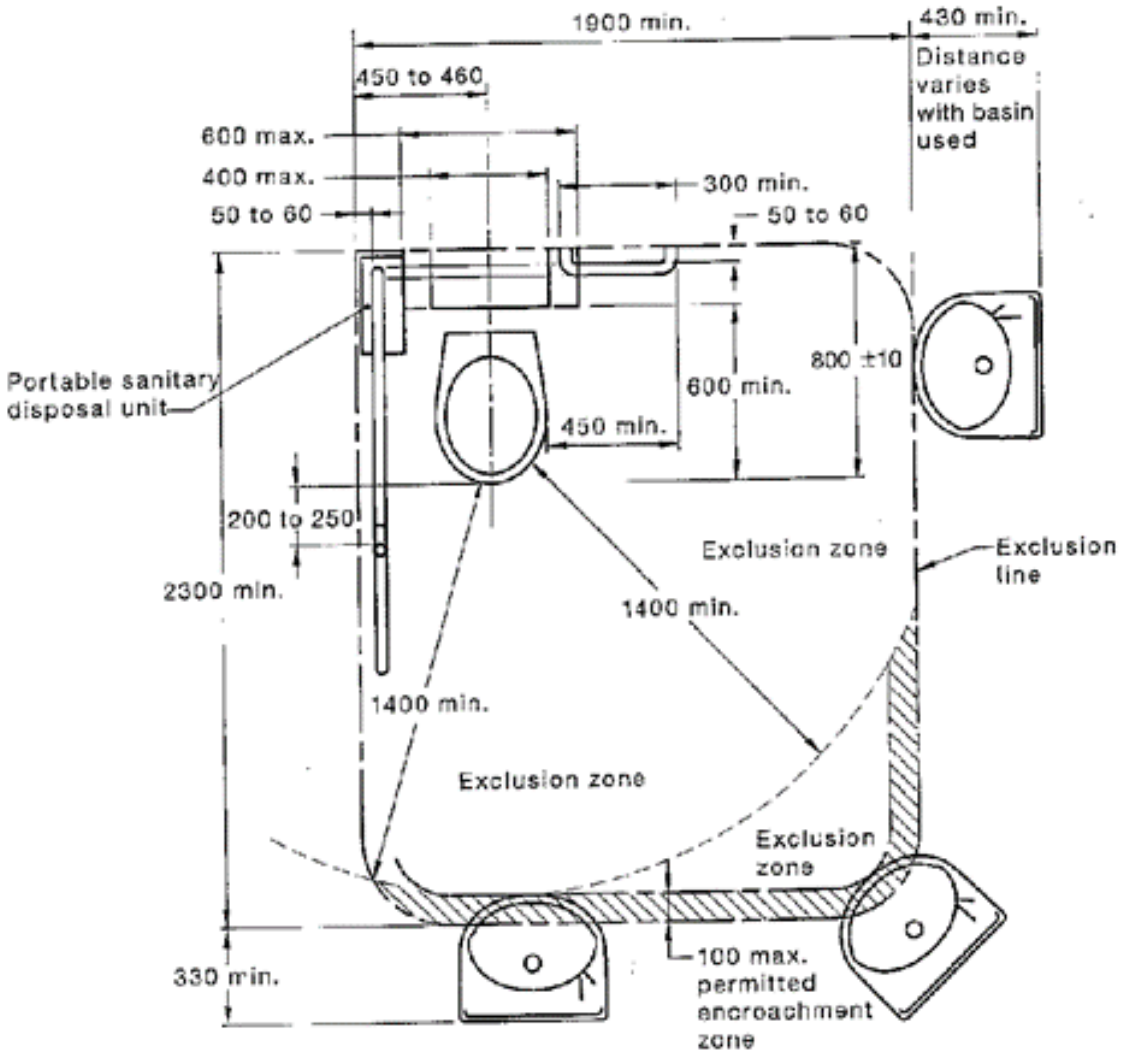
NOTES:

1 For the purpose of dimensioning, the front of the WC pan has been taken as the datum plane.

2 The dimension of 800 ±10 mm from the front of the WC pan to the wall is a critical dimension.

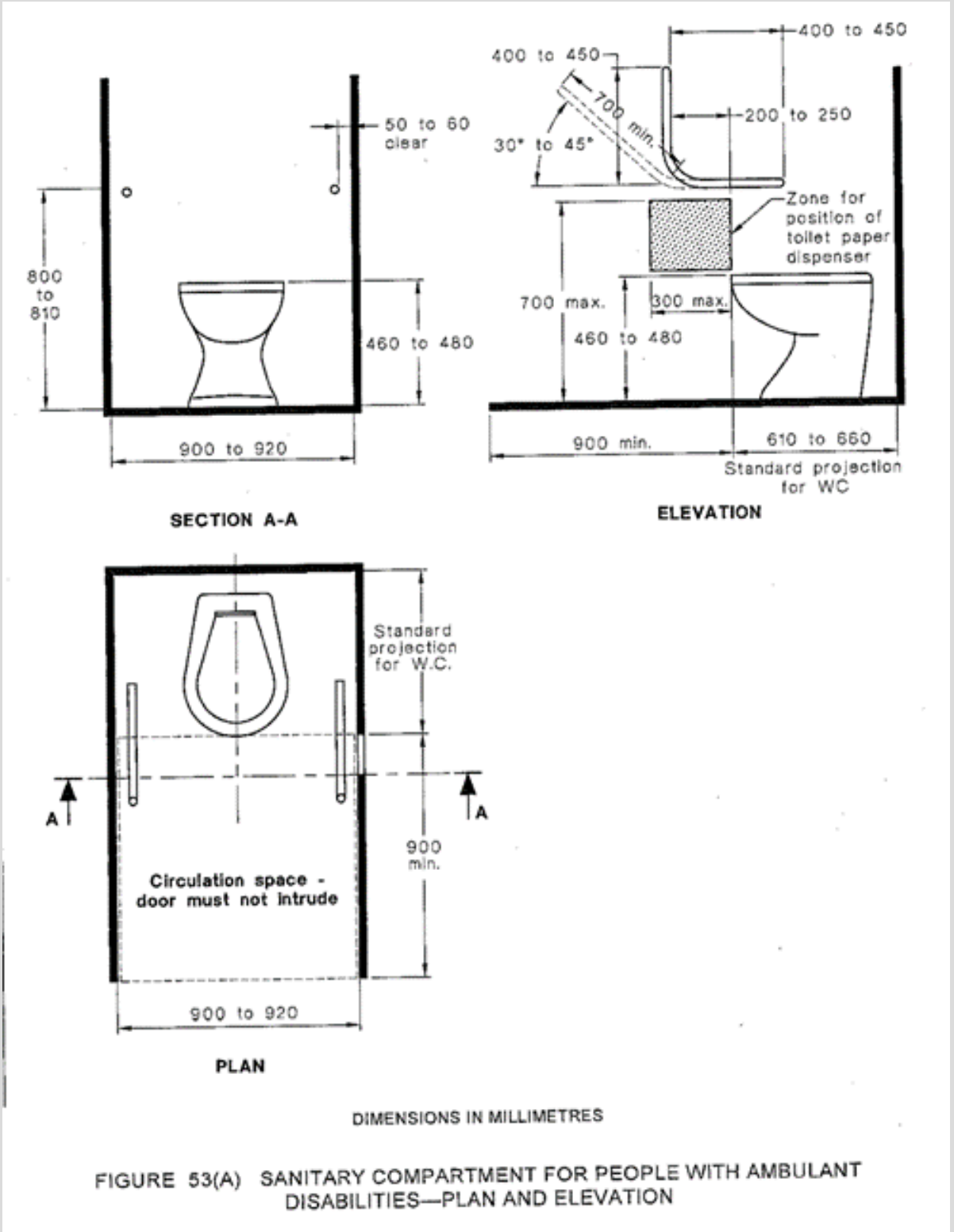
DIMENSIONS IN MILLIMETRES

Circulation space for WC pan- RH transfer (LH transfer is mirror reversed)- Source AS1428.1-2009

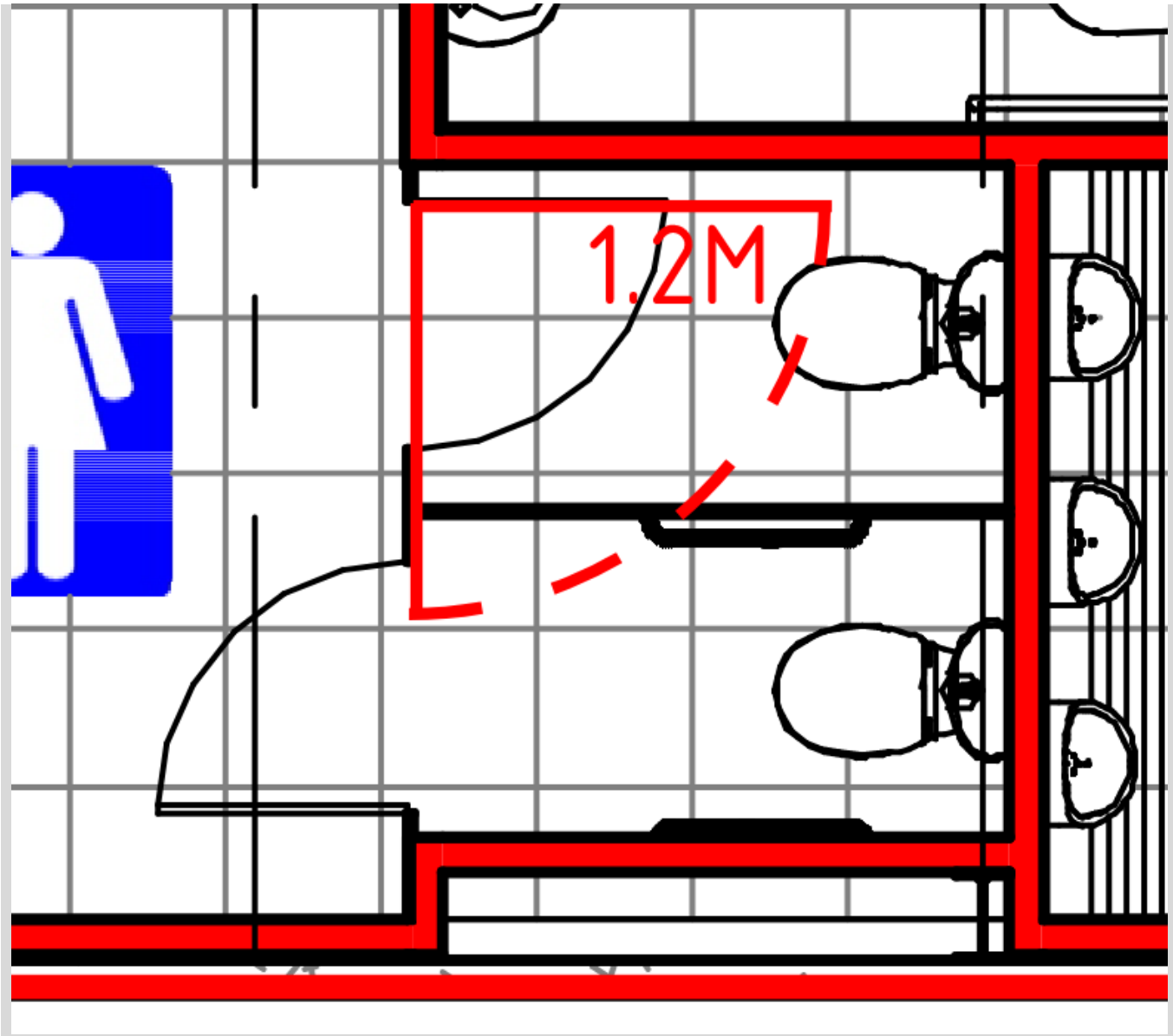


NOTE: This circulation space may overlap any other circulation spaces specified in this Standard.

DIMENSIONS IN MILLIMETRES

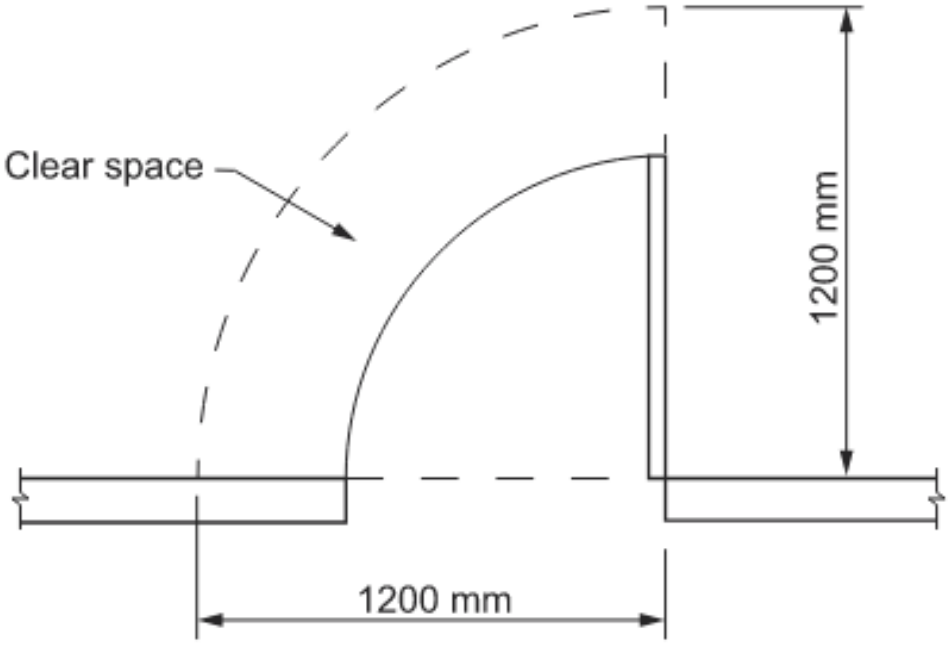
	In addition to the accessible unisex facility there must be provision in each bank of toilets for a male and female ambulant WC  FIGURE 53(A) SANITARY COMPARTMENT FOR PEOPLE WITH AMBULANT DISABILITIES—PLAN AND ELEVATION		
F4D7	Accessible unisex showers	N/A – no requirement.	N/A

F4D8	Construction of sanitary compartments	(1) Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend- (a) from floor level to the ceiling in the case of a unisex facility; or (b) to a height of not less than 1.5 m above the floor if primary school children are the principal users; or (c) 1.8 m above the floor in all other cases. (2) 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. (3) N/A ***Note:*** *It appears as though one of the female toilet stalls does not comply with the clear space requirement (using scaled measurements). Confirmation of compliance with clear space requirements, or implementation of one of the methods in (2) should be implemented to comply.*	*Note* *Confirmation of compliance with clear space should be confirmed*



Female toilet stall – confirmation of compliance required

Figure F4D8: Construction of sanitary compartments



F4D9	Interpretation: urinals and washbasins	(1) A urinal may be- (a) an individual stall or wall-hung urinal; or (b) each 600 mm length of a continuous urinal trough; or (c) a closet pan used in place of a urinal. (2) A washbasin may be- (a) an individual basin; or (b) a part of a hand washing trough served by a single water tap.	*Note*
		Part F5 Room heights	
F5D2	Height of rooms and other spaces	(3) The height of rooms and other spaces in a Class 5, 6, 7 or 8 building must be not less than- (a) except as allowed in (b) and (8) - 2.4 m; and (b) for a corridor, passageway, or the like - 2.1 m. (8) The height of rooms and other spaces in any building must be not be less than- (a) for a bathroom, shower room, sanitary compartment, other than an accessible adult change facility, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like - 2.1 m; and (b) for a commercial kitchen - 2.4 m; and (c) above a stairway, ramp, landing or the like - 2 m measured vertically above the nosing	*Complies based on elevations.*

		line of stairway treads or the floor surface of the ramp, landing or the like; and (d) for a required accessible adult change facility - 2.4 m. ***Note:*** *Elevations show ground floor to ceiling height of 2.7 m.*	
Part F6 Light and ventilation			
F6D2	Provision of natural light	While Class 6 buildings have no requirements for the provision of natural light, when it is provided it can reduce the requirement for artificial lighting to be provided. See F6D5 below.	*N/A*
F6D5	Artificial lighting	Artificial light must be provided in required stairways, passageways, and ramps. If natural light through openings with an aggregate area of 10% the floor area of the room are provided, artificial lighting need not be provided to: (a) All rooms that are frequently occupied (b) all spaces required to be accessible (c) all corridors, lobbies, internal stairways, and other circulation spaces and paths of egress. Where natural light compliant with the above cannot be provided to these spaces, artificial lighting must be provided. The artificial lighting system must comply with AS/NZS 1680.0. The system may provide a lesser level of illumination to the following spaces during times when the level of lighting would be inappropriate for the use: A discotheque, nightclub or the like, where to create an ambience and character for the space, low lighting levels are used.	Note Artificial lighting must comply with AS 1680.0
F6D6	Ventilation of rooms	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 have –	*See F6D7 below*

		(a) Natural ventilation complying with F6D7; or (b) A mechanical ventilation or air-conditioning system complying with AS1668.2 and AS3666.1	
F6D7	Natural ventilation	(1) Natural ventilation provided in accordance with F6D6(a) must consist of openings, windows, doors or other devices which can be opened- (a) with a ventilating area not less than 5% of the floor area of the room required to be ventilated; and (b) open to- (i) a suitably sized court, or space open to the sky; or (ii) an open verandah, carport, or the like; or (iii) an adjoining room in accordance with F6D8. ***Note:*** *Unable to confirm the adequacy of available natural ventilation as compliant. Confirmation that the building has a ventilating area of 5% of it's floor area (approx. 30.5 m^2), or a mechanical ventilation system in compliance with AS1668.2 and AS3666.1 is required.*	*Unable to confirm as compliant.* *See note adjacent.*
F6D8	Ventilation borrowed from adjoining room	Natural ventilation to a room may come through a window, opening, door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same sole-occupancy unit or the enclosed verandah is common property, and- (a) N/A (b) in a Class 5, 6, 7, 8 (except a Class 8 electricity network substation) or 9 building- (i) the window, opening, door or other device has a ventilating area of not less than 10% of the floor area of the room to be ventilated, measured not more than 3.6 m above the floor; and (ii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 10% of the combined floor areas of both rooms; and (c) the ventilating areas specified in (a) and (b) may be reduced as appropriate if direct natural ventilation is provided from another source.	*Note*

F6D9	Restriction on location of sanitary compartments	A sanitary compartment must not open directly into – (a) A kitchen or pantry; or (b) A public dining room or restaurant; or (c) A dormitory in a class 3 building; or (d) A room used for public assembly; or (e) A workplace normally occupied by more than one person. ***Note:*** *The accessible sanitary facility opens directly into a public dining area/restaurant, and will need to be mechanically ventilated or provided with an airlock similar to that provided to the other sanitary facilities.*	*Can Comply – see Note adjacent*
F6D10	Airlocks	If a sanitary compartment is prohibited under F6D9 from opening directly to another room- (a) N/A (b) in a Class 5, 6, 7, 8 or 9 building (which is not an early childhood centre, primary school or open spectator stand)- (i) access must be by an airlock, hallway or other room with a floor area of not less than 1.1 m2 (i) and fitted with self-closing doors at all access doorways; or (ii) the sanitary compartment must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view.	*Note* *Required where mechanical ventilation is not provided to accessible sanitary facility*
F6D12	Kitchen local exhaust ventilation	A commercial kitchen must be provided with a kitchen exhaust hood complying with AS 1668.1 and AS 1668.2 where- (a) any cooking apparatus has- (i) a total maximum electrical power input exceeding 8 kW; or (ii) a total gas power input exceeding 29 MJ/hour; or (b) the total maximum power input to more than one apparatus exceeds, per m2 (b) of floor area of the room or enclosure- (i) 0.5 kW electrical power; or (ii) 1.8 MJ/hour gas. ***Note:*** *Current kitchen facilities are unable to be confirmed. Where a cooking apparatus exceeds the measures above, a kitchen exhaust hood complying with AS 1668.2 is required.*	*Note*

G ANCILLARY PROVISIONS

Part G1 Minor structures and components

G1D3	Refrigerated chambers, strong-rooms and vaults	(1) A refrigerated or cooling chamber, strongroom or vault that is of sufficient size for a person to enter must have- (a) a door which is capable of being opened by hand from inside without a key; and (b) internal lighting controlled only by a switch which is located adjacent to the entrance doorway inside the chamber, strongroom or vault; and (c) an indicator lamp positioned outside the chamber, strongroom or vault which is illuminated when the interior lights required by (b) are switched on; and (d) an alarm that is- (i) located outside but controllable only from within the chamber, strongroom or vault; and (ii) able to achieve a sound pressure level outside the chamber, strongroom or vault of 90 dB(A) when measured 3 m from the sounding device. (2) A door required by (1)(a) in a refrigerated or cooling chamber must have a doorway with a clear width of not less than 600 mm and a clear height not less than 1.5 m	*Note requirements for refrigerated rooms*

Perception Planning Pty Ltd.
PO Box 107,
Clarence Town, NSW, 2321
Phone: 0437 195 264
Email: admin@perceptionplanning.com.au