



BLACKETT
MAGUIRE+
GOLDSMITH

THE NATIONAL CONSTRUCTION CODE
VOLUME ONE

DESIGN DEVELOPMENT REPORT

TOTAL ASSET MANAGEMENT FACILITY
NEPEAN HOSPITAL STAGE 2



Health
Infrastructure

Revision 2

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Project No.: 230086



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REVISION STATUS				
REVISION	DATE	STATUS	PREPARED BY	REVIEWED BY
0	28.02.2022	Schematic Design Report	Adam Durnford	David Blackett
1	18.03.2022	Schematic Design Report – Update based on proposed installation of Sprinklers	Adam Durnford	David Blackett
2	07.11.2023	Design Development Report	Adam Durnford	David Blackett

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Director



A. INTRODUCTION

A.1 BACKGROUND / PROPOSAL

Blackett Maguire + Goldsmith Pty Ltd (BM+G) have been commissioned by Donnelley Construction to undertake a Building Code of Australia (BCA) 2019 Amendment No. 1 assessment of the proposed Total Asset Management (TAM) facility relocation which comprises the construction of a new single storey building located within the grounds of the existing Nepean Hospital Campus between the existing Multi Storey Care Park to the East and the Sexual Health and Court Building to the South.

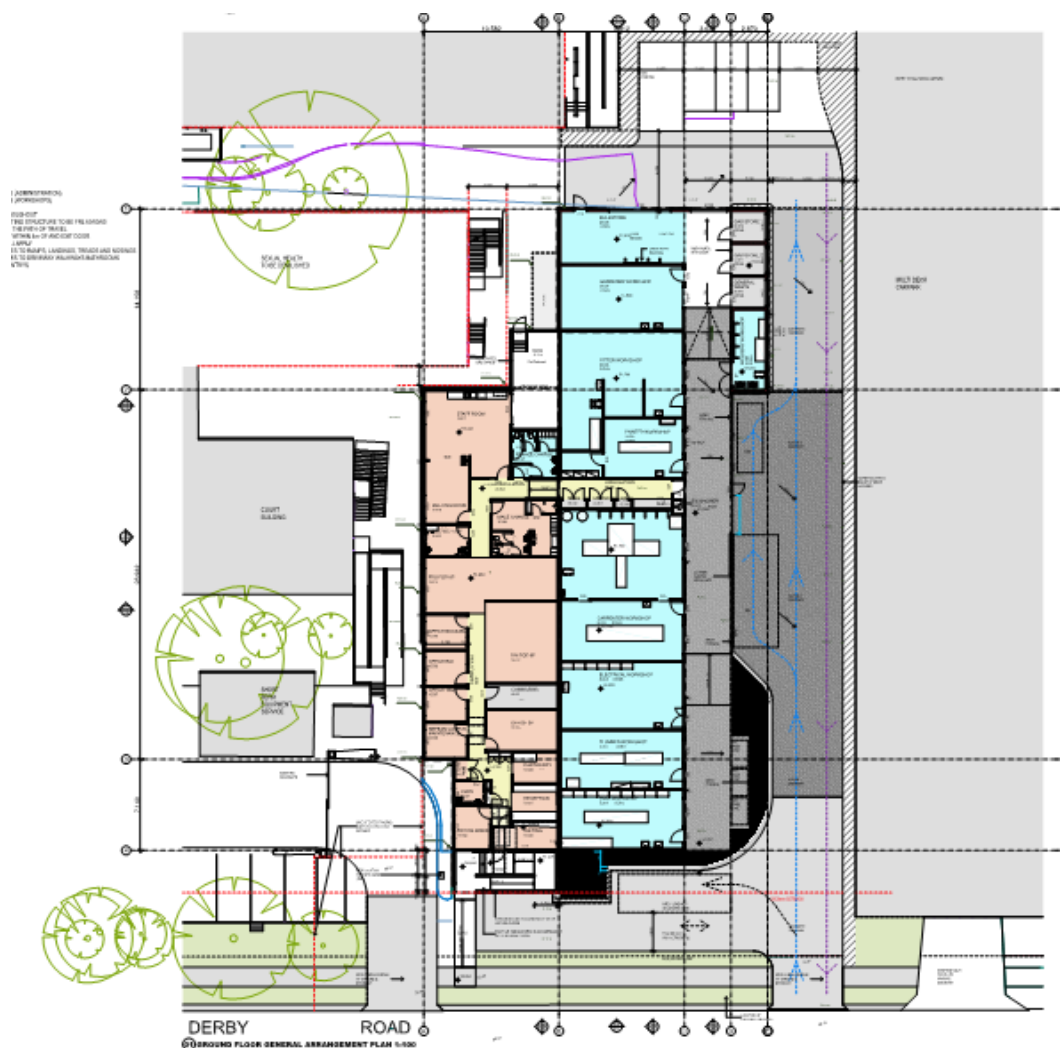


Figure No. 1 – Proposed Total Asset Management Facility to be constructed at Nepean Hospital as part of the Stage 2 Redevelopment

A.2 AIM

The aim of this report is to:

- + Undertake an assessment of the proposed TAM facility against the Deemed-to-Satisfy (DtS) provisions of Part C, D, E, F, G & J of the BCA 2019 Amendment No. 1.
- + Identify any BCA compliance issues that require resolution/attention for the proposed redevelopment.
- + Review the design documentation against the Access to Premises Standards 2010.



A.3 PROJECT TEAM

The following BM+G Team Members have contributed to this Report:

- + Adam Durnford (Associate Director)
- + Innaaya Sampelalong (Cadet Building Surveyor)
- + David Blackett (Director)

A.4 DOCUMENTATION

The following documentation has been reviewed, referenced and/or relied upon in the preparation of this report:

- + Building Code of Australia 2019 Amendment No. 1.
- + Guide to the Building Code of Australia 2019.
- + Access to Premises Standards 2010.
- + 'For Comment' Design Development Architectural Drawings prepared by Fortey & Grant Architecture dated 13 September 2023.

A.5 REGULATORY FRAMEWORK

Pursuant to Section 19 of the Environmental Planning and Assessment (Development Certification and fire Safety) Regulation 2021 all new building work must comply with the current BCA however the existing features of an existing building need not comply with the BCA unless upgrade is required by other clauses of the legislation.

The project is permitted to be designed in accordance with the requirements of BCA 2019 Amendment No. 1 based on the calling of tenders which occurred prior to the adoption of BCA 2002 which came into force on the 1 May 2023.

Notwithstanding the above, confirmation is required from Health Infrastructure that there is no requirement for the building to be designed and constructed in accordance with BCA 2022.

A.6 LIMITATIONS & EXCLUSIONS

The limitations and exclusions of this report are as follows:

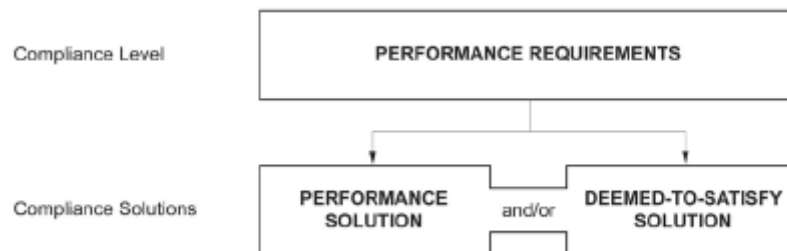
- + The following assessment is based upon a review of the architectural documentation.
- + The Report does not address matters in relation to the following:
 - + Local Government Act and Regulations.
 - + Occupational Health and Safety (OH&S) Act and Regulations.
 - + WorkCover Authority requirements.
 - + Water, drainage, gas, telecommunications, and electricity supply authority requirements.
- + BM+G Pty Ltd do not guarantee acceptance of this report by Local Council, NSW Fire Brigades, or other approval authorities.
- + No part of this document may be reproduced in any form or by any means without written permission from BM+G Pty Ltd. This report is based solely on client instructions, and therefore should not be used by any third party without prior knowledge of such instructions.



A.7 COMPLIANCE WITH THE BCA

The BCA is a performance-based code which contains the 'Performance Requirements' for the construction of buildings. Being a performance-based document, the BCA provides options and flexibility, allowing practitioners to satisfy the Performance Requirements for building by:

- + Developing a Performance Solution; or
- + Complying with Deemed to Satisfy Provisions (known as a DTS Solution); or
- + A combination of the above two options.



This Report has been prepared based on an assessment of the proposed design against the DTS provisions of the BCA and identifies matters which are non-compliance and which BM+G are capable of being subject to a Performance Solution subject to consultation and agreement between all stakeholders.

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

- + Prepare a Performance-Based Design Brief (PBDB) in consultation with the project stakeholders.
- + Undertake analysis using one or more Assessment Methods listed in Clause A2.2(2) of BCA2019[A1]
- + Evaluate the results against the acceptance criteria in the PBDB.
- + Prepare a final Performance Solution Report that:
 - ▲ Identifies the applicable Performance Requirements and DtS departures identified through Clause A2.2 (3) or A2.4 (3) of BCA2019 [A1] as applicable; and
 - ▲ Identifies of all Assessment Methods used; and
 - ▲ Includes details of the steps taken under; and
 - ▲ Confirms that the applicable BCA Performance Requirement(s) are met; and

Stipulates any applicable conditions / limitations required as part of the Performance Solution

A.8 TERMINOLOGY

Building Code of Australia (BCA)

Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and is adopted in New South Wales (NSW) under the provisions of the EPA Act and Regulation. Building regulatory legislation stipulates that compliance with the BCA Performance Requirements must be attained and hence this reveals BCA's performance-based format.

Construction Type

The construction type is a measure of a buildings ability to resist a fire. The minimum type of fire-resisting construction of a building must be that specified in Table C1.1 and Specification C1.1, except as allowed for—



- (i) certain Class 2, 3 or 9c buildings in C1.5; and
- (ii) a Class 4 part of a building located on the top storey in C1.3 (b); and
- (iii) open spectator stands and indoor sports stadiums in C1.7.

Note: Type A construction is the most fire-resistant and Type C the least fire-resistant of the types of construction.

Climatic Zone

Is an area defined in BCA Figure A1.1 and in Table A1.1 for specific locations, having energy efficiency provisions based on a range of similar climatic characteristics.

Deemed to Satisfy Provisions (DtS)

Provisions which are deemed to satisfy the Performance Requirements.

Effective Height

Means the vertical distance between the floor of the lowest storey including the calculation of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).

Fire Resistance Level (FRL)

The grading periods in minutes for the following criteria-

- (a) structural adequacy; and
- (b) integrity; and
- (c) insulation,

and expressed in that order.

Fire Source Feature (FSF)

The far boundary of a road which adjoins the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.

Health-care building –

A building whose occupants or patients undergoing medical treatment generally need physical assistance to evacuate the building during an emergency and includes—

- (a) a public or private hospital; or
- (b) a nursing home or similar facility for sick or disabled persons needing full-time care;
or
- (c) a clinic, day surgery or procedure unit where the effects of the predominant treatment administered involve patients becoming non-ambulatory and requiring supervised medical care on the premises for some time after the treatment.

National Construction Code Series (NCC)

The NCC was introduced 01 May 2011 by the Council of Australian Governments. The BCA Volume One (Class 2 to 9 Buildings) is now referenced as the National Construction Code Series Volume One — BCA.

Occupation Certificate

Building Occupation Approval issued by the Principal Certifying Authority pursuant to Part 4A of the EPA Act 1979.

Open Space

A space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.



Performance Solution

A method of complying with the Performance Requirements other than by a Deemed-to-Satisfy Solution.

Patient care area

a part of a healthcare building normally used for the treatment, care, accommodation, recreation, dining and holding of patients including a ward area and treatment area.

Performance Requirements of the BCA

A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance requirement states the level of performance that a Building Solution must meet.

Compliance with the Performance Requirements can only be achieved by-

- (a) complying with the DtS Provisions; or
- (b) formulating an Alternative Solution which-
 - (i) complies with the Performance Requirements; or
 - (ii) is shown to be at least equivalent to the DtS Provisions; or
- (c) a combination of (a) and (b).

Residential Care Building

Means a Class 3, 9a or 9c building which is a place of residence where 10% or more of persons who reside there need physical assistance in conducting their daily activities and to evacuate the building during an emergency (including any aged care building or residential aged care building) but does not include a hospital.

Sole occupancy Unit (SOU)

A room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes a dwelling.

Treatment area

An area within a patient care area such as an operating theatre and rooms used for recovery, minor procedures, resuscitation, intensive care, and coronary care from which a patient may not be readily moved.

Ward area

That part of a patient care area for resident patients and may contain areas for accommodation, sleeping, associated living and nursing facilities.



B. BUILDING CHARACTERISTICS

B.1 BUILDING CLASSIFICATION

The following table presents a summary of relevant building classification items of the proposed TAM facility to be constructed as part of the Stage 2 Nepean Hospital Redevelopment.

+ BCA Classification:	Class 5 (Administration) Class 8 (Workshops)
+ Storeys Contained	One (1)
+ Rise in Storeys:	One (1)
+ Effective Height:	< 12m
+ Type of Construction:	Type C Construction
+ Sprinkler System Installed Throughout	No
+ Importance Level	Importance Level 2
+ Climate Zone:	Energy Efficiency Zone 6
+ Maximum Floor Area of Fire Compartment:	Max 2,000m ² based on Class 8 classification
+ Maximum Volume:	Max 12,000m ³ based on Class 8 classification
+ Largest Fire Compartment	< 2000 m ²

Table No. 1 – Summary of building classification items



C. SUMMARY OF KEY COMPLIANCE ISSUES

Based on the 'For Comment' Architectural Drawings prepared by Fortey & Grant Architecture, the following is a summary of the key compliance issues identified for the proposed TAM facility.

C.1 SUMMARY OF KEY COMPLIANCE ISSUES:

No.	BCA CLAUSE	DESCRIPTION
1.	B1.2	<p><i>Importance Level</i></p> <p>The new building will be required to be designed and constructed in accordance with the requirements of Importance Level 2 due to the fact that the building does not have a capacity of more than 50 residents (criteria for Importance Level 2) together with the fact that the building is not designed to cater for special post disaster functions (criteria Importance Level 4).</p> <p>Notwithstanding the minimum requirements of the BCA, verification is required to be obtained from Health Infrastructure that the building is not required to be designed in accordance with Importance Level 3.</p>
2.	C1.9	<p><i>External Wall Construction</i></p> <p>Due to the fact that the building is not required to be designed and constructed in accordance with Type A or B Construction, the external walls of the building are not required to the comply with the non-combustibility requirements of Clause C1.9 in terms of the external walls of the building and the components incorporated in them.</p> <p>Furthermore, the design and construction of the external walls are not required to comply with Health Infrastructure Design Guidance Note No. 32 which once again only relates to the buildings of Type A & B Construction.</p> <p>Notwithstanding the above, verification will be required to be provided from the Health Infrastructure that there is not requirement or expectation for the external walls of the building to be designed to comply with Design Guidance No. 32.</p>
3.	C2.2	<p><i>Maximum Size of Fire Compartment</i></p> <p>The maximum size of any fire compartment containing a Class 8 classification constructed of Type C Construction cannot exceed 2,000m² & 12,000m³.</p> <p>The floor area of the building as detailed on the current 'For Comment' Architectural Drawings complies with DtS Provisions of the BCA with the floor area not exceeding 2,000m².</p>
4.	C2.12	<p><i>Dangerous Goods</i></p> <p>A Dangerous Goods Consultant is to provide verification as to whether there is any requirement for any dangerous goods (based on volume of storage) to be fire separated from the remainder of the building by fire rated construction.</p>
5.	C3.2	<p><i>Location of TAM in relation to the existing buildings</i></p> <p>A building of Type C Construction located 3m or more from a fire source feature being a side or rear allotment boundary or another building on the site is not required to have external walls that are fire rated nor have any openings within the external walls of the building that are required to be protected.</p> <p>In this instance it is noted that the proposed TAM facility is located more 3m or more from the existing Court Building and Short-Term Equipment Service Building to the West and</p>



No.	BCA CLAUSE	DESCRIPTION
		<p>the existing Multistorey Car Park to the East along with the proposed CAMHS Building to the North.</p> <p><i>Location of existing Sexual Health, Court and Short-Term Equipment Services Buildings in relation to TAM</i></p> <p>It is understood that the existing Court Building is a maximum two (2) storeys and consist of administration consultation uses which permits it to be constructed of Type C Construction. The Short-Term Equipment Service Building is single storey and is permitted to be constructed of Type C Construction.</p> <p>In this instance, the location of the proposed TAM facility in proximity to the subject existing buildings does not create any non-compliances in terms of exposure to a fire source feature.</p> <p><i>Location of existing Multi Storey Car Park in relation to TAM</i></p> <p>A building of Type A Construction is required to be located a minimum distance of 6m from another building on the allotment in order for there to be deemed no exposure between buildings.</p> <p>In this instance, the external walls of the proposed TAM facility will be required to be located a minimum distance of 6m from the external wall of the multi storey car park to ensure that no non-compliance is created in relation to the multi storey car park.</p> <p>From the 'For Comment' Architectural Drawings reviewed, it appears that the TAM facility has been designed to be located a minimum distance of 6m from the external wall of the existing Multi Storey Car Park.</p> <p><i>Location of proposed CAMHS Building in relation to TAM</i></p> <p>A building of Type B Construction is required to be located a minimum distance of 6m from another building on the allotment in order for there to be deemed no exposure between buildings.</p> <p>In this instance, the external walls of the proposed TAM facility will be required to be located a minimum distance of 6m from the external wall of the proposed CAMHS Building to the north to ensure that no non-compliance is created in relation to the proposed CAMHS Building.</p> <p>From the 'For Comment' Architectural Drawings reviewed, appears that the TAM facility has been designed to be located a minimum distance of 6m from the external wall of the proposed CAMHS Building.</p>
6.	D1.4	<p><i>Egress Travel Distance</i></p> <p>Based on the 'For Comment' Architectural Drawings assessed to date, egress travel distance to a point of choice and to an alternative exit complies with the DtS Provisions of the BCA.</p>
7.	D1.5	<p><i>Egress Travel Distance between Alternative Exits</i></p> <p>Based on the 'For Comment' Architectural Drawings assessed to date, egress travel distance between alternative exits complies with the DtS Provisions of the BCA.</p>
8.	Part D3	<p><i>Access for a Person with a Disability</i></p> <p>Access for a person with a disability will be required to be provided from the allotment boundary to the main entrance and then throughout the building.</p>



No.	BCA CLAUSE	DESCRIPTION
		<p>This Report contains high level comments pertaining to access for a person with a disability. A separate and independent Access Report has been prepared by iAccess.</p>
9.	E1.3	<p><i>Fire Hydrants</i></p> <p>Based on the proposed building having a floor area greater than 500 m2, the building is required to be provided with fire hydrant system designed and installed in accordance with AS 2419.1 – 2005.</p> <p>It is noted that a new a fire hydrant service is proposed to be installed to service the building in accordance with Clause E1.3 and AS 2419.1 – 2005.</p> <p><i>System Performance</i></p> <p>Based on the fact that the building is single storey and has a fire compartment that appears not exceed 1000 m2, the maximum number of fire hydrants that are required to flow simultaneously is 1 in accordance with Table 2.1 of AS 2419.1 – 2005.</p> <p>The Fire Services Consultant will be required to provide design verification that the hydrant system has been designed so 1 hydrant can flow simultaneously in accordance with the requirements of AS 2419.1 – 2005.</p> <p>Note: Verification is required to be provided from the Architect that the total floor area of the building does not exceed 1,000 m2.</p> <p><i>Hydrant Locations</i></p> <p>If external hydrants are installed, they are required to be set back a minimum distance of 10 m from the external walls of the building unless protected by construction having a minimum FRL of 90/90/90 which extends 3m above and 2m beyond the hydrant outlet.</p> <p>If internal fire hydrants are installed, they are required to be positioned within 4m of each of the required exit doors.</p> <p>At present, the Architectural Drawings do not indicate the proposed location of fire hydrants serving the building. The Fire Services Consultant is to verify the location of the fire hydrants serving the building and these are to be identified on the Architectural Drawings.</p> <p><i>Fire Hydrant Booster</i></p> <p>A fire hydrant booster is required to be located in a manner where it is within sight of the main entrance of the building and adjoins a primary vehicular entrance and is situated within 8m of a hardstand access to permit Brigade access.</p> <p>Verification is required as to which existing fire hydrant booster on the hospital site will be relied upon in order to serve the TAM facility.</p> <p>It is noted that it is likely that the hydrant booster relied upon will not be located within sight of the main entrance of the building and thus a non-compliance with AS 2419.1 – 2005 will be created.</p> <p>The provision of a fire hydrant booster not within the sight of the main entrance of the building will be required to be addressed as part of a Fire Engineering Assessment to be undertaken by the appointed Fire Safety Engineer in order to demonstrate compliance with the nominated Performance Requirements of the BCA.</p>
10.	E1.4	<p><i>Fire Hose Reels</i></p> <p>Fire hose reels are required to be installed throughout the building areas in accordance with AS 2441 – 2005.</p>



No.	BCA CLAUSE	DESCRIPTION
		<p>Internal fire hose reels are required to be located as follows:</p> <ul style="list-style-type: none"> + Within 4m of the exit doors leading to open space; or + Adjacent to an internal fire hydrant <p>It is noted that two internal fire hose reels are positioned within 4 m of the required exit doors as indicated on the Architectural Drawings.</p>
11.	E1.5	<p><i>Provision of Sprinklers</i></p> <p>Based on the building classification and the rise in storeys of the building, the building is not required to be provided with an Automatic Fire Suppression System in accordance with Clause E.1.5 and Clause E2.2a.</p> <p>Furthermore, it is noted that Health Infrastructure have provided written confirmation that the sprinklers are not required to be installed within the building in accordance with the Health Infrastructure Services Guidelines.</p>
12.	E2.2	<p><i>Automatic Fire Detection & Alarm System</i></p> <p>Based on the building classification and the rise in storeys of the building, the building is not required to be provided with an Automatic Fire Detection & Alarm System in accordance with Clause E2.2a.</p> <p>Notwithstanding the requirements of the BCA, it understood that an Automatic Fire Detection & Alarm System is proposed to be installed throughout the building at the direction of HI / LHD.</p>
13.	F1.0	<p>Performance Requirement FP1.4 relating to the prevention of water through the external is required to be demonstrated as being complied. There is no specific DtS Clause for this Performance Requirement in respect of external walls.</p> <p>In this instance a Performance Solution Report is required to be prepared to demonstrate that the external wall and roof weatherproofing system meets Performance Requirement FP1.4 and will prevent the penetration of water through the external walls.</p>
14.	F2.3	<p>The 'For Comment' Architectural Drawings detail the provision of two (2) female water closets and two (2) male water closets (and two (2) urinals) with one (1) unisex accessible sanitary facility.</p> <p>Based on the sanitary facilities provided, a total of 45 female and 50 male staff can be accommodated within the building.</p> <p>Verification will be required to be provided from the LHD that the total male and female staff within the building at any one time do not exceed 45 female and 50 male staff.</p>
15.	F2.4	<p><i>Accessible Sanitary Facilities</i></p> <p>Facilities for a person with a disability will be required to be throughout the building in accordance with the below.</p> <p>In this instance the following sanitary facilities are required to be provided:</p> <ul style="list-style-type: none"> + One (1) unisex accessible sanitary facility for staff + One (1) unisex ambulant sanitary facility for male staff within the male change room + One (1) unisex accessible sanitary facility for female staff within the female change room <p>The Architectural Drawings indicate the required provision of sanitary facilities for a person with a disability.</p>



No.	BCA CLAUSE	DESCRIPTION
16.	Section J	<p>The energy efficiency provisions of Section J are applicable to the proposed building.</p> <p>In this regard Parts J1 - Building Fabric, J2, Part J3 - Building Sealing, Part J5 - Air Conditioning and Mechanical Ventilation, Part J6 - Artificial Lighting and Power, and Part J7 - Hot water supply & Part J8 – Access for Maintenance is required to be provided.</p> <p>If the proposed design will not comply with the DtS provisions of the BCA, then a JV3 Assessment will be required to be undertaken to demonstrate compliance with the Performance Requirements of the BCA.</p> <p>It is understood that a JV3 Assessment will be undertaken to demonstrate compliance with the Performance Requirements of the BCA.</p>

Table No. 2 – Summary of key compliance items

C.2 SUMMARY OF ITEMS REQUIRING A FIRE ENGINEERING PERFORMANCE SOLUTION:

No.	DtS CLAUSE	BCA PERFORMANCE REQUIREMENT	DtS DEPARTMENT
1.	E1.3	EP1.3	Location of fire hydrant booster not within sight of the main entrance of the building and adjacent to vehicular entry point

Table No. 3 – Summary of required non compliances to be addressed via a Fire Engineering Assessment

The FER process must include input from the LHD and HI, being key stakeholders in the delivery and operation of the hospital project.

C.3 SUMMARY OF ITEMS REQUIRING A PERFORMANCE SOLUTION:

No.	DtS CLAUSE	BCA PERFORMANCE REQUIREMENT	DtS DEPARTMENT
1.	F1.0	FP1.4	Weatherproofing of roof and external wall

Table No. 4 – Summary of required non compliances to be addressed via a Performance Solution



D. BCA ASSESSMENT

C.1 BCA DEEMED-TO-SATISFY COMPLIANCE ISSUES:

The following assessment has been made in relation to the relevant BCA compliance issues associated with the proposed TAM Facility at Nepean Hospital as part of the Stage 2 Development

SECTION B – STRUCTURE

PART B1 – STRUCTURAL PROVISIONS

1. Part B1 – Structural Provisions

Structural engineering details prepared by an appropriately qualified Chartered Professional Structural Engineer listed on the NER Register is to be provided to demonstrate compliance with Part B1. This will include the following Australian Standards (where relevant):

1. AS 1170.0 – 2002 General Principles
2. AS 1170.1 – 2002, including certification for balustrading (dead and live loads)
3. AS 1170.2 – 2002, Wind loads
4. AS 1170.4 – 2007, Earthquake loads
5. AS 3700 – 2018, Masonry code
6. AS 3600 – 2018, Concrete code
7. AS 4100 – 1998, Steel Structures and/or
8. AS 4600 – 2005, Cold formed steel.
9. AS 2047 – 1999, Windows in buildings.
10. AS 1288 – 2006, Glass in buildings

Importance Level

The new building will be required to be designed and constructed in accordance with the requirements of Importance Level 2 due to the fact that the building does not have a capacity of more than 50 residents (criteria for Importance Level 3) together with the fact that the building is not designed to cater for special post disaster functions (criteria Importance Level 4).

Notwithstanding the minimum requirements of the BCA, verification is required to be obtained from Health Infrastructure that the building is not required to be designed in accordance with Importance Level 3.

SECTION C – FIRE RESISTANCE

PART C1 – FIRE RESISTANCE AND STABILITY

2. Clause C1.1 – Type of Construction Required

The new building elements will be required to be constructed in accordance with the FRL's detailed in Table 5 of Specification C1.1 for Type C Construction (refer to table below).

TYPE C CONSTRUCTION	
BUILDING ELEMENT	CLASS 5 & 8
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is –	
less than 1.5m	
1.5m to less than 3m	90/90/90
3m or more	60/60/60



	-/-/-
EXTERNAL COLUMNS not incorporated in an external wall, where the distance from any fire source feature to which it is exposed is –	
Less than 1.5m	90/-/-
1.5m to less than 3m	60/-/-
3m or more	-/-/-
COMMON WALLS & FIRE WALLS	90/90/90
ROOFS	-/-/-

Table No. 5 – Required FRL's for building elements

3. Clause C1.2 – Calculation of Rise in Storeys

The building has a calculated rise in storeys of one (1).

4. Clause C1.9 – Non-Combustible Building Elements

Due to the fact that the building is not required to be designed and constructed in accordance with Type A or B Construction, the external walls of the building are not required to comply with the non-combustibility requirements of Clause C1.9 in terms of the external walls of the building and the components incorporated in them.

Furthermore, the design and construction of the external walls are not required to comply with Health Infrastructure Design Guidance Note No. 32 which once again only relates to the buildings of Type A & B Construction.

Notwithstanding the above, verification will be required to be provided from the Health Infrastructure that there is no requirement or expectation for the external walls of the building to be designed to comply with Design Guidance No. 32.

In this instance any proposed panels to be used on the external walls of the building will be required to comply with the requirements of Clause C1.9 i.e. single piece of pre-finished metal sheeting having a combustible surface finish not exceeding 1mm thickness and where the Spread of Flame Index of the product is not greater than 0.

Note: No form of Aluminium Composite Panel can be installed on the external façade of the building.

5. Clause C1.10 – Fire Hazard Properties

The fire hazard properties of all new building materials and assemblies as well as all new floor materials, floor coverings, wall and ceiling lining materials used in the development must comply with the requirements of Specification C1.10 of the BCA.

In accordance with Specification C1.10, we note the following requirements:

Non- Sprinkler Protected Building

Critical Radiant Flux of Floor Materials and Floor Coverings

- + All areas – not less than 2.2 kW/m²

Wall and Ceiling Lining Materials – Group Number

- + Public Corridor – Group 1 or 2
- + Other Areas – Group 1, 2 or 3

Material test data sheets will need to be submitted for further assessment to ensure compliance with the above.



PART C2 – COMPARTMENTATION AND SEPARATION

6. Clause C2.2 – General Floor Area and Volume Limitations

The maximum size of any fire compartment containing a Class 8 classification constructed of Type C Construction cannot exceed 2,000m² & 12,000m³.

The floor area of the building as detailed on the current 'For Comment' Architectural Drawings complies with DtS Provisions of the BCA with the floor area not exceeding 2,000m².

7. Clause C2.8 – Separation of Classifications in the same Storey

The building is noted as containing Class 5 (Administration areas) and Class 8 (Workshop areas) located within the same storey.

In accordance with Clause C2.8, the separate classifications are required to be separated by a fire wall or alternatively the higher FRL is to be adopted throughout the storey.

In this instance and having regard to the fact that in accordance with Table 5 of Specification C1.1 a Class 5 and Class 8 classification within a building of Type C Construction are required to be constructed of the same FRLs, there is no requirement for separation of classifications.

8. Clause C2.12 – Separation of Equipment

Any of the following equipment must be fire rated with a fire resistance level of 120/120/120 and any doorway to have an FRL of not less than --/120/30:

- + Emergency generators used to sustain emergency equipment operating in the emergency mode.
- + Boilers where the water is boiled to greater than 100 degrees Celsius.
- + A battery system installed in the building that has a total voltage of 12 volts or more and a storey capacity of 200 kWh or more.

Dangerous Goods

A Dangerous Goods Consultant is to provide verification as to whether there is any requirement for any dangerous goods (based on volume of storage) to be fire separated from the remainder of the building by fire rated construction.

9. C2.13 – Electricity Supply System

Any proposed Main Switch Room is required to be fire separated from the internal parts of the building by construction achieving a minimum FRL of 120/120/120.

PART C3 – PROTECTION OF OPENINGS

10. Clause C3.2 – Protection of Openings in External Walls

Location of TAM in relation to the existing buildings

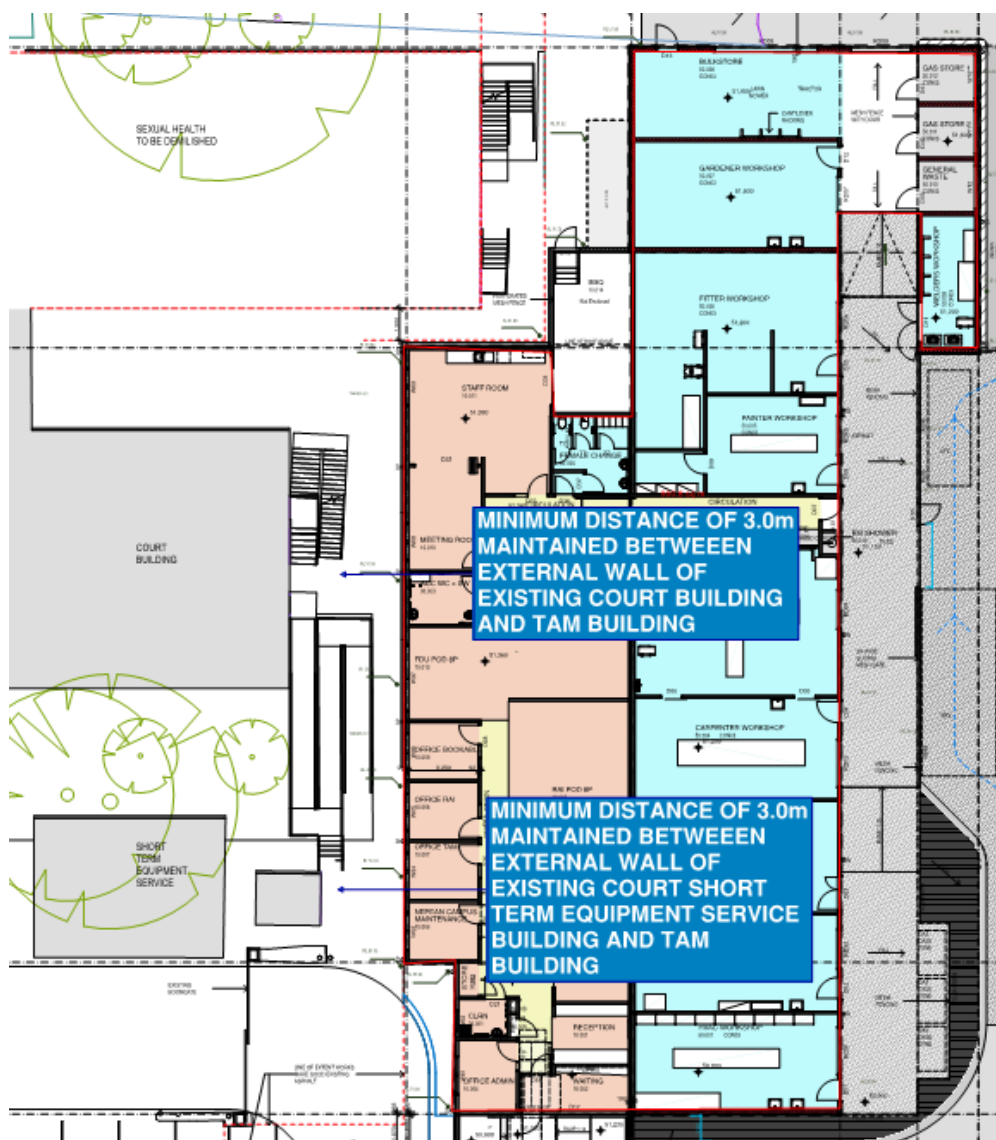
A building of Type C Construction located 3m or more from a fire source feature being a side or rear allotment boundary or another building on the site is not required to have external walls that are fire rated nor have any openings within the external walls of the building that are required to be protected.

In this instance it is noted that the proposed TAM facility is located more 3m or more from the existing Court Building and Short-Term Equipment Service Building to the West and the existing Multistorey Car Park to the East along with the proposed CAMHS Building to the North.

Location of existing Court and Short-Term Equipment Services Buildings in relation to TAM

It is understood that the existing Court Building is a maximum two (2) storeys and consist of administration consultation uses which permits it to be constructed of Type C Construction. The Short-Term Equipment Service Building is single storey and is permitted to be constructed of Type C Construction.

In this instance, the location of the proposed TAM facility in proximity to the subject existing buildings does not create any non-compliances in terms of exposure to a fire source feature.



Location of existing Multi Storey Car Park in relation to TAM

In this instance, the external walls of the proposed TAM facility will be required to be located a minimum distance of 6m from the external wall of the multi storey car park to ensure that no non-compliance is created in relation to the multi storey car park.

From the 'For Comment' Architectural Drawings reviewed, it appears that the TAM facility has been designed to be located a minimum distance of 6m from the external wall of the existing Multi Storey Car Park.

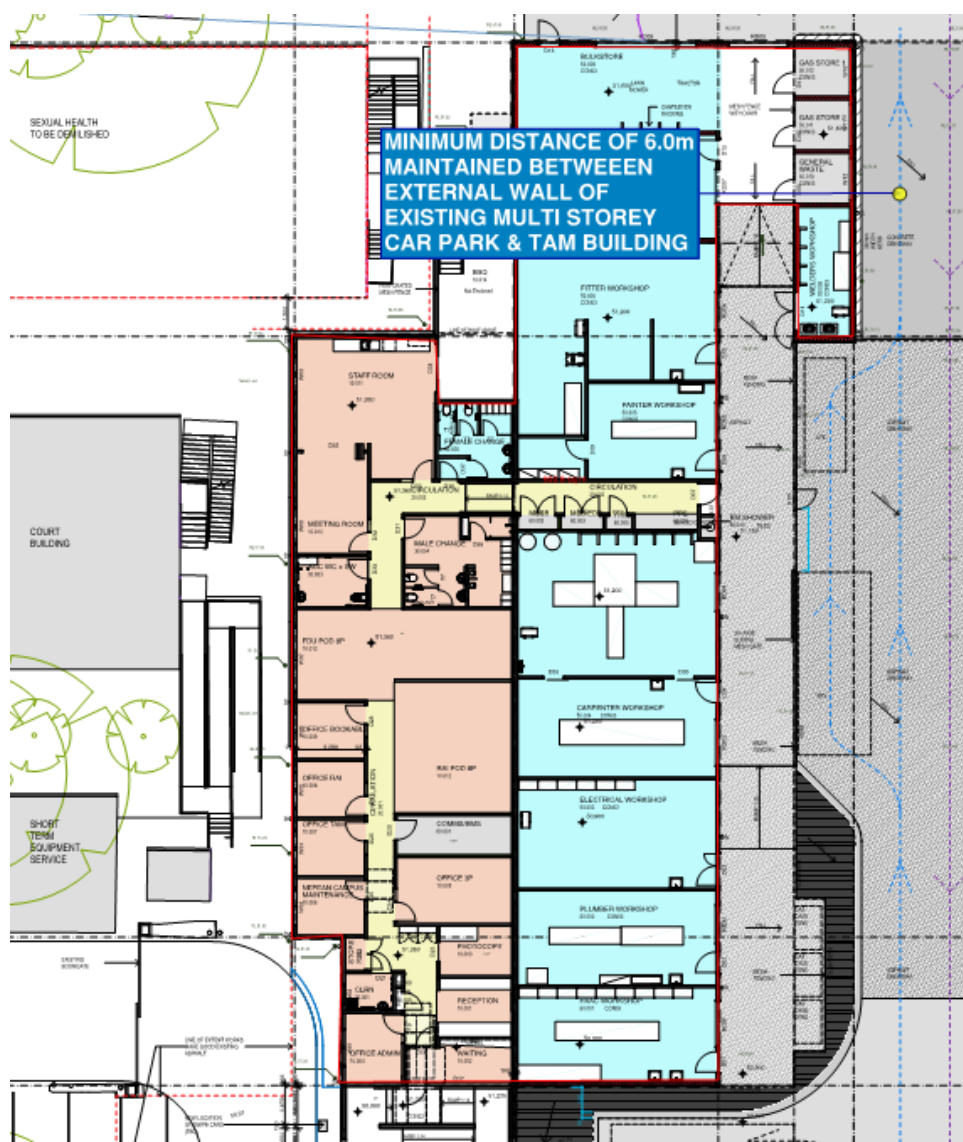


Figure No. 3 – Location of TAM facility in relation to existing multi storey car park to the east

Location of proposed CAMHS Building in relation to TAM

A building of Type B Construction is required to be located a minimum distance of 6m from another building on the allotment in order for there to be deemed no exposure between buildings.

In this instance, the external walls of the proposed TAM facility will be required to be located a minimum distance of 6m from the external wall of the proposed CAMHS Building to the north to ensure that no non-compliance is created in relation to the proposed CAMHS Building.

From the 'For Comment' Architectural Drawings reviewed, appears that the TAM facility has been designed to be located a minimum distance of 6m from the external wall of the proposed CAMHS Building.

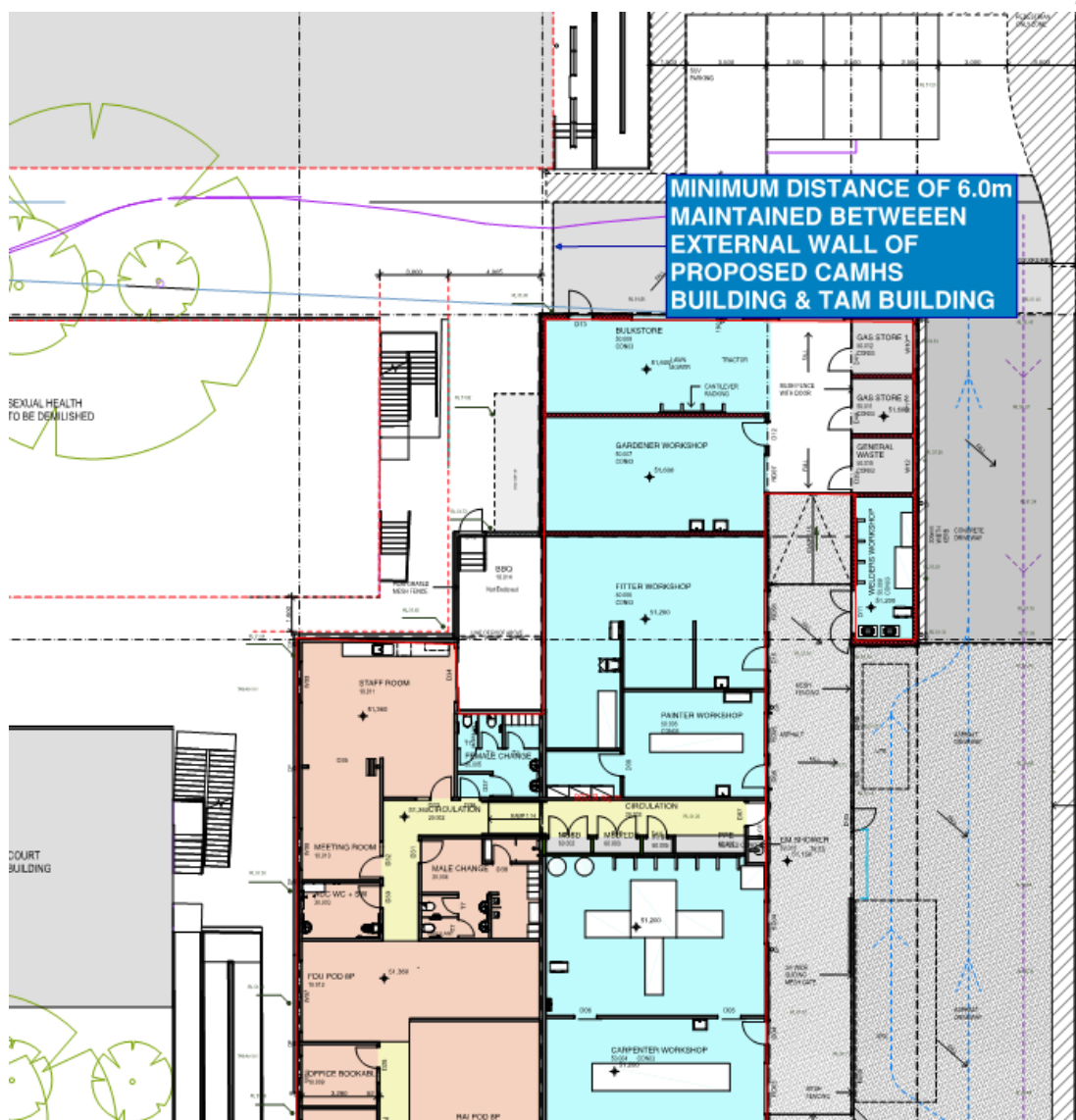


Figure No. 4 – Location of TAM facility in relation to the proposed CAMHS Building

SECTION D - ACCESS & EGRESS

PART D1 – PROVISION FOR ESCAPE

11. Clause D1.2 – Number of Exits Required

The minimum number of exits has been provided from the building.

12. Clause D1.4 – Exit Travel Distances

Egress travel distance from all parts of the building is permitted to extend up to 20 m to a point of choice and a maximum distance of 40 m to an alternative exit.

Based on the 'For Comment' Architectural Drawings assessed to date, egress travel distance to a point of choice and to an alternative exit complies with the DtS Provisions of the BCA.

The figure below details the required exit doors that have been relied upon from the building.

Note: Egress travel distance has been measured to open space beyond the roof covering above.

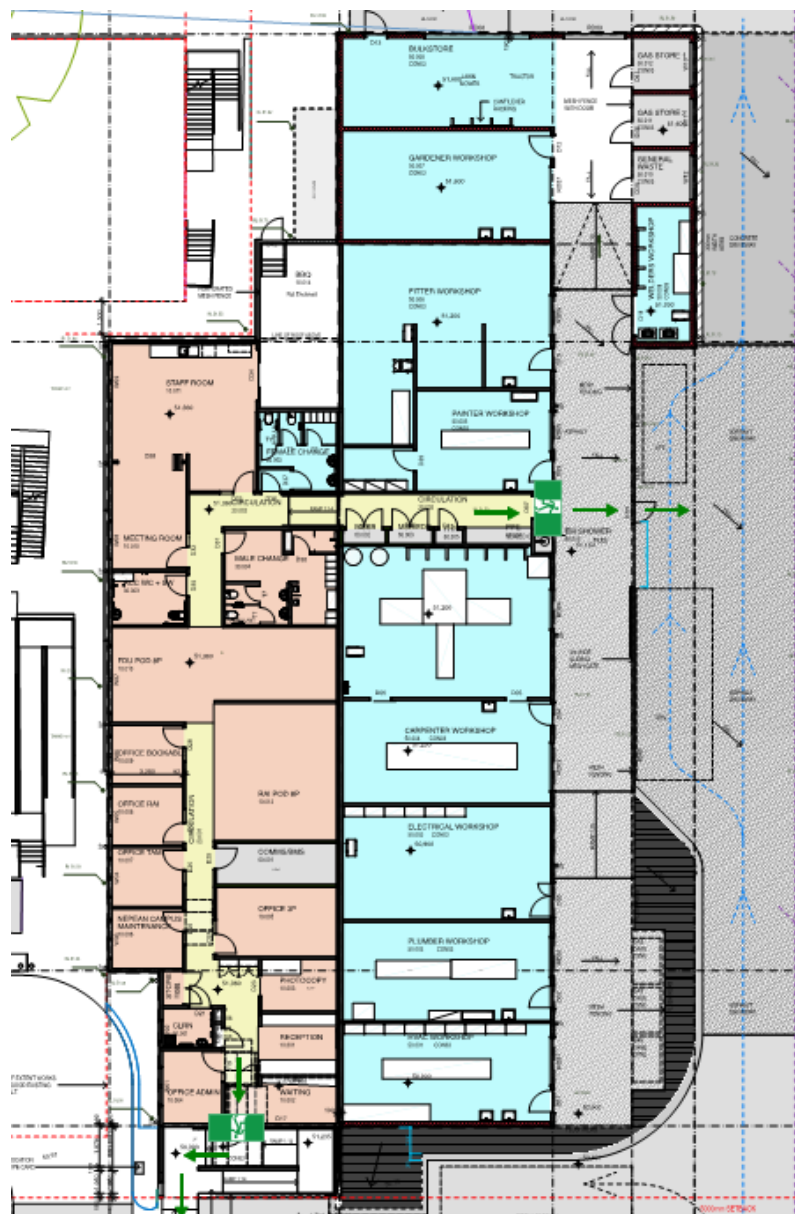


Figure No. 5 – Required exit doors from the building

13. Clause D1.5 – Distances Between Alternative Exits

The maximum travel distance between alternative exits is permitted to be up to 60 m.

Based on the 'For Comment' Architectural Drawings assessed to date, egress travel distance measured between exits back through the point of choice complies with the DTS Provisions of the BCA.

14. Clause D1.6 – Dimensions of Exits

The unobstructed height throughout all corridors leading to an exit cannot be less than 2100 mm except for doorways which may be reduced to not less than 1980 mm.

The unobstructed width of all paths of travel leading to an exit and forming part of an exit must not be less than 1000 mm.

All doorways are to achieve an unobstructed width of not less than 850 mm.



15. Clause D1.10 – Discharge from Exits

An exit cannot be blocked at the point of discharge and where necessary suitable barriers are to be installed to prevent vehicles blocking the exit i.e., installation of bollards.

PART D2 – CONSTRUCTION OF EXITS

16. Clause D2.7 – Installations in Exits & Paths of Travel

Any electrical meters, distribution boards or ducts, central communications distribution boards or equipment or electrical motors located within the corridors are to be smoke sealed and enclosed within non-combustible construction with any penetrations smoke sealed.

Note: The smoke sealing is required of any penetrations located between floor and ceiling level.

Gas and other fuel services must not be located within a required exit.

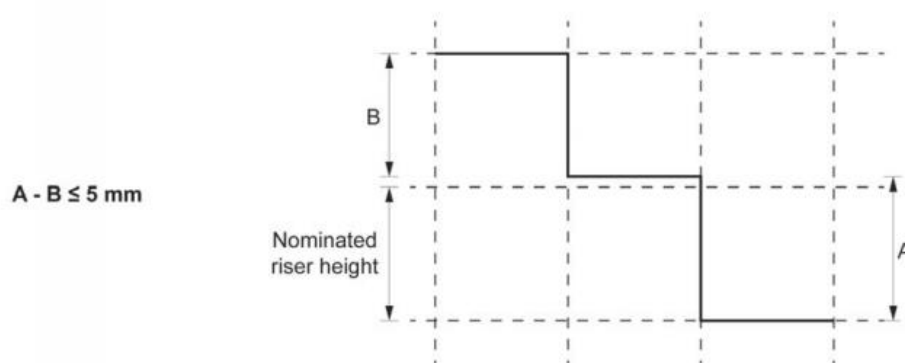
17. Clause D2.13 – Goings & Risers

In relation to the construction of stairways we note the following:

- + Stairway must have not more than 18 and not less than 2 risers in each flight.
- + Goings and risers within the stair flights must be constant throughout.
- + Goings and risers are to be in accordance with the following dimensions.

Riser and Going Dimensions (mm)			
	Riser (R)	Going (G)	Quantity (2R + G)
Maximum	190	355	700
Minimum	115	250	550

Table No. 6 – Riser and going dimensions for stairways



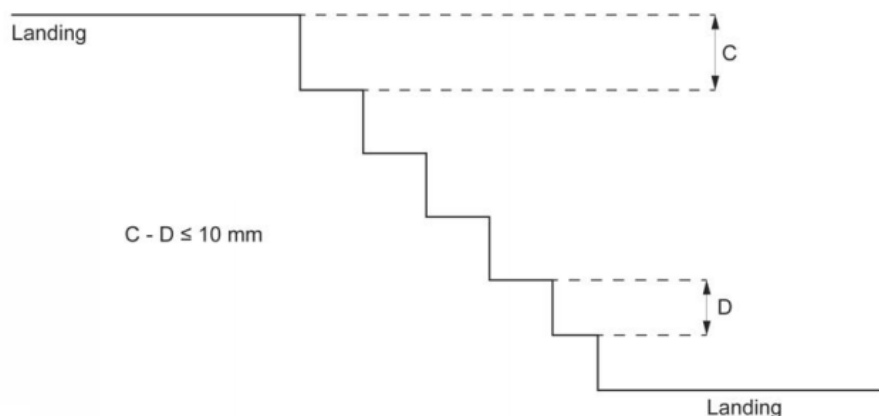
Notes:

1. A = larger riser of two adjacent risers.
2. B = smaller riser of two adjacent risers.
3. This figure only shows deviations in risers, however the same principle can apply for goings.

Figure No. 6 – Permitted deviations in adjacent stair risers



Figure D2.13(2) Deviations over a flight



Notes:

1. C = largest riser of the flight.
2. D = smallest riser of the flight.
3. This diagram only shows deviations in risers, however the same principle can apply for goings.

Figure No. 7 – Permitted deviations over a stair flight

- + The stair treads are required to be provided with the following:
 - + Have a surface with a slip resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or
 - + Be provided with a nosing strip with a slip resistance classification not less than that detailed in Table D2.14 when tested in accordance with AS 4586.
- + Each stairway is to be provided with a contrast strip to the nosing in accordance with AS1428.1-2009.

18. Clause D2.14 – Landings

Landings are required to be provided at the top and bottom of all stairways. Landings are required to have a maximum gradient of 1:50 and be not less than 750 mm long.

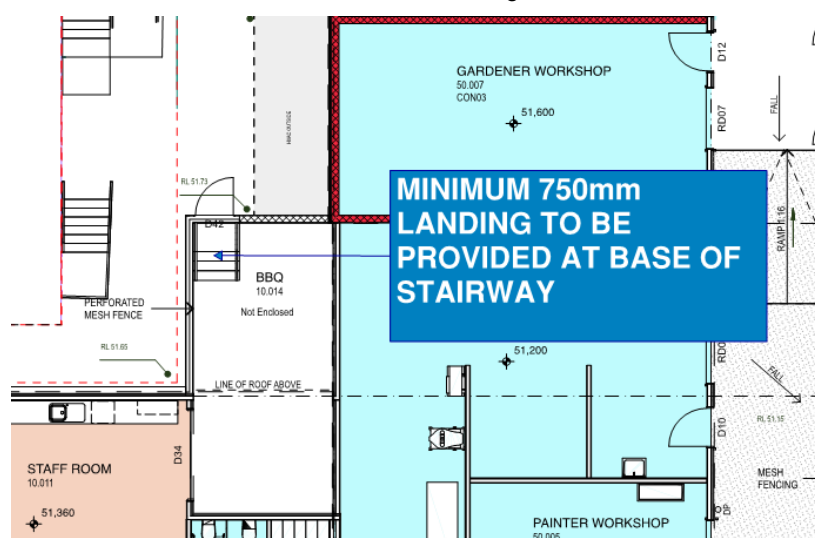


Figure No. 8 – Minimum landing required to stairway leading from the BBQ area



Furthermore, the stair landings must:

- + A surface with a slip resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or
- + 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

The stairway provided at the front of the building will be required to be designed in accordance with the above.

Table D2.14 Slip Resistance Classification

Application	Surface Conditions	
	Dry	Wet
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

Table No. 7 – Minimum slip resistance ratings required to stairs and ramps

In addition to the slip resistance ratings detailed within the table, the following slip resistance ratings are required throughout the building:

Location	Minimum Slip Resistance
Internal Driveway	P4 or R11
External walkways etc	P4 or R11
Bathrooms and Change Rooms	P3 or R10
Administration Areas	P2 or R9
Workshops	P4 or R11
Building Entry (wet area)	P3 or R10
Building Entry (transitional area)	P3 or R10
Building Entry (dry area)	P2 or R9

Table No. 8 – Minimum slip resistance ratings required to specific areas throughout the hospital



19. Clause D2.15 – Thresholds

No steps can be located within the internal or external door thresholds.

Where there are any steps within external door thresholds, a threshold or step ramp is required to be installed in accordance with Clause 10 of AS 1428.1.

Threshold ramps

Threshold ramps are required to be constructed in accordance with the following:

- + Maximum rise of 35 mm
- + Maximum length of 280 mm
- + Maximum gradient of 1:8
- + Be located within 20 mm of the door leaf it serves

Where the threshold ramp does not abut a wall, the edges of the threshold ramp are required to be tapered or splayed at a minimum of 45°.

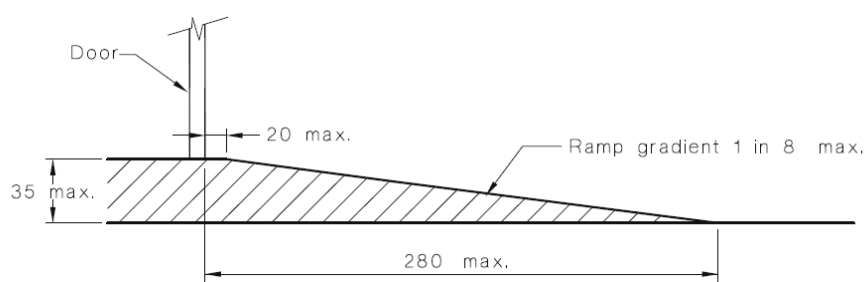


Figure No. 9 – Threshold ramp dimensions

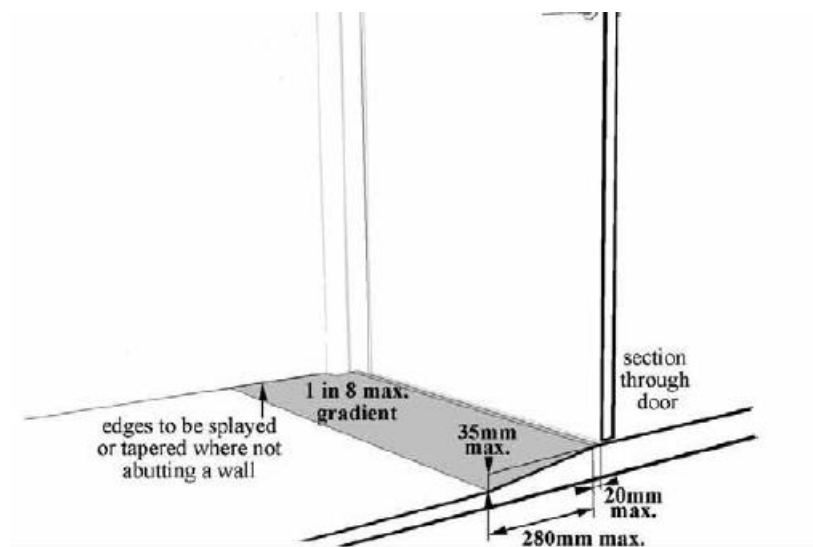


Figure No. 10 – Threshold Ramp

Step ramps

Step ramps are required to be constructed in accordance with the following:

- + Maximum rise of 190 mm
- + Maximum length of 1900 mm
- + Maximum gradient of 1:10
- + Be located within 20 mm of the door leaf it serves

The edges of a step ramp are required to have a 45° degree splay where there is pedestrian cross traffic, otherwise the step ramp will be required to be protected by a suitable barrier as detailed in figures below.

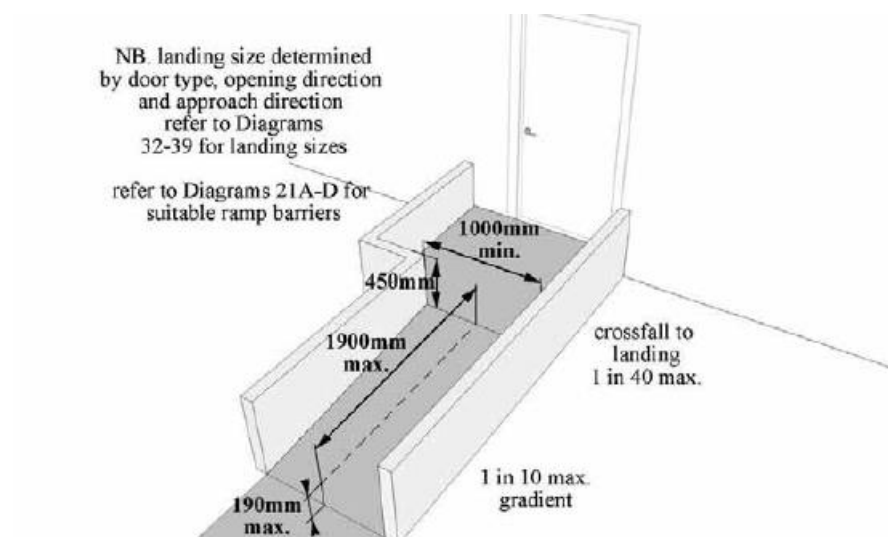


Figure No. 11 - Step Ramp at External Doorway – Front Approach

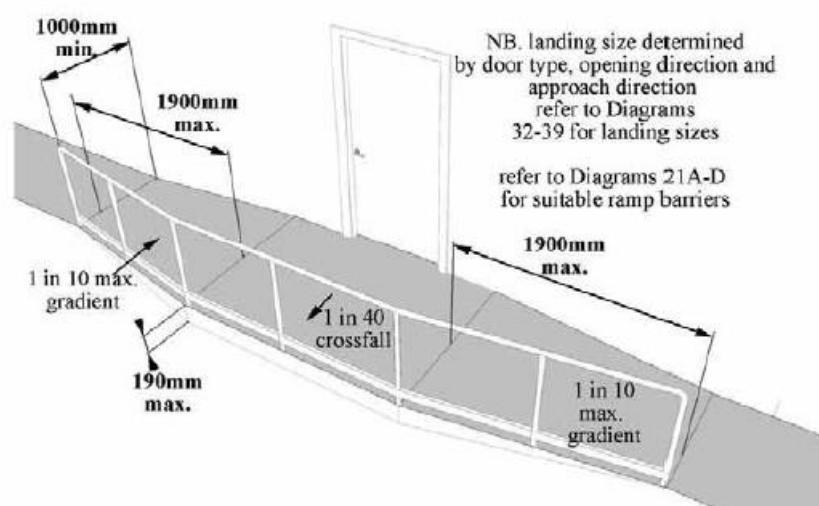


Figure No. 12 – Step Ramp at External Doorway – Side Approach

20. Clause D2.16 – Balustrades or Other Barriers

All balustrades are required to be constructed to a minimum height of 1000 mm where the level below the trafficable surface is greater than 1000 mm to all landings, walkways etc.

All balustrades are required to comply with the structural loading requirements of AS 1170.1.

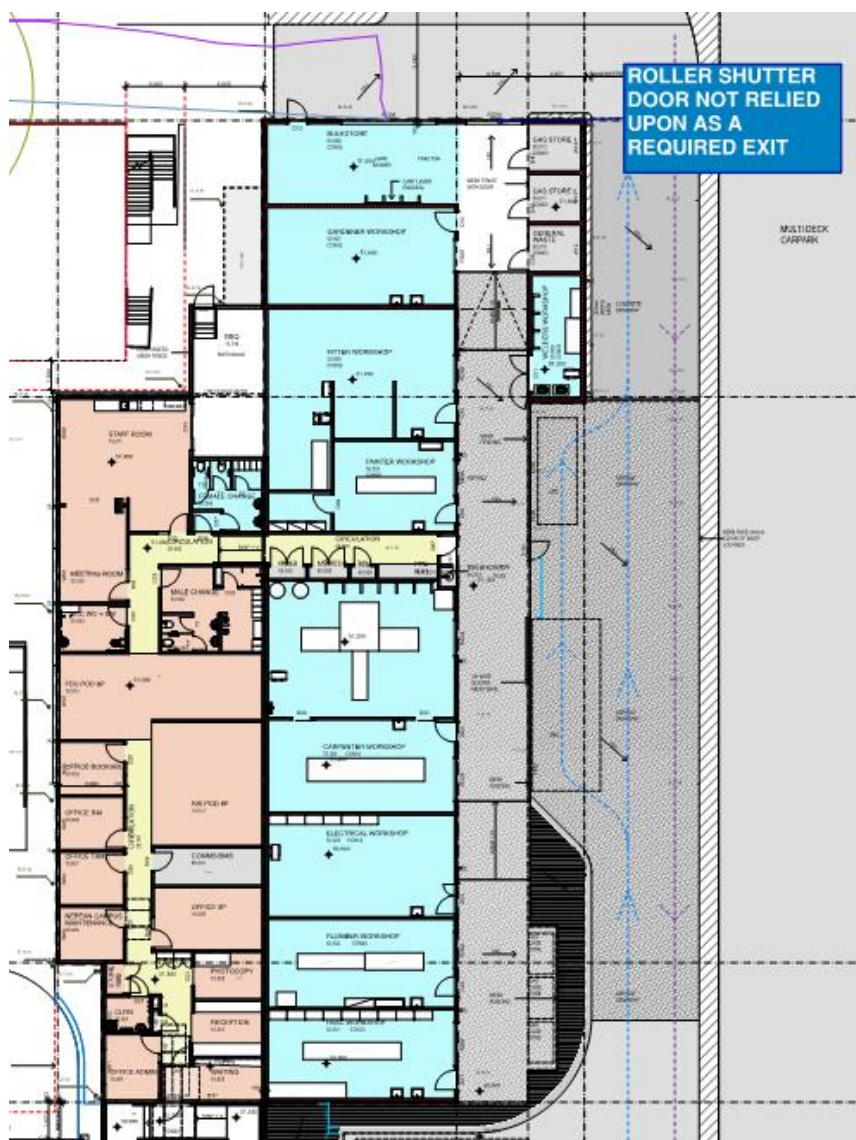
21. Clause D2.17 – Handrails

Handrails are required to be provided to the stairways at the front and rear of the building and the ramp at the front of the building in accordance with AS 1428.1 – 2009 which will require the provision of handrails to both sides of the stairways and ramp.

22. Clause D2.19 – Doorways & Doors

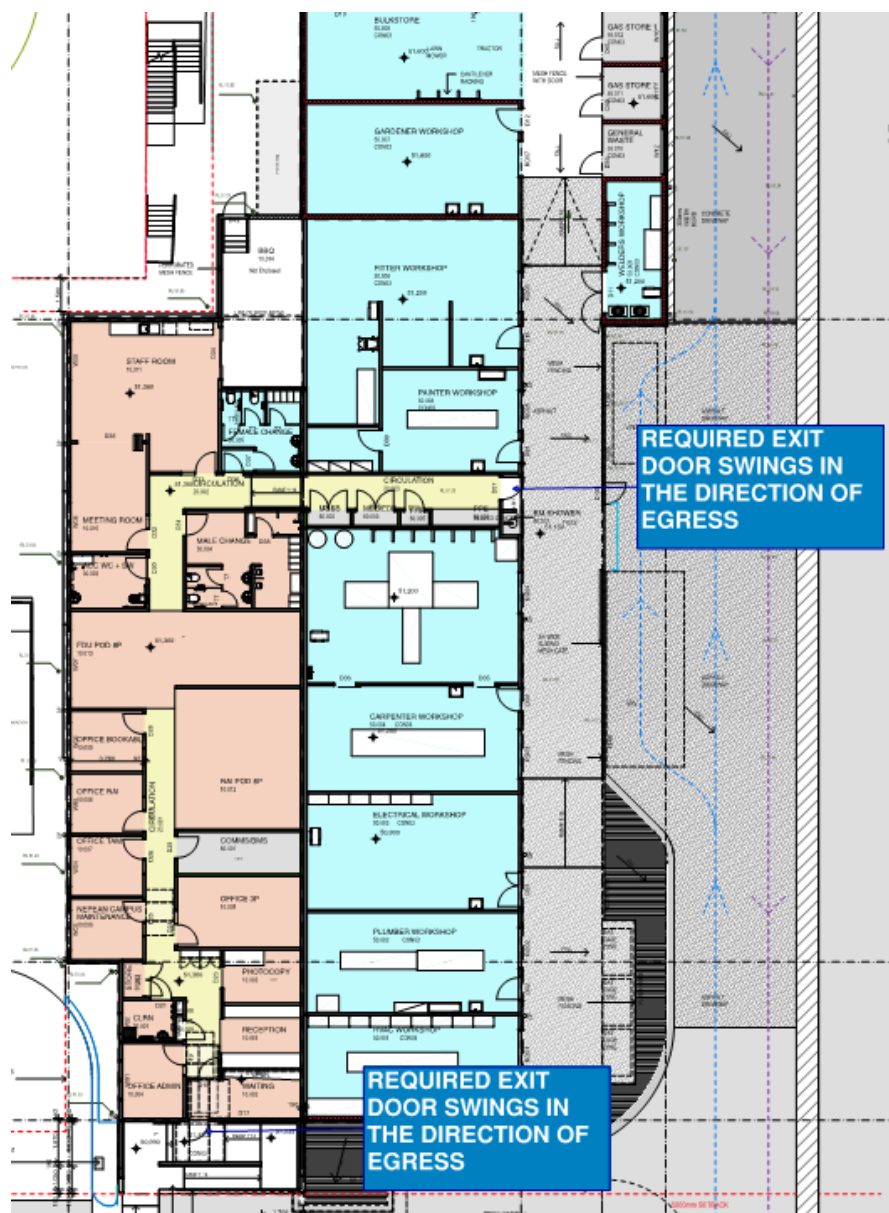
A doorway serving as a required exit door or forming part of a required exit door cannot be fitted with a roller shutter door unless it serves a Class 8 building with a floor area not more than 200m², the doorway is the only required exit and it is held in the open position while the building is lawfully occupied.

From a review of the Architectural Drawings, it is noted that a roller shutter door has been installed between the Bulkstore and Gas Store 1, however the doorway is not being relied upon as a required exit from the building.



23. Clause D2.20 – Swinging Doors

In this instance, the two nominated exit doors leading from the building are noted as swinging in the direction of egress as detailed in the figure below.



The doorways serving each of the workshop areas which lead directly to open space are not required to swing in the direction of egress on the basis they each serve a part of the building with a floor area less than 200 m², however the doorways are required to be provided with a device for holding it in the open position.

All exit doors and doors in a path of travel are required to be provided with door hardware that is operable by a single-handed downward action without recourse to a key or locking device and meet the following criteria:

- The door hardware is to be positioned between 900 – 1100mm from the ground.

Doors providing re-entry to the building from balcony areas etc. must be fitted with key-operated fastenings only, the tongues of which must be locked in the retracted position whenever the building is occupied so that the door can yield to pressure.



PART D3 – ACCESS FOR PEOPLE WITH A DISABILITY

25. Clause D3.1 – General Building Access Requirements

Access for a person with a disability will be required to be provided from the allotment boundary through the to the main entrance of the building and then throughout the building.

This Report contains high level comments pertaining to access for a person with a disability. A separate and independent Access Report has been prepared by iAccess.

26. Clause D3.2 – Access to Buildings

Access to the building is required as follows:

- + An accessible accessway is required to be provided as follows:
 - ▲ From the main points of a pedestrian entry at the allotment boundary, and
 - ▲ From another accessible building connected by a pedestrian link; and
 - ▲ From any required accessible carparking space on the allotment
- + In a building required to be accessible, an access is required to be provided throughout the principal pedestrian entrance and –
 - ▲ Through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and
 - ▲ In a building with a total floor area of more than 500 m², a pedestrian entrance which is not accessible must not be located more than 50m from an accessible pedestrian entrance.
- + An accessible pedestrian entrance with multiple doorways is considered to be one pedestrian where -
 - ▲ All doorways serve the same part or parts of the building; and
 - ▲ The distance between each doorway is not more than the width of the widest doorway at that pedestrian entrance.

Except for pedestrian entrance serving only areas exempted from Clause D3.4 (refer to areas below under Clause D3.4)

- + Where a pedestrian entrance required to be accessible has multiple doorways –
 - ▲ If the pedestrian entrance consists of not more than 3 doorways, - not less than 1 of those doorways is required to be accessible.
 - ▲ If a pedestrian entrance consists of more than 3 doorways, - not less than 50% of those doorways is required to be accessible.
 - ▲ From any required accessible carparking space on the allotment
- + The minimum unobstructed height of a continuous accessible path of travel is required to be 2000 mm and 1980 mm at doorways.

Unless otherwise specified (such as at doors, curved ramps and similar), the minimum unobstructed width of a continuous accessible path of travel is required to be 1000 mm and following elements cannot intrude into the minimum width:



- ▲ Fixtures and fittings such as lights, awnings, windows that when open intrude into the circulation space, telephones, skirtings, and similar objects.
- ▲ Essential fixture and fittings such as fire hose reels, fire extinguishers and switchboards.
- ▲ Door handles less than 900 mm above the finished floor.

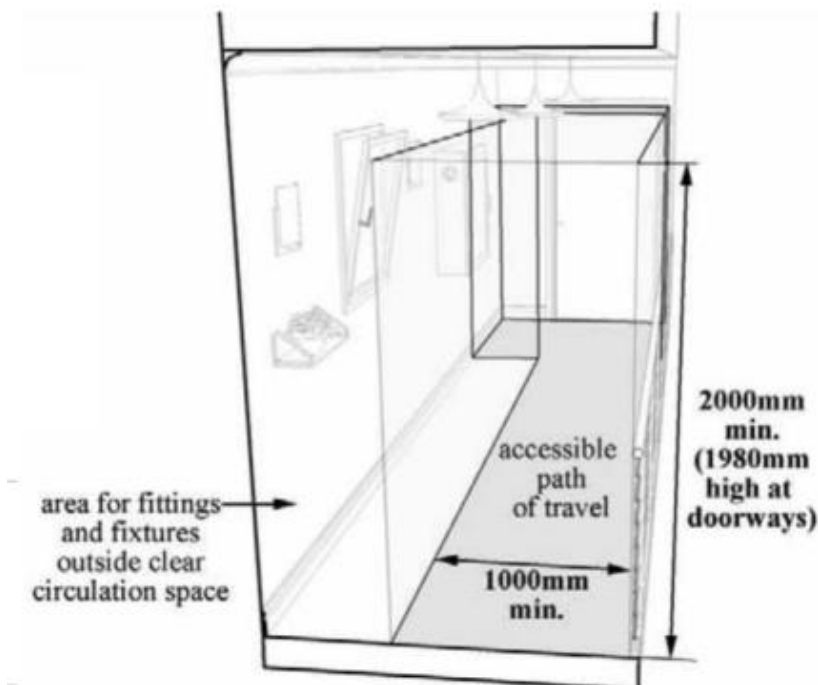


Figure No. 15: Minimum height and width of accessible path of travel

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

Note: -

Please refer to Clause D1.6 above having regard to the clear width of doorways where patient transportation in beds is required.

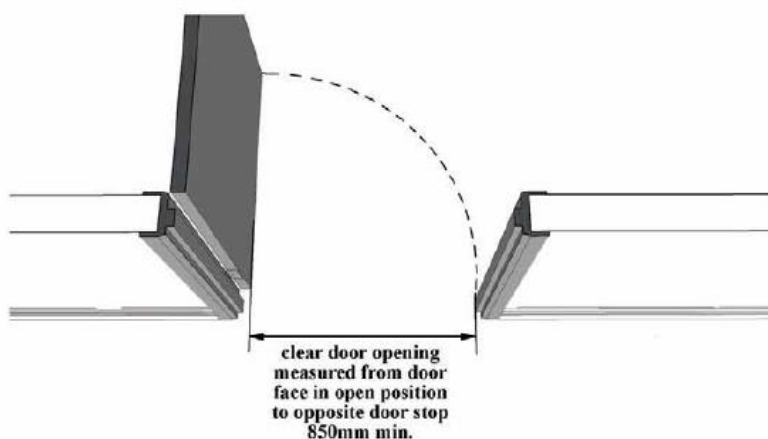


Figure No. 16: Clear Unobstructed Width of Doorway

- + All new doorways shall have a minimum luminance contrast of 30% provided between—
(a) door leaf and door jamb;



(b) door leaf and adjacent wall;

(c) architrave and wall;

(d) door leaf and architrave; or

(e) door jamb and adjacent wall.

The minimum width of the area of luminance contrast shall be 50 mm.

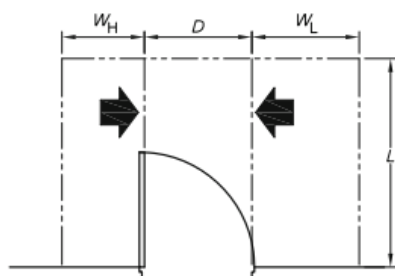
Doorways providing access to rooms that are not required to be accessible, are not required to be provided with a luminance contrast i.e., clean utility rooms, dirty utility rooms, equipment stores etc.

- + Circulation space is required to all doorways throughout the building that are required to be accessible in accordance with Section 13 of AS 1428.1 – 2009 (see diagrams below).

Note: Where doorways are provided with one and half leaves, the half leaf is required to permit the required latch side circulation space as required by AS 1428.1 – 2009.

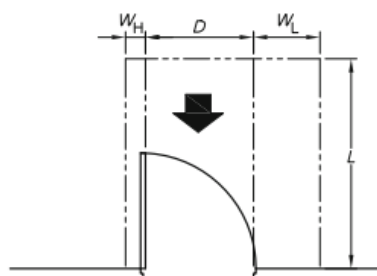
Swing Door Opens Towards User:

Both Sides Approach:



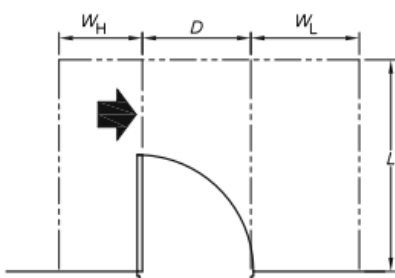
D	L	W _H	W _L
850	1670	660	900
900	1670	610	900
950	1670	560	900
1000	1670	510	900

Front On Approach:



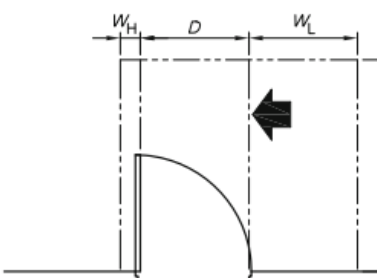
D	L	W _H	W _L
850	1450	110	530
900	1450	110	530
950	1450	110	530
1000	1450	110	530

Hinge Side Approach:



D	L	W _H	W _L
850	1670	660	900
900	1670	610	900
950	1670	560	900
1000	1670	510	900

Latch Side Approach:



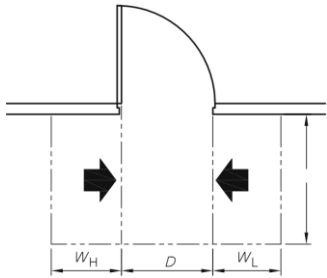
D	L	W _H	W _L
850	1670	110	900
900	1670	110	900
950	1670	110	900
1000	1670	110	900

Figure No. 17 – Circulation Space at Swing Doors – Door Opens Toward User



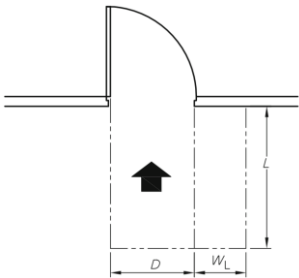
Swing Door Opens Away from User:

Both Sides Approach:



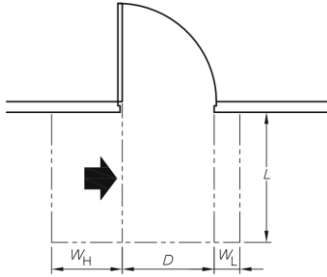
D	L	W_H	W_L
850	1240	560	660
900	1210	510	660
950	1175	460	660
1000	1155	410	660

Front On Approach:



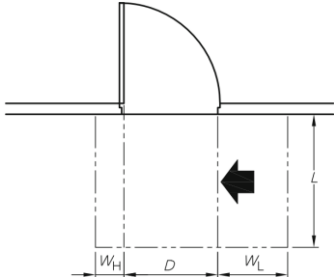
D	L	W_H	W_L
850	1450	0	510
900	1450	0	510
950	1450	0	510
1000	1450	0	510

Hinge Side Approach:



D	L	W_H	W_L
850	1220	560	340
900	1185	510	340
950	1160	460	340
1000	1140	410	340

Latch Side Approach:



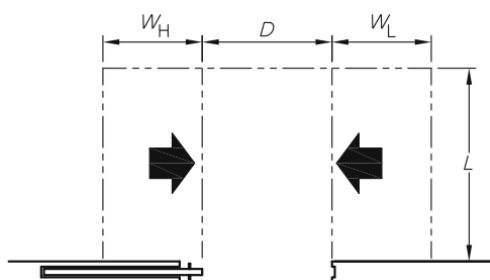
D	L	W_H	W_L
850	1240	240	660
900	1210	190	660
950	1175	140	660
1000	1155	90	660

Figure No. 18 – Circulation Space at Swing Doors – Door Opens away from User



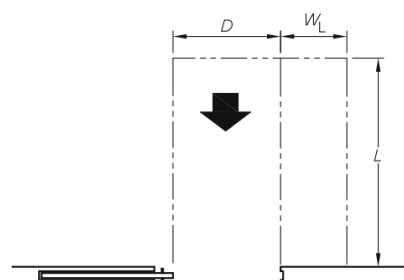
Sliding Doors Recessed in Wall:

Both Sides Approach:



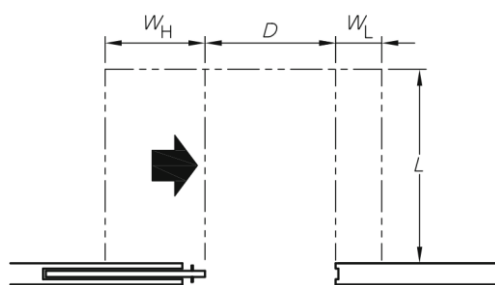
D	L	W_H	W_L
850	1280	660	660
900	1280	610	660
950	1280	560	660
1000	1280	510	660

Front On Approach:



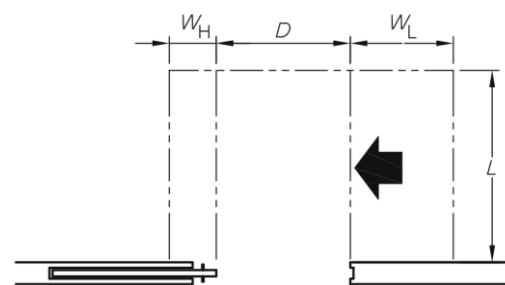
D	L	W_H	W_L
850	1450	0	530
900	1450	0	530
950	1450	0	530
1000	1450	0	530

Slide Side Approach:



D	L	W_H	W_L
850	1280	660	395
900	1280	610	395
950	1280	560	395
1000	1280	510	395

Latch Side Approach:



D	L	W_H	W_L
850	1230	185	660
900	1230	180	660
950	1230	180	660
1000	1230	180	660

Figure No. 19 – Circulation Space at Sliding Doors – Recessed in Wall

Sliding Doors Surface Mounted

For any side on approach:

Add dimension t to W_L and W_H .

For only a front on approach:

Add dimension t to L , W_L and W_H .

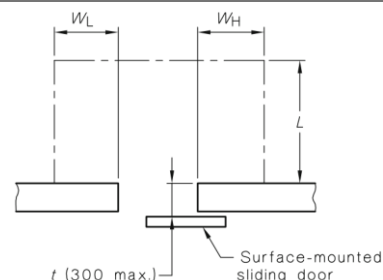


Figure No. 20 – Circulation Space at Sliding Doors – Surface Mounted

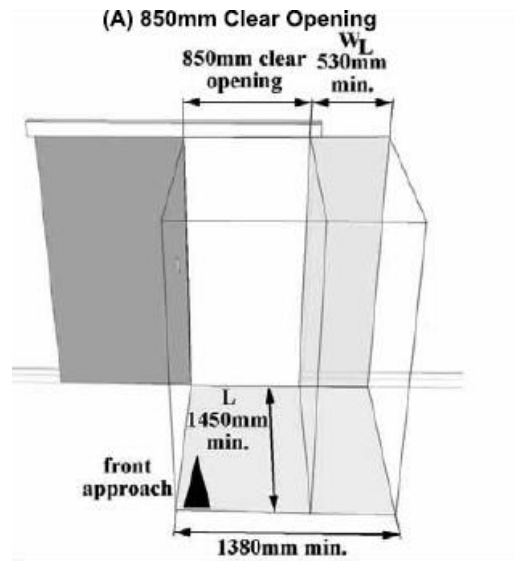


Figure No. 21 – Circulation Space at Swing Doors

The figure below details doorways that require compliant circulation space on both sides of the doorway

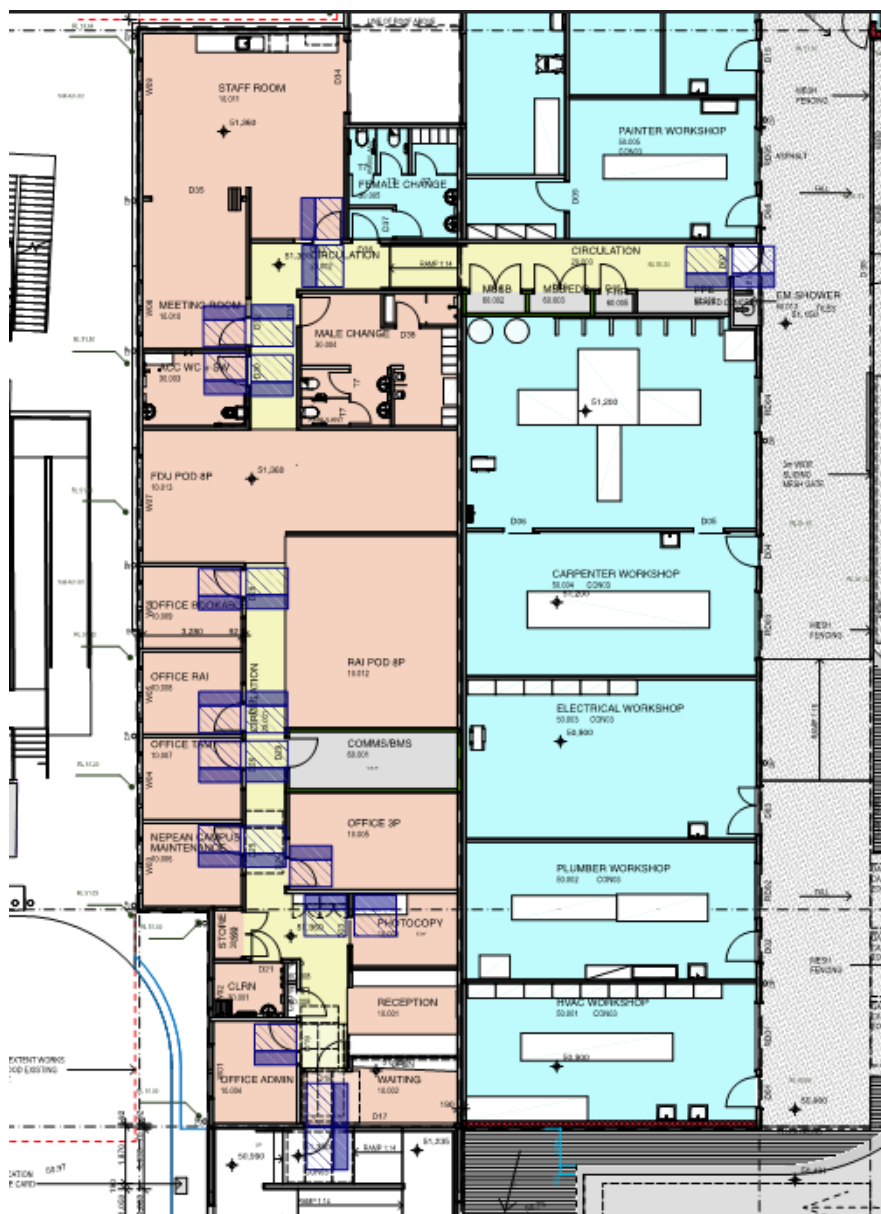


Figure No. 22 – Circulation Space required to accessible doorways

27. Clause D3.3 – Parts of Buildings to be Accessible.

In a building required to be accessible –

- + Every ramp and stairway, excepts for ramps and stairways in areas exempted from Clause D3.4, are required to comply with –
 - ▶ For a ramp, except a fire isolated ramp, Clause 10 of AS 1428.1; and
 - ▶ For a stairway, except a fire isolated stairway, Clause 11 of AS 1428.1; and
 - ▶ For a fire isolated stairway, Clause 11 (f) and (g) of AS 1428.1.
 - ▶ Door handles less than 900 mm above the finished floor.
- ▶ Every passenger lift is required to be designed in accordance with Clause E3.6



- ▶ Accessways throughout the building are required to have –
 - ▶ Passes spaces complying with AS 1428.1 at a maximum 20m intervals on those parts of an access where a direct line of sight is not available; and
 - ▶ Turning spaces complying with AS 1428.1 –
 - Within 2 m of the end of accessways where it is not possible to continue travelling along the accessway, and
 - At maximum 20 m intervals along the accessway
- + All dead-end corridors where a person in a wheelchair is required to make a 90° to 180° turn is required to be not less than 2070mm in the direction of travel and not less than 1540 mm wide.

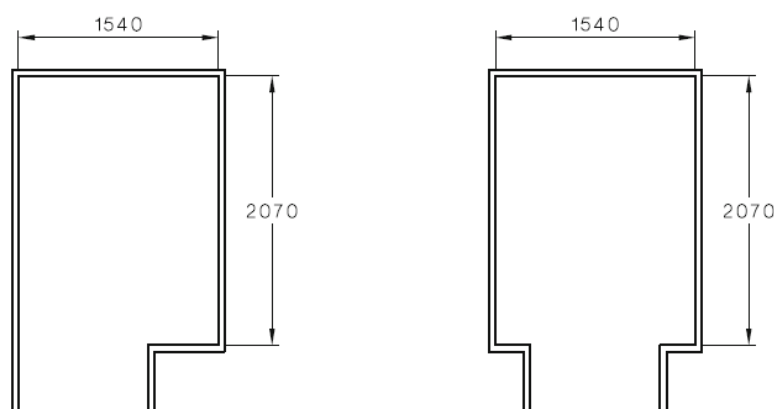


Figure No. 23: Minimum space required for >90° to 180° turn.

Accessible Walkways (AS1428.1 – 2009 Section 10.2):

The requirements for walkways serving the development are as follows:

- + Walkways can have a gradient up to 1:20. Anything steeper is a ramp and requires kerbs or kerb rails plus handrails to both sides.
- + A walkway with a gradient less than 1 in 33 does not require landings but does require a crossfall of maximum 1 in 40 (maximum cross fall of 1 in 33 if the surface is bitumen).
- + Walkways steeper than 1 in 33 do not require a crossfall to the main walkway but do require a crossfall of 1 in 40 to landings.

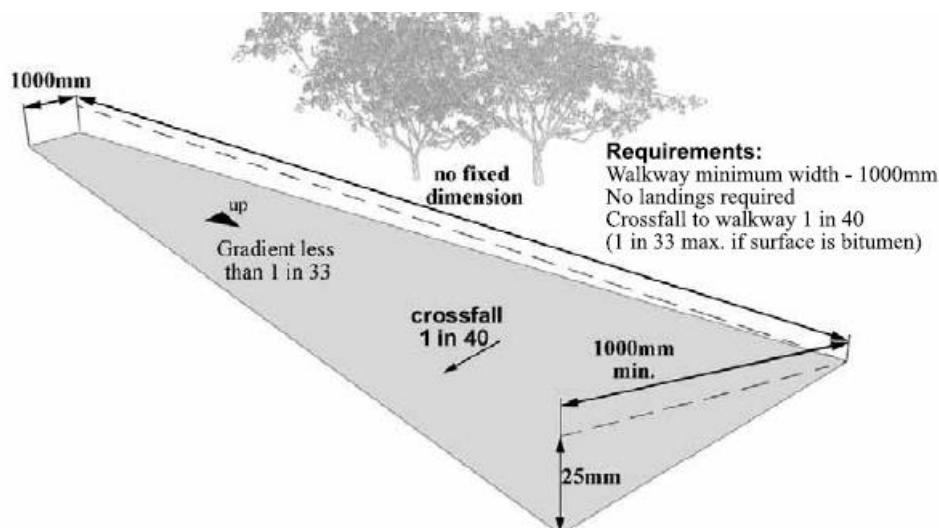


Figure No. 24: Requirements for a Walkway with a Gradient Less Than 1 in 33

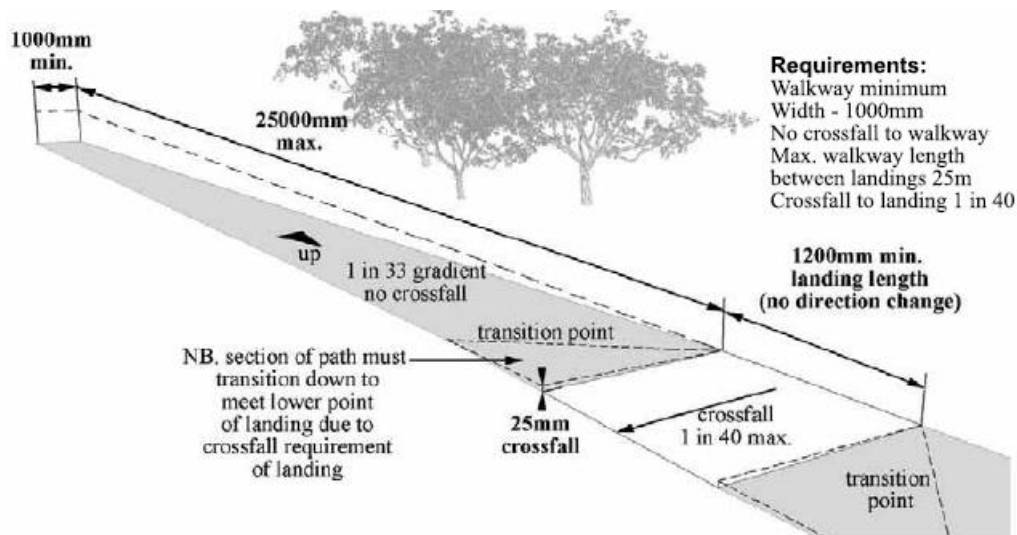


Figure No. 25: Requirements for a Walkway with a 1 in 33 Gradient

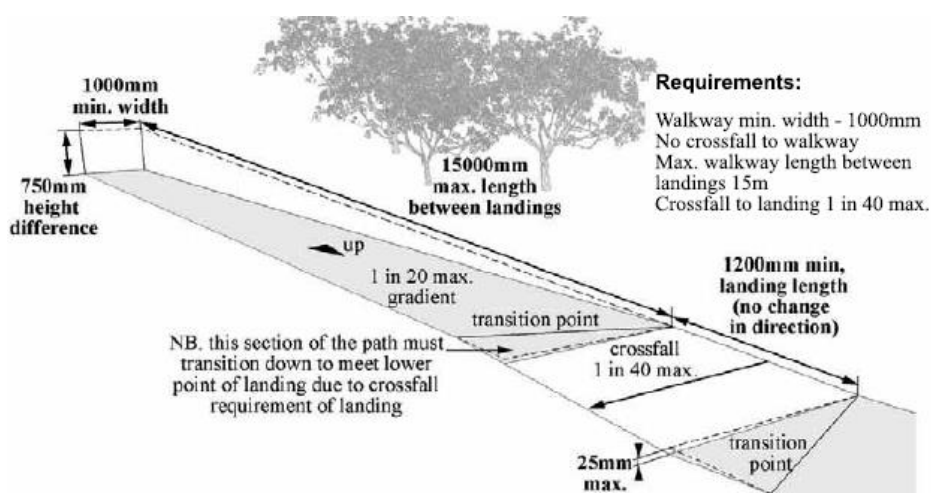


Figure No. 26: Requirements for a Walkway with a 1 in 20 Gradient

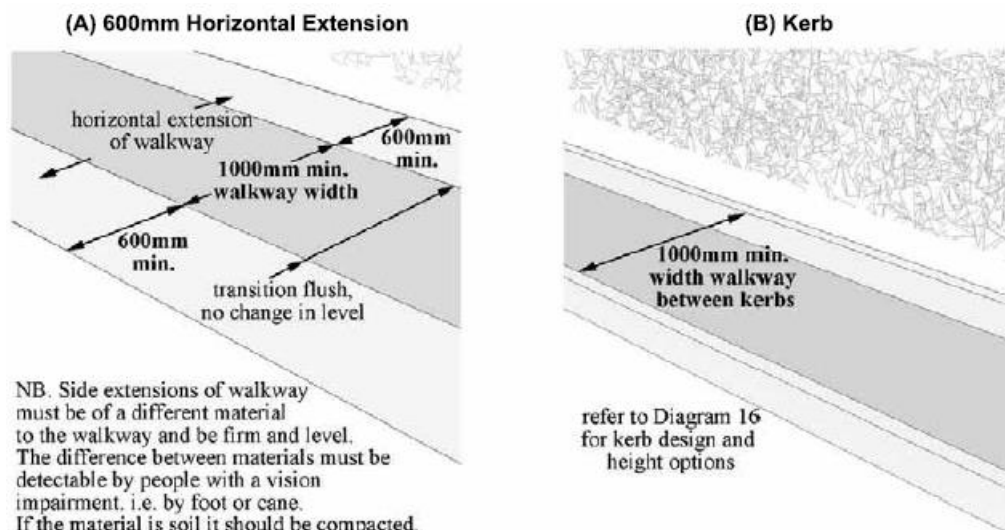


Figure No. 27: Requirements for Edges of Walkways

Accessible Ramps (AS1428.1-2009 Section 10.3):

Accessible ramps are required to be designed and constructed in accordance with the following:

- + The maximum gradient is to be 1:14.
- + Landings are to be provided at the top and bottom of the ramp and at intervals not exceeding 9m.
The landings to the ramps are required to have a minimum width of 1200mm.
- + Handrails are to be provided to both sides of the ramp. The handrails are required to be extended 300mm at both the top and bottom of the ramp.
 - ▲ The ramps are to be provided with kerb rails that comply with the following:
 - ▲ The minimum height above the finished floor shall be 65mm.
 - ▲ The height of the top of the kerb or kerb rail shall not be within the range of 75mm to 150mm above the finished floor.
 - ▲ There cannot be a longitudinal gap or slot greater than 20mm in the kerb or kerb rail within the range 75mm to 150mm above the finished floor.
- + Where ramps are constructed with a change in direction, the angle of approach shall create a 90° angle to the line of transition between the ramp surface and the landing surface.

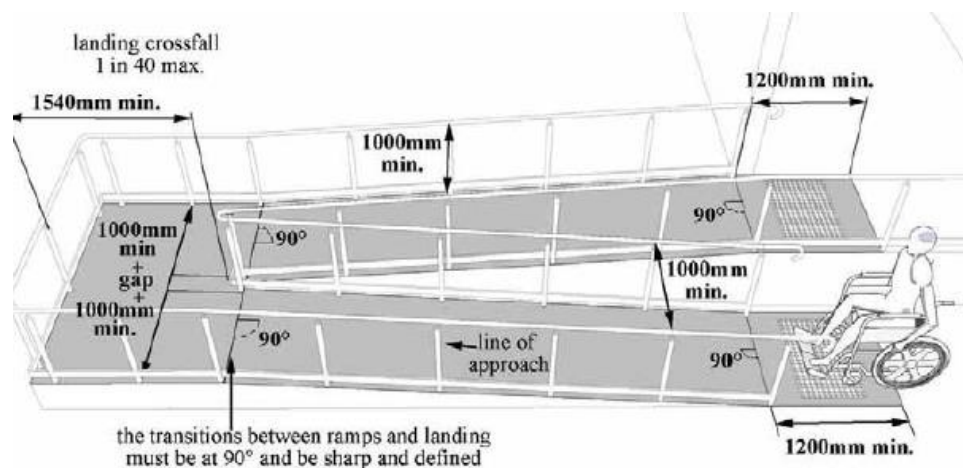


Figure No. 28: Ramp and Landing with Change in Direction of 180°

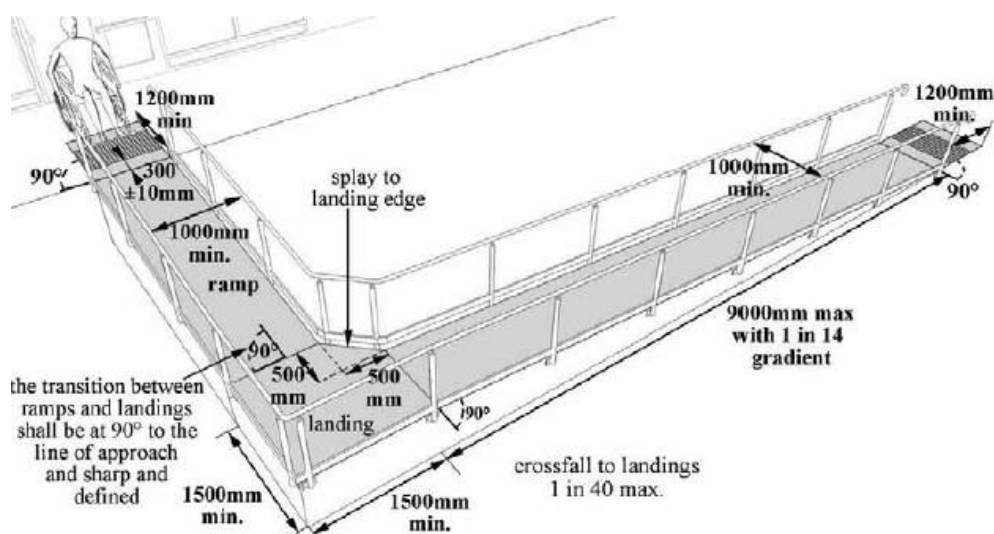


Figure No. 29: Ramp and Landing with Change of 90°

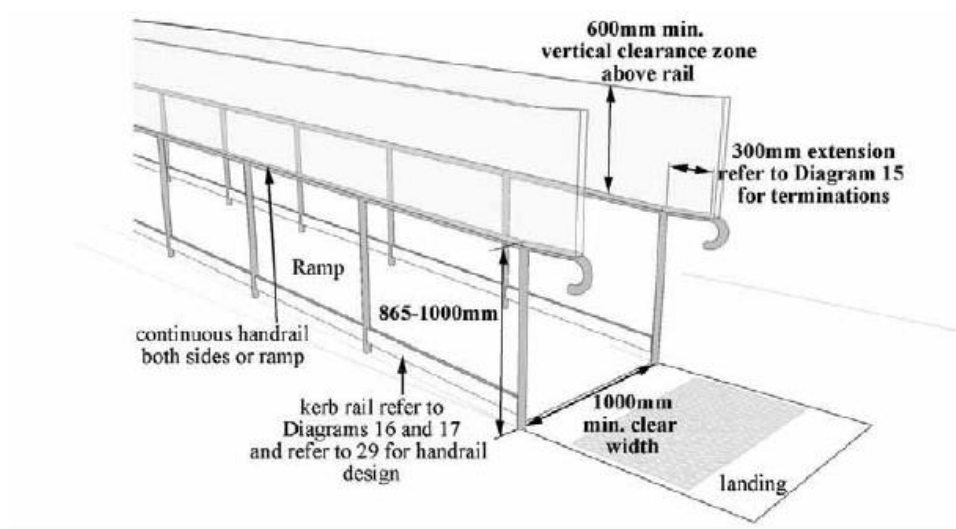


Figure No. 30: Handrail Extensions at Ramp Ending

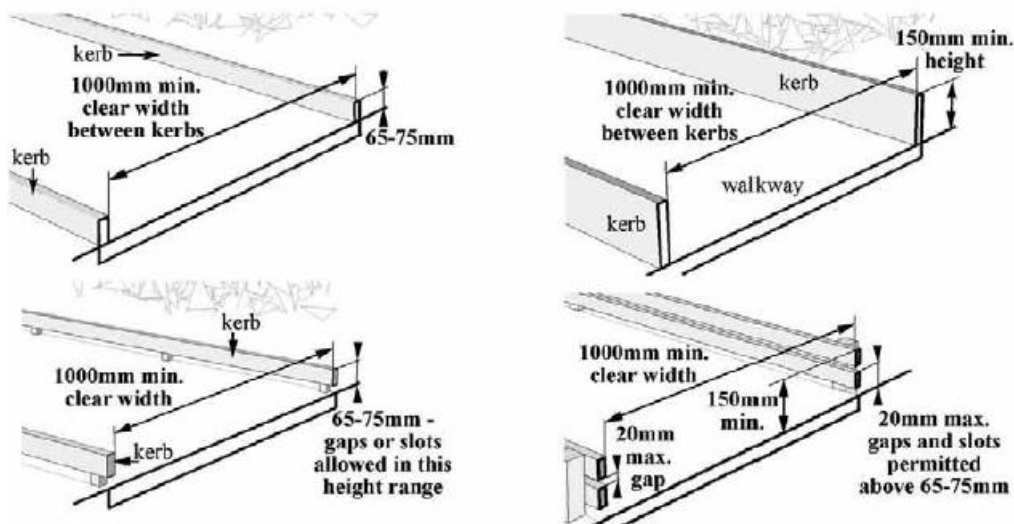


Figure No. 31: Kerb and Kerb Rail Design Options

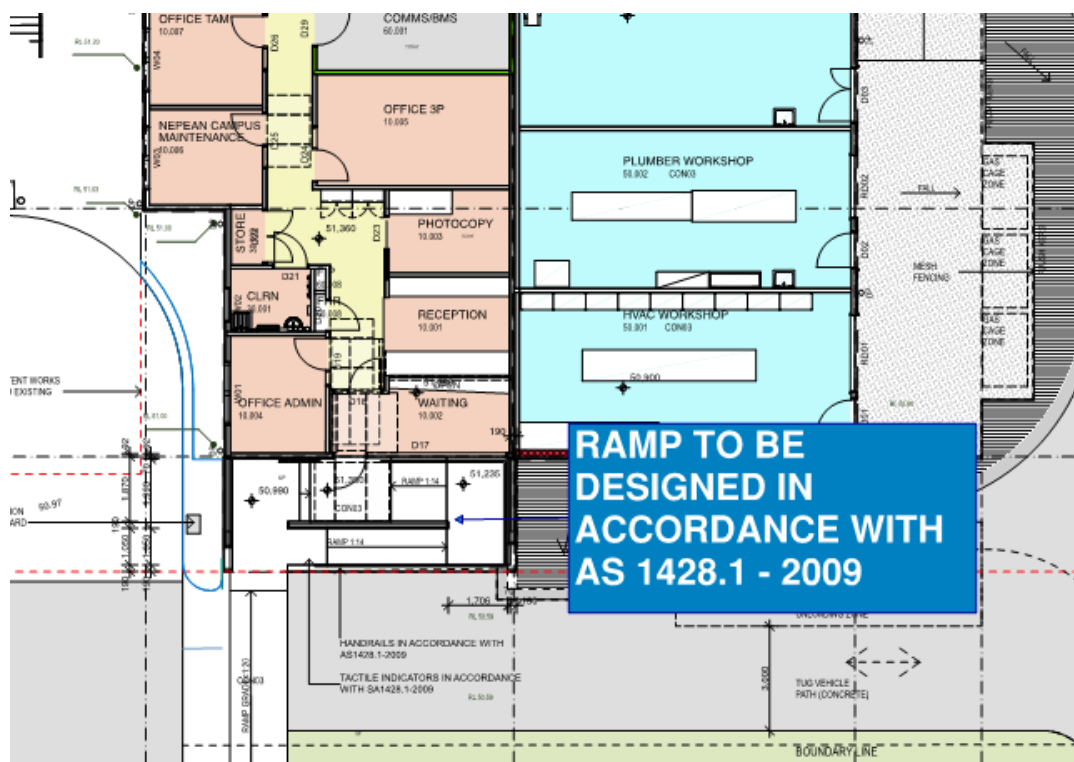


Figure No. 32: Ramp required to be designed in accordance with AS 1428.1 - 2009

Accessible Stairways:

Stairways are required to be designed in accordance with AS 1428.1 - 2009. In this instance, the following is required:

- + A handrail to each side of stairway.
- + Handrails are required to be extended at the top and bottom of the stairway. At the bottom of the stairway, the handrails are required to extend one tread width plus 300mm from the last riser. At the top of the stairway, the handrails are required to extend 300mm from the last riser.
- + Solid opaque risers.
- + Contrast nosing's to the stair treads.



- + The handrails are to have a maximum dimension of 50mm and be spaced a minimum distance of 50mm from the wall.

Note: -

Handrails within fire isolated stairways that are not used as circulation stairways are only required to comply with Clause 12 of AS 1428.1 which regulates the size of the handrails, cross section and distance from adjacent walls surfaces etc. In this instance the extensions at the top and bottom of the handrails are not required within the fire isolated stairway.

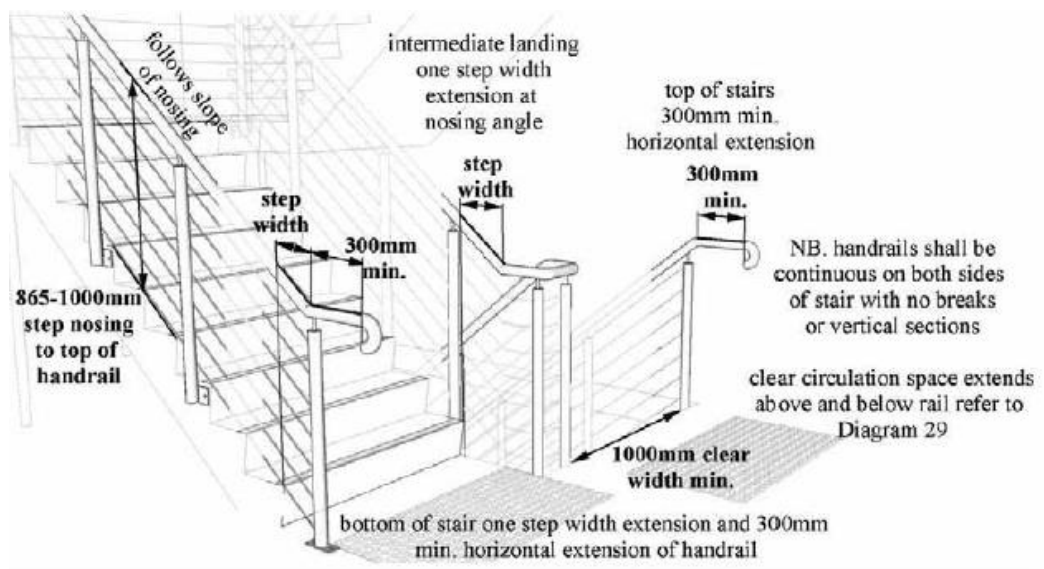


Figure No. 33: Handrails to Stairways

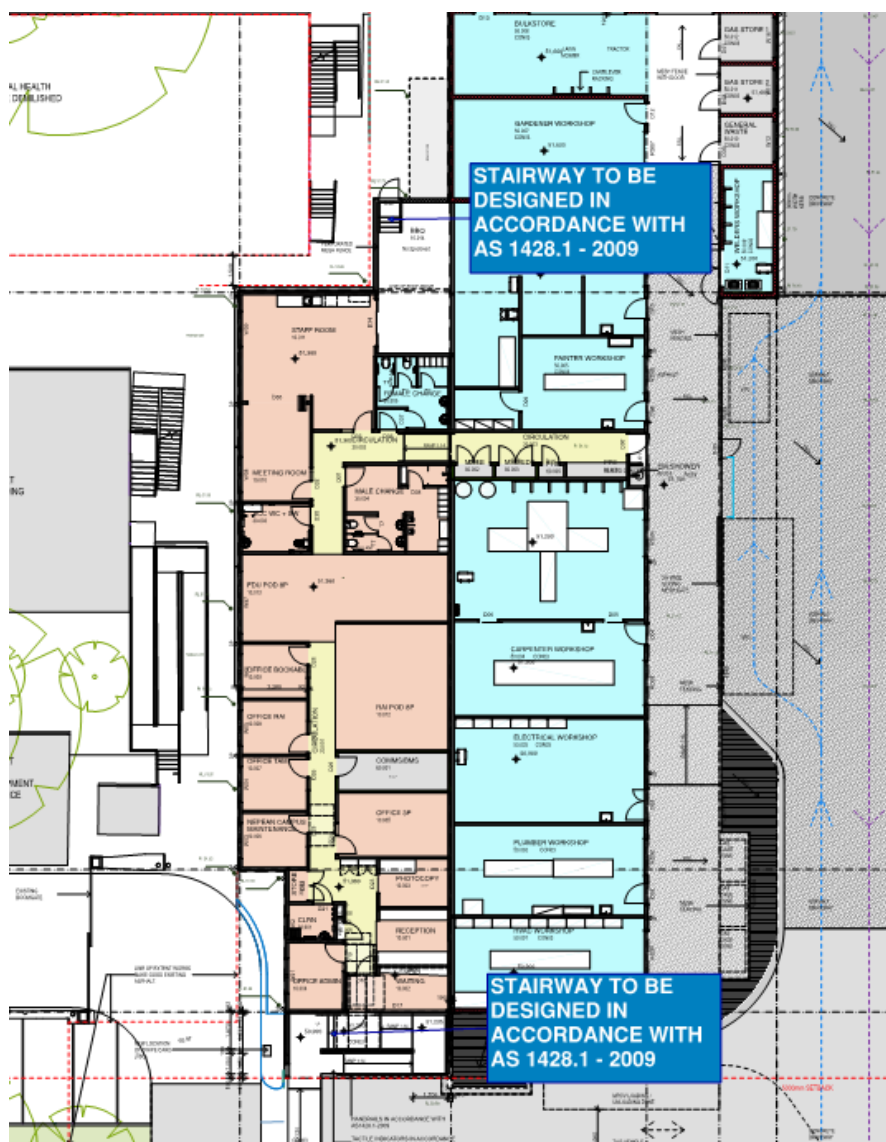


Figure No. 34: Stairways required to be designed in accordance with AS 1428.1 - 2009

Video Intercoms

Any video intercom units will be required to be installed in accordance with the manufactures specifications and be located a minimum distance of 500 mm from any internal corner.

Access Control

Access control swipe readers are required to be installed between 900 – 1100mm above FFL and not closer than 500mm to an internal corner.

Door release buttons are required to be located between 900 – 1100mm above FFL and closer than 500mm to an internal corner. Door release buttons will need to be large format switches (35mm x 35mm rocker style switches) or a 'mushroom' push button type.

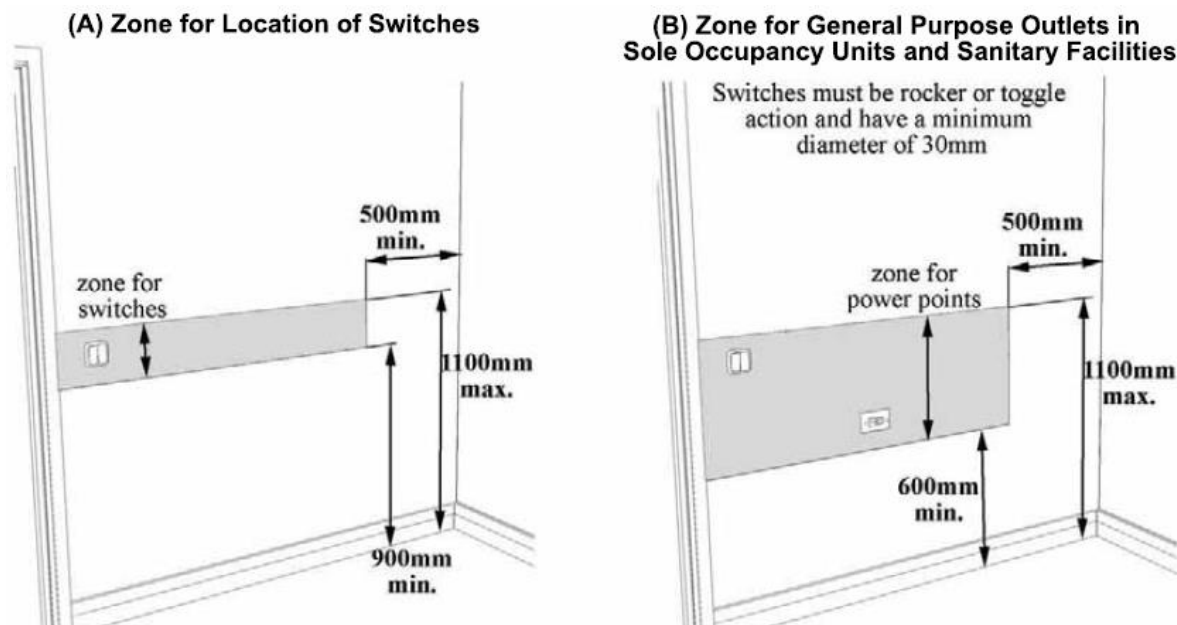


Figure No. 35 – Zones for the location of switches and power outlets

Clear Turning Space Behind Workstations

A minimum clearance of 1550mm is required to be provided between the edge of workstations / desks and the wall behind or between workstations located back-to-back to ensure that a staff member who is wheelchairbound has sufficient space to ensure manoeuvrability.

Clear Turning Space within individual Offices / Rooms

A minimum turning circle of 1540 mm x 2070 mm is required to be provided within all individual offices / rooms and is to be measured clear of all fixed furniture.

Wheelchair Seating in Waiting Areas

Within the waiting areas at least one zone of 1300mm x 800mm is required to be provided for a wheelchair seating location for a person with a disability.

Accessible Counters

The reception counters associated with the entrance to the building is to include a portion of the counter that is accessible to a person with a disability. The height of the counter should be 850mm +/- 20mm.

The knee and foot clearances below the counter or bench are required to be provided in accordance with AS 1428.2 – 1992.

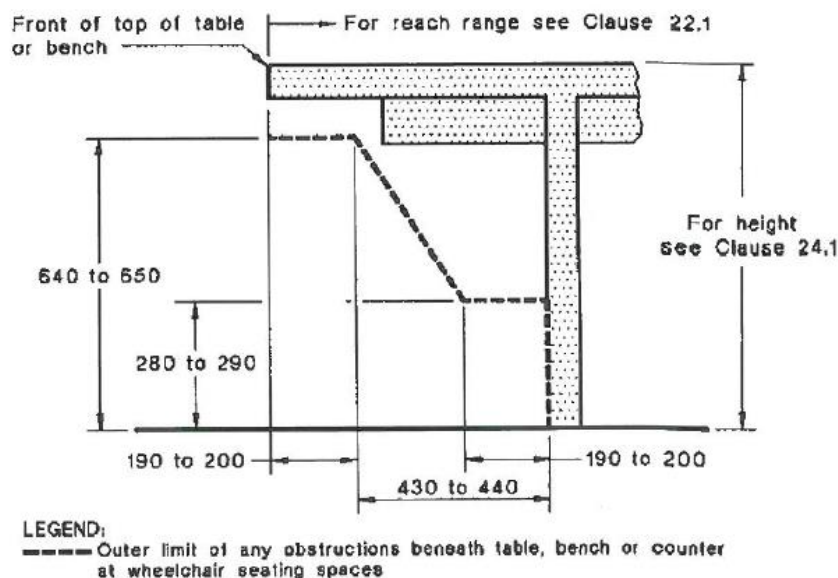


Figure No. 36 – Clearances below an accessible counter or bench

Beverage Bays

Where Beverage Bays are proposed to be installed, they are required to be designed as follows:

- + If the beverage bays are located within a room, the circulation space within the room will be required to comply with the provisions of AS 1428.1 – 2009 with a zone of 1500mm x 1500mm provided to ensure that that an occupant can make a 180o turn.
- + The distance between the beverage bay counter and any adjacent wall cannot be less than 1540mm.
- + Where the beverage bay is located adjacent to a doorway, circulation space around the doorway is required to be provided as detailed above.
- + Water zip taps cannot be located closer than 500mm from an internal corner.
- + Side reach access to the tap hardware of the beverage bay is permitted. Side reach access is required to be provided in accordance with AS 1428.2 – 1992 as detailed in the below Figure.

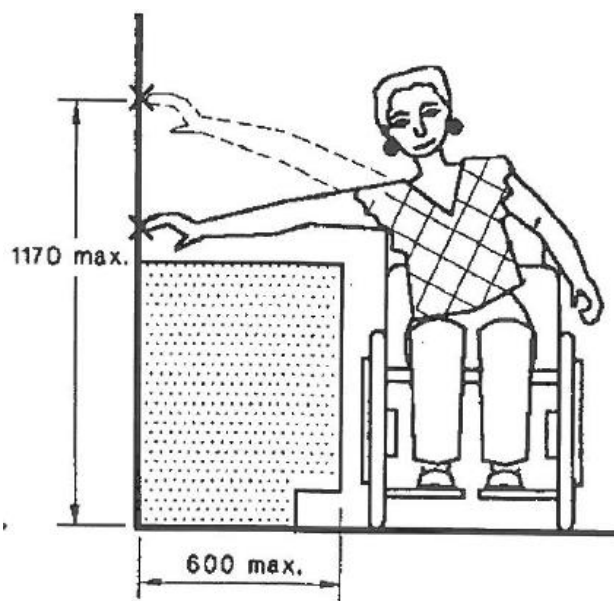


Figure No. 37 – Side reach requirements for a wheelchair user



Carpet

The pile height or pile thickness cannot exceed 11 mm and the carpet backing thickness cannot exceed 4 mm.

Exposed edges of floor covering are required to be fastened to the floor surface and is required to have a trim along the entire length of any exposed edge.

At the leading edges, carpet trims and any soft flexible materials are required to have a vertical face no higher than 3 mm or a rounded bevelled edge no higher than 5mm or above that height a gradient of 1 in 8 up to a total maximum height of 10 mm.

Note: In accordance with Clause D3.3 (h), the dimensions of 10mm, 6mm and 4mm are to be replaced with 11 mm, 4mm and 15 mm respectively.

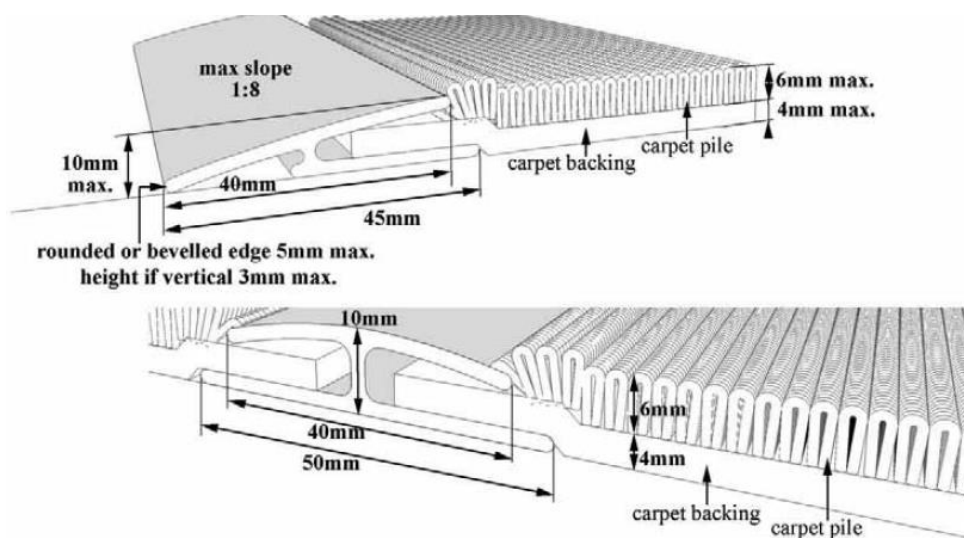


Figure No. 38 - Carpet joints on an accessible path of travel

Recessed Matting

Matting recessed within a continuous accessible path of travel is required to comply with the following:

- + Where of metal and bristle type construction or similar, its surface cannot be more than 3 mm if vertical or 5 mm if rounded or bevelled, above or below the surrounding surface; and
- + Where a mat or carpet type material, it is required to have the fully compressed surface level with or above the surrounding surface with a level difference no greater than 3 mm if vertical or 5 mm if rounded or bevelled.

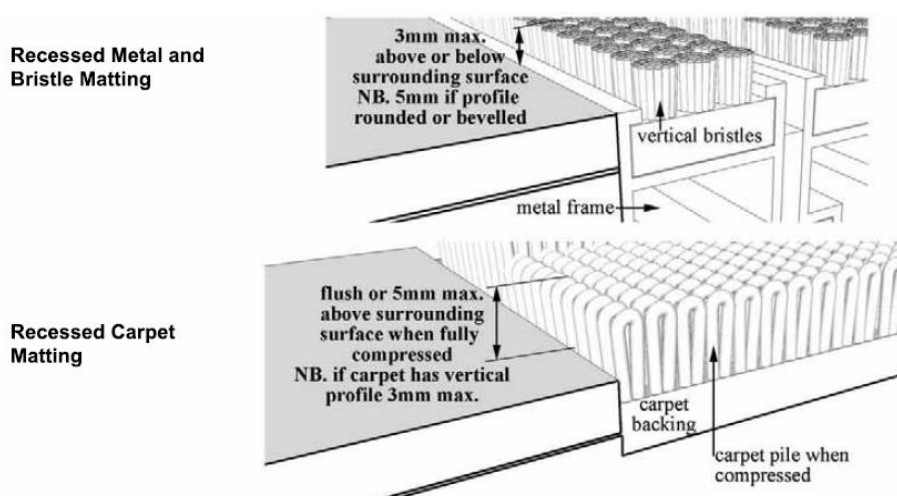


Figure No. 39 – Recessed matting height tolerances



Grates

Grates installed are required to comply with the following:

- + Circular openings cannot be greater than 13 mm in diameter.
- + Slotted openings cannot be greater than 13 mm wide and be orientated so that the long dimension is transverse to the dominant direction of travel.

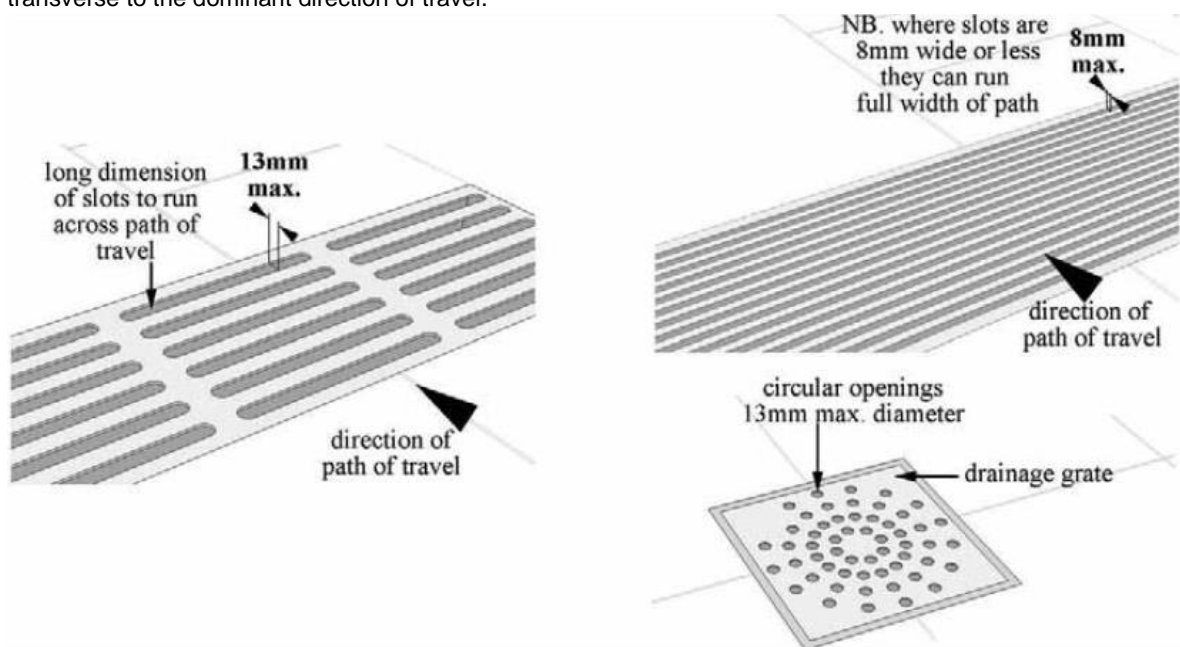


Figure No. 40 – Maximum size of openings in grates

Accessible Fixtures & Fittings:

- + All fixtures, fittings and door hardware are to comply with Section 13.5 & Section 14 of AS1428.1-2009.

Door hardware to swing doors is to be in accordance with the following diagrams:

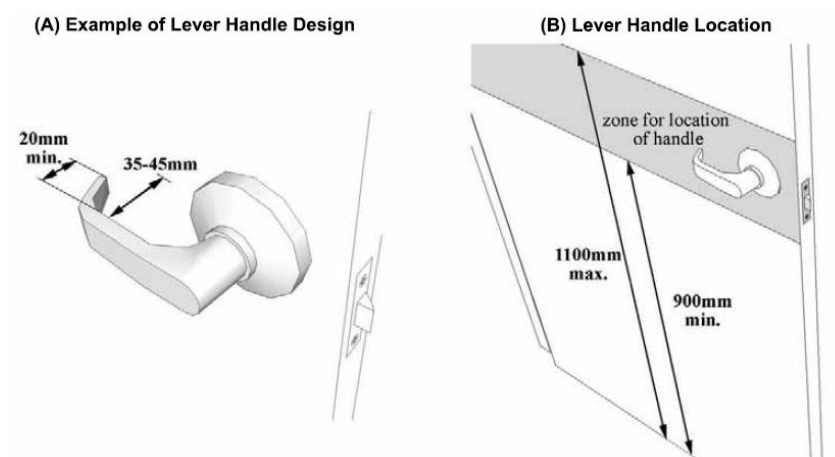


Figure No. 41 – Door hardware to swing doors

Door hardware to sliding doors is to be in accordance with the following diagram:

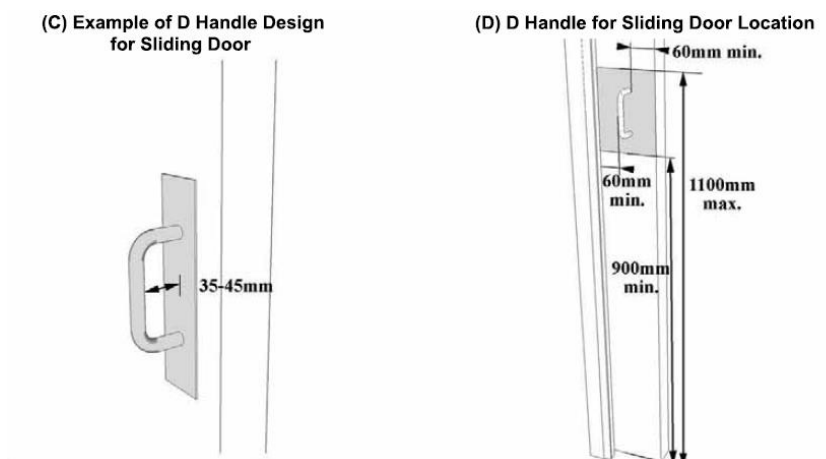


Figure No. 42 – Door hardware to sliding doors

In this instance, toggle style light switches and GPO outlets etc. should be provided within all patient care areas and to all accessible sanitary facilities (unless automatic lighting is provided within the sanitary facility)

- + Braille tactile signage will be required to be installed throughout the building identifying accessible sanitary facilities, exits and lifts in accordance with the DTS Provisions of the BCA and AS 1428.1.

Signage to identify any ambulant or accessible sanitary facility is required to be located on the wall on the latch side of door or on the door itself leading to the sanitary facility.

28. Clause D3.4 – Exemptions

The following areas are not required to be accessible:

- + An area where access would be inappropriate because of the particular purpose for which the area is used.
- + An area that would pose a health or safety risk for people with a disability.
- + Any path of travel providing access only to an area exempted by (a) or (b).

Areas / rooms that may not be required to be accessible for a person with a disability include the following:

- + Comms Rooms
- + Workshops

The figure below details location of rooms that may receive a concession in accordance with Clause D3.4 of the BCA.

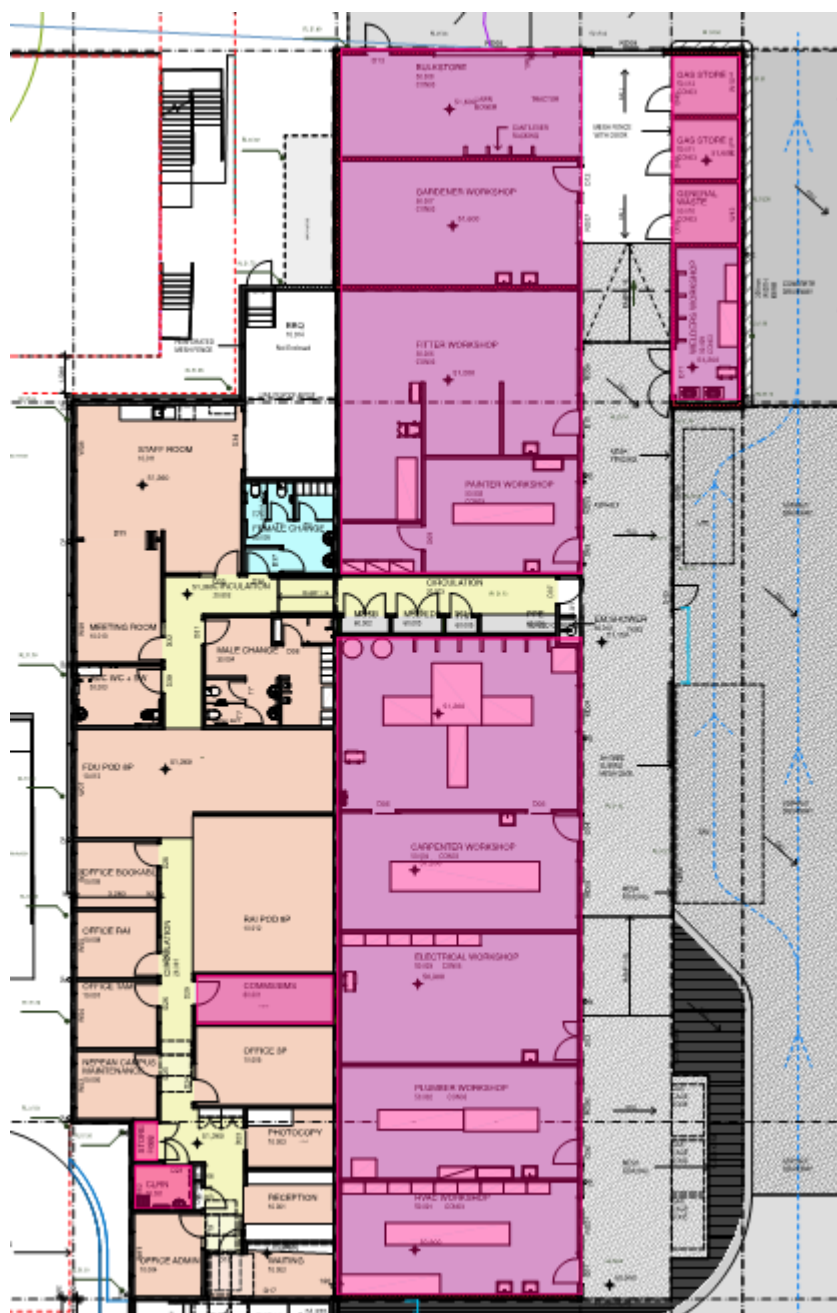


Figure No. 43 – Rooms that are eligible for a Clause D3.4 concession for access for a person with a disability

The LHD are to provide written confirmation that access for any staff members with a disability (wheelchair bound) is not required to be provided to the abovementioned rooms.

29. Clause D3.5 – Accessible Carparking

It is noted that there are no proposed car parking spaces associated with the proposed TAMS building.

30. Clause D3.6 – Signage

Braille and tactile signage complying the requirements of Specification D3.6 is required to:

- + Incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 and identify each -
- + Sanitary facility; and



- + A space with a hearing augmentation system; and
- + Identify each door required by **E4.5** (door to be provided with exit signs) to be provided with an exit sign and state –
 - a. **“Exit”**; and
 - b. **“Level”** followed by the floor number.
- + Signage including the international symbol for deafness in accordance with AS 1428.1 must be provided within a room containing a hearing augmentation system identifying –
 - ▲ The type of hearing augmentation; and
 - ▲ The are covered within the room; and
 - ▲ If receivers are being used and where the receivers can be obtained
- + Signage in accordance with AS 1428.1 must be provided for accessible unisex sanitary facilities to identify the facility is suitable for left or right-handed use.
- + Signage to identify an ambulant accessible sanitary facility in accordance with AS 1428.1 must be located on the door of the facility.
- + Where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access, in accordance with AS 1428.1 must be provided to the location of the nearest accessible pedestrian entrance.
- + Where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary facility.

Signs identifying a door required by E4.5 to be provided with an exit sign must be located:

- i. On the side that faces a person seeking egress; and
- ii. On the wall on the latch side of the door with the leading edge of the sign located between 50mm and 300mm from the architrave; and
- iii. Where (ii) is not possible, the sign may be placed on the door itself.

The provision of Braille and tactile exit signage with the message, *for example*. **“Exit - Level 1”** assists people with vision impairment to orientate themselves in case of an emergency and to find an exit and evacuate the area in a safe and equitable manner.

Location of Braille and Tactile Signs

Braille tactile signage including symbols, numbering and lettering is required to be designed in accordance with the following: -

- + Braille and tactile components of the sign must be located not less than 1200 - 1600mm above the ground or floor surface.
- + Signs with single lines of characters are to have the line of the tactile characters not less than 1250 mm and not more than 1350 mm above the floor or ground surface.



- + Signs identifying rooms containing features or facilities listed in D3.6 are required to be located –
 - ▲ On the wall on the latch side of the door with the leading edge of the sign located between 50 mm and 300 mm from the architrave; and
 - ▲ Where the above is not possible, the sign is permitted to be located on the door itself.
- + Signs identifying a door required to by Clause E4.5 to be provided with an exit must be located –
 - ▲ On the side that faces a person seeking egress; and
 - ▲ On the wall on the latch side of the door with the leading edge of the sign located between 50 mm and 300 mm from the architrave; and

The Braille & tactile egress signage is to be located adjacent or on (see above) each door that: -

- + Provides direct egress into a fire isolated stairway.
- + Provides direct discharge from the storey into a passageway or lobby (airlock) associated with the fire isolated stairway.
- + Provide direct discharge from a fire isolated stairway to open space (discharge door).
- + Horizontal exit doors providing egress into an adjoining fire compartment.
- + Provides direct egress to a roadway or open space.

The below signage is an example of what will be required: -



Signage Specification: -

- + Tactile characters must be raised or embossed to a height of not less than 1 mm and not more than 1.5 mm.
- + Title case must be used for all tactile characters, and
 - ▲ Upper case tactile characters must have a height of not less than 15 mm and not more than 55 mm, except that the upper-case tactile characters on a sign identifying a door required by Clause E4.5 to be provided with an exit sign must have of not less 20 mm and not more than 55 mm; and
 - ▲ Lower case tactile characters must have a minimum height of 50% of the related uppercase characters.
- + Tactile characters, symbols, and the like, must have rounded edges.
- + The entire sign, including any frame, must have all edges rounded.
- + The background, negative space or fill of signs must be of matt or low sheen finish.
- + The characters, symbols, logos and other features on signs must be matt or low sheen finish.
- + The minimum letter spacing of tactile characters on signs must be 2 mm.
- + The minimum word spacing of tactile characters on signs must 10 mm.



- + The thickness of letter strokes must not be less than 2 mm and not more than 7mm.
- + Tactile text must be left justified, except that single words may be centre justified.
- + Tactile text must be Aerial typeface.

31. Clause D3.7 – Hearing Augmentation

Hearing Augmentation

A hearing augmentation system will be required to be installed to all rooms / areas where a built-in amplification system is installed.

A built-in amplification system is a system where either speakers are installed within a room or a wall mounted monitor has built in speakers. Such installations are typically found in meeting rooms, training rooms and waiting areas.

Where the wall mounted screen is not capable of broadcasting sound and any audio is provided way of speakers attached to a laptop or that are portable, the hearing augmentation provisions will not need to be applied.

If a hearing augmentation system is:

- + An induction loop, it must be provided to not less than 80% of the floor area of the room or space served by the inbuilt amplification system; or
- + A system requiring the use of receivers or the like, it must be available to not less than 95% of the floor area of the room or space served by the inbuilt amplification system, and the number of receivers must not be less than -
 - ▲ If the room or space accommodates up to 500 persons, 1 receiver for every 25 persons or part thereof, or 2 receivers, whichever is the greater; and
 - ▲ If the room or space accommodates more than 500 persons but not more than 1000 persons, 20 receivers plus 1 receiver for every 33 persons or part thereof in excess of 500 persons.

32. Clause D3.8 – Tactile Indicators

Tactile ground surface indicators are required to be provided to the accessible stairways and ramps associated with the building, both internal and external.

33. Clause D3.11 – Ramps

On an accessway –

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

The For Comments Issue Architectural Drawings indicate that there are no pedestrian ramps that have combined vertical rise of more than 3.6 m.

34. Clause D3.12 – Glazing on an Accessway

On an accessway where there is no chair rail, handrail or transom provided to all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly line marked in accordance with the following:

- + Must be clearly marked for the full width of the glazed element,
- + Must be a solid and non-transparent contrasting line,
- + The contrasting line must have a minimum of 30% luminance contrast when viewed against the floor surface or surfaces within 2m of the glazing of the opposite side.
- + Must be not less than 75mm in width,



- + The lower edge of the contrasting line must be located between 900mm and 1000mm above the finished floor level.

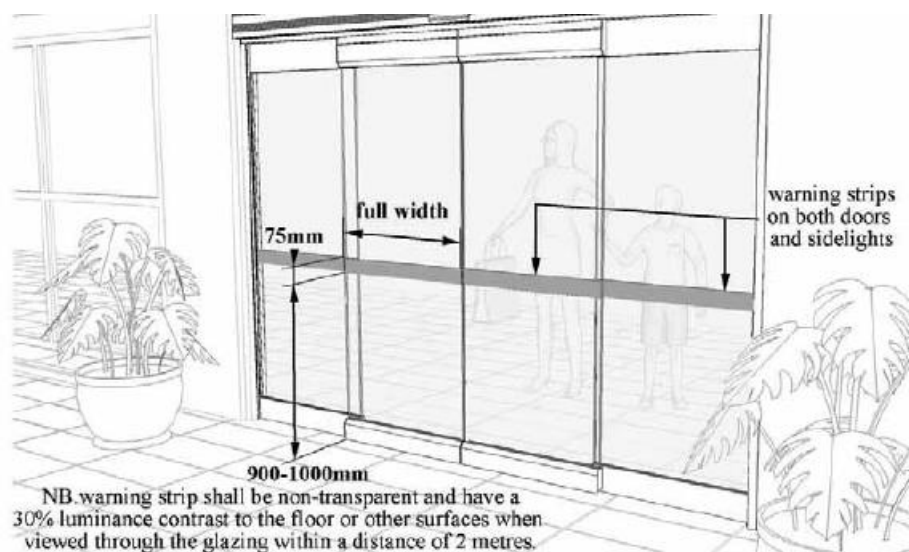


Figure No. 44: Warning Strips to Full Height Glazing

SECTION E – SERVICES AND EQUIPMENT

PART E1 – FIRE FIGHTING EQUIPMENT

35. Part E1 – E4 – Essential Fire Safety Measures

The following essential fire safety measures are required to be installed within the building based on the 'For Comment' Architectural Drawings reviewed to date.

Essential Fire and Other Safety Measures	Standard of Performance
Automatic Fail-Safe Devices	BCA Clause D2.21
Automatic Fire Detection & Alarm System	BCA Spec. E2.2a AS 1670.1 - 2018
Emergency Lighting	BCA Clause E4.4 AS/NZS 2293.1 - 2018
Emergency Evacuation Plan	AS 3745 - 2002
Exit Signs	BCA Clauses E4.5, E4.6 & E4.8 AS/NZS 2293.1 – 2018
Fire Hose Reels	BCA Clause E1.4 AS 2441 – 2005
Fire Hydrant Systems	Clause E1.3 AS 2419.1 - 2005
Paths of Travel	EP & A Regulation Clause 186
Portable Fire Extinguishers	BCA Clause E1.6 & AS 2444 – 2001



Essential Fire and Other Safety Measures	Standard of Performance
Warning & Operational signs	Section 183 of the EP & A Regulations 2000 BCA Clause D3.6

Table No. 9 – Required essential fire safety measures

36. Clause E1.3 – Fire Hydrants

Based on the proposed building having a floor area greater than 500 m², the building is required to be provided with fire hydrant system designed and installed in accordance with AS 2419.1 – 2005.

System Performance

Based on the fact that the building is single storey and has a fire compartment that appears not exceed 1000 m², the maximum number of fire hydrants that are required to flow simultaneously is 1 in accordance with Table 2.1 of AS 2419.1 – 2005.

The Fire Services Consultant will be required to provide design verification that the hydrant system has been designed so 1 hydrant can flow simultaneously in accordance with the requirements of AS 2419.1 – 2005.

Note: Verification is required to be provided from the Architect that the total floor area of the building does not exceed 1,000 m².

Hydrant Locations

If external hydrants are installed, they are required to be set back a minimum distance of 10 m from the external walls of the building unless protected by construction having a minimum FRL of 90/90/90 which extends 3m above and 2m beyond the hydrant outlet.

If internal fire hydrants are installed, they are required to be positioned within 4m of each of the required exit doors.

At present, the Architectural Drawings do not indicate the proposed location of fire hydrants serving the building. The Fire Services Consultant is to verify the location of the fire hydrants serving the building and these are to be identified on the Architectural Drawings.

Fire Hydrant Booster

A fire hydrant booster is required to be located in a manner where it is within sight of the main entrance of the building and adjoins a primary vehicular entrance and is situated within 8 m of a hardstand access to permit Brigade access.

Verification is required as to which existing fire hydrant booster on the hospital site will be relied upon in order to serve the TAM facility.

It is noted that it is likely that the hydrant booster relied upon will not be located within sight of the main entrance of the building and thus a non-compliance with AS 2419.1 – 2005 will be created.

The provision of a fire hydrant booster not within the sight of the main entrance of the building will be required to be addressed as part of a Fire Engineering Assessment to be undertaken by the appointed Fire Safety Engineer in order to demonstrate compliance with the nominated Performance Requirements of the BCA.

37. Clause E1.4 – Hose Reels

Fire hose reels are required to be installed throughout the building in accordance with AS 2441 – 2005.

Location

Internal fire hose reels are required to be located as follows:

- + Within 4m of the exit doors leading to open space; or
- + Adjacent to an internal fire hydrant

It is noted that two internal fire hose reels are positioned within 4 m of the required exit doors as indicated on the Architectural Drawings.

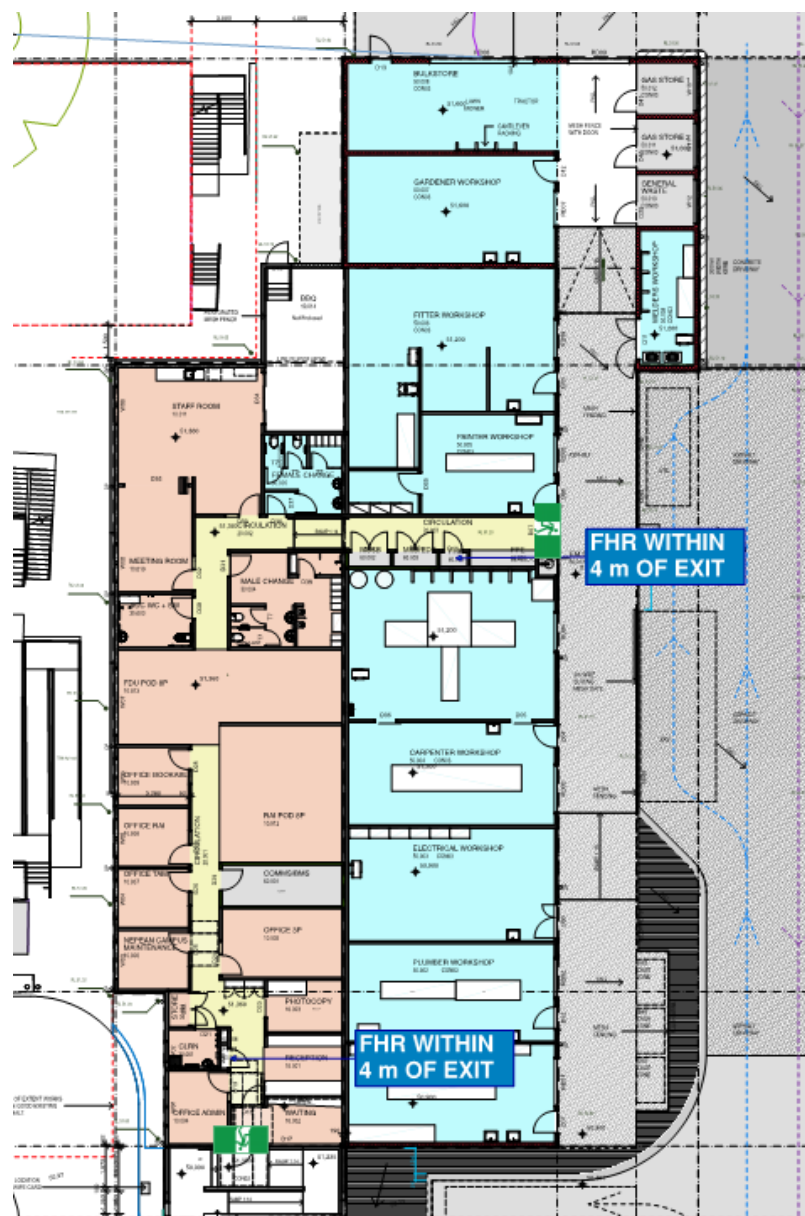


Figure No. 45: Location of fire hose reels located within 4m of exits

Doors to Cupboards Housing FHR's

Doors to cupboards housing fire hose reels are to be designed in such a manner that when they are open, they do not impede on the path of travel leading to an exit.

In this instance, doors to cupboards will be required to swing 180° open against the wall face or in some instances, two smaller doors may need to be provided to cupboards so as not to impede the width of exits. Special attention is required to cupboards located directly adjacent to fire safety doors throughout the building.

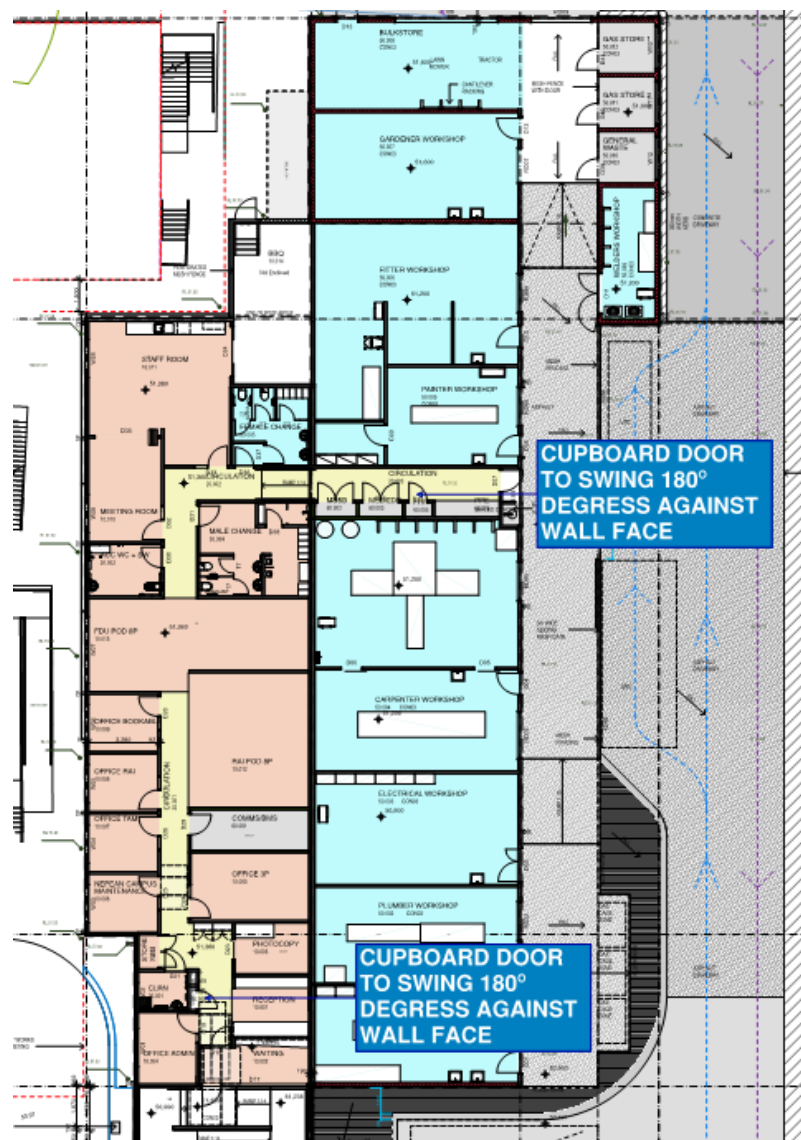


Figure No. 46: Cupboard doors that are required to swing 180° degrees against wall face

38. Clause E1.5 – Sprinklers

Provision of Sprinklers

Based on the building classification and the rise in storeys of the building, the building is not required to be provided with an Automatic Fire Suppression System in accordance with Clause E.1.5 and Clause E2.2a.

Furthermore, it is noted that Health Infrastructure have provided written confirmation that the sprinklers are not required to be installed within the building in accordance with the Health Infrastructure Services Guidelines.



39. Clause E1.6 – Portable Fire Extinguishers

Portable fire extinguishers are to be installed in accordance with clause E1.6 and AS 2444.

PART E2 – SMOKE HAZARD MANAGEMENT

40. Clause E2.2 – Smoke Hazard Management

Automatic Fire Detection & Alarm System

Based on the building classification and the rise in storeys of the building, the building is not required to be provided with an Automatic Fire Detection & Alarm System in accordance with Clause E2.2a.

Notwithstanding the requirements of the BCA, it is understood that an Automatic Fire Detection & Alarm System is proposed to be installed throughout the building at the direction of HI / LHD.

Key elements of AS 1670.1 which require close attention are as follows:

- + Where a sole occupancy unit i.e., bedroom consists of one main room and water closet/shower/bathroom (which is not used for other purposes i.e., laundry), it may be protected by one smoke detector located in the main room provided that the total area of the whole unit is less than 50m² i.e., when less than 50 m², the water closet/shower/bathroom is not required to be protected.
- + Where an area is divided into sections by walls, partitions, or storage racks reaching within 300mm of the ceiling (or the soffits of the joists where there is no ceiling) each section is to be treated as a room and is required to be protected.
- + Where full height curtains are proposed to be installed within treatment areas, ward areas etc, they must be of open mesh material for at least 300mm to permit smoke to pass through, otherwise the curtains will be considered a wall and smoke detectors will have to be installed either side of the curtains.
- + A clear space of at least 300mm radius, to a depth of 600mm is required to be maintained from the smoke detector.
- + Detectors are required to be located a minimum distance of 900mm from supply air fans or ceiling fans.
- + Detectors are required in all sanitary facilities with a floor area greater than 3.5m².
- + Any cupboard with a floor area >3m² is required to be protected.
- + All electrical cupboards, comms cupboards etc. irrespective of the size are required to be protected.

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

41. Clause E4.2 – Emergency Lighting

Emergency Lighting is required to be installed throughout the building in accordance with AS 2293.1 -2018 in the following locations:

- + In every passageway, corridor, hallway or the like that is part of the path of travel to an exit.

42. Clause E4.5 – Exit Signs

Exit signs are to be installed throughout the building in accordance with AS 2293.1 -2018 in the following locations:

- + Doors providing direct egress from a storey to open space.
- + Doors leading from courtyards etc. back into the building; and
- + Above doorways in a path of travel where the location of the exit is not clear.

43. Clause E4.6 – Directional Exit Signs

Directional exit signs are to be installed throughout the building where the exits are not readily apparent to occupants in accordance with AS 2293.1 -2018.



44. Clause E4.9 – Emergency Warning & Intercom System

An Emergency Warning & Intercom System is not required to be installed throughout the building based on the building classification, together with the rise in storeys and floor area.

SECTION F – HEALTH & AMENITY

PART F1 – DAMP AND WEATHERPROOFING

45. Clause F1.0 – Deemed to Satisfy Provisions

Performance Requirement FP1.4 relating to the prevention of water through the external is required to be demonstrated as being complied. There is no specific DtS Clause for this Performance Requirement in respect of external walls.

In this instance a Performance Solution Report is required to be prepared to demonstrate that the external wall and roof weatherproofing system meets Performance Requirement FP1.4 and will prevent the penetration of water through the external walls.

46. Clause F1.1 – Stormwater Drainage

Stormwater Drainage is required to be designed in accordance with AS/NZS 3500.3.

Design Verification will be required to be submitted by the Civil / Hydraulic Design Engineer.

47. Clause F1.4 – External above Ground Membranes

All waterproofing membranes to external areas are to be designed and constructed in accordance with AS 4654 Parts 1 & 2. Particular attention is required to doorways leading to external areas where there is a level threshold.

This is not just a waterproofing issue but also an architectural design issue where grated drains may be required to be installed in front of the door where a step down is not provided.

48. Clause F1.5 – Roof Coverings

A roof is required to be covered with –

- + Concrete roofing tiles complying with AS 2049 and fixed in accordance with AS 2050; or
- + Terracotta roofing tiles complying with AS 2049 and fixed in accordance with AS 2050; or
- + Cellulose cement corrugated sheeting complying with AS/NZS 2908.1 and installed in accordance with AS/NZS 1562.2; or
- + Metal sheet roofing complying with AS 1562.1; or
- + Plastic sheet roofing designed and installed in accordance with AS/NZS 4256.1, AS/NZS 4256.2, AS/NZS 4256.3, AS/NZS 4256.5 and AS/NZS 1562.3; or
- + Terracotta, fibre-cement and timber slates and shingles design and installed in accordance with AS 4597.

49. Clause F1.6 – Sarking

Sarking-type material used for weatherproofing of roofs and walls is required to comply with AS/NZS 4200.1 and AS 4200.2.

50. Clause F1.7 – Waterproofing of Wet Areas

Wet Area Construction

Building elements in the bathroom or shower room, a slop hopper or sink compartment, a laundry or sanitary compartment is required:

- + Be water resistant or waterproof in accordance with Table F1.7 (Specification 26 of NCC 2022); and
- + Be constructed in accordance with AS 3740



Urinal Construction

Where a slab or stall type urinal is installed –

- + The floor surface of the room containing the urinal must be an impervious material; and
 - ▲ Where no step is installed, must –
 - Be graded to the urinal for a distance of 1.5 m from the urinal channel; and
 - Have the remainder of the floor graded to a floor waste; and
 - ▲ Where a step is installed –
 - The step must have an impervious surface and be graded to the urinal channel; and
 - The floor behind the step must be graded to a floor waste; and
- + The junction between the floor surface and the urinal channel must be impervious.

Where a wall hung urinal is installed –

- + The wall must be surfaced with impervious material extending from the floor to the top of the urinal and not less than 225 mm on each side of the urinal; and
- + 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 –

- + The wall must be surfaced with an impervious material extending from the floor to not less than 100 mm above the floor surface; and
- + The junction of the floor surface and the wall surface must be impervious.

51. Clause F1.9 – Damp-Proofing

Moisture from the ground must be prevented from reaching –

- + The walls above the damp-proof course; and
- + The underside of a suspended floor construction of a material other than timber, and the supporting beams or girders.

Where a damp-proof course is provided, it is required to consist of:

- + A material that complies with AS/NZS 2904; or
- + Impervious sheet material in accordance with AS 3660.1.

52. Clause F1.10 – Damp-Proofing of Floors on the Ground

A floor of a room laid on the ground or on fill, moisture from the ground is required to 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. Except damp-proofing need not be provided if -

- + Weatherproofing is not required; or
- + The floor is the base of a stair, lift or similar shaft which is adequately drained by gravitation or mechanical means.

53. Clause F1.13 – Glazed Assemblies

The following glazed assemblies in an external wall, is required to comply with AS 2047 requirements for resistance to water penetration:

- + Windows
- + Sliding and swing glazed doors within a frame, including French and bi-fold doors with a frame
- + Adjusted louvres
- + Shopfronts



- + Window walls within one piece framing

The following glazed assemblies are not required to comply with the requirements of AS 2047:

- + All glazed assemblies not in an external wall
- + Revolving doors
- + Fixed louvres
- + Skylights, roof lights and windows in other than the vertical plane
- + Sliding and swing glazed doors without a frame
- + Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047

Second-hand windows, re-used

PART F2 – SANITARY AND OTHER FACILITIES

54. Clause F2.3 – Facilities in Class 3 to 9 Buildings

Required Sanitary Facilities

- + BCA2016 Part F requires sanitary facilities with the Class 5 and 8 building as follows: -

(a) Facilities for Staff: -

Toilet facilities for staff are to be provided in accordance with the following: -

User Group	Closet Pans		Urinals		Washbasins	
	Design Occupancy	Number	Design Occupancy	Number	Design Occupancy	Number
Male Employees	1-20	1	1	0	1-20	1
			11-25	1		
	>20	Add 1 per 20	26-50	2	>20	Add 1 per 20
Female Employees			>50	Add 1 per 50		
	1-15	1			1-20	1
	> 15	Add 1 per 15	N/A		> 20	Add 1 per 20

Table No. 10 – Sanitary facilities required for staff members

The 'For Comment' Architectural Drawings detail the provision of two (2) female water closets and two (2) male water closets (and two (2) urinals) with one (1) unisex accessible sanitary facility.

Based on the sanitary facilities provided, a total of 45 female and 50 male staff can be accommodated within the building.

Verification will be required to be provided from the LHD that the total male and female staff within the building at any one time do not exceed 45 female and 50 male staff.

55. Clause F2.4 – Accessible Sanitary Facilities

Facilities for a person with a disability will be required to be throughout the building in accordance with the below.

In this instance the following sanitary facilities are required to be provided:

- + One (1) unisex accessible sanitary facility for staff
- + One (1) unisex ambulant sanitary facility for male staff within the male change room
- + One (1) unisex accessible sanitary facility for female staff within the female change room

The Architectural Drawings indicate the required provision of sanitary facilities for a person with a disability.



Accessible Sanitary Facilities

The unisex accessible sanitary facility is required to be designed spatially in accordance with the following Figures:

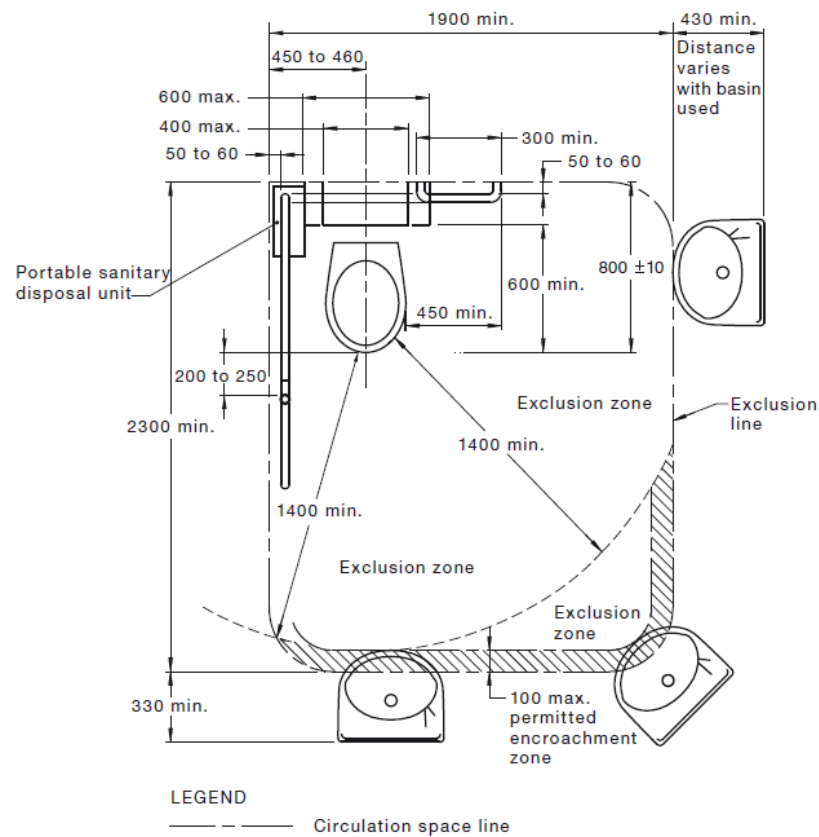
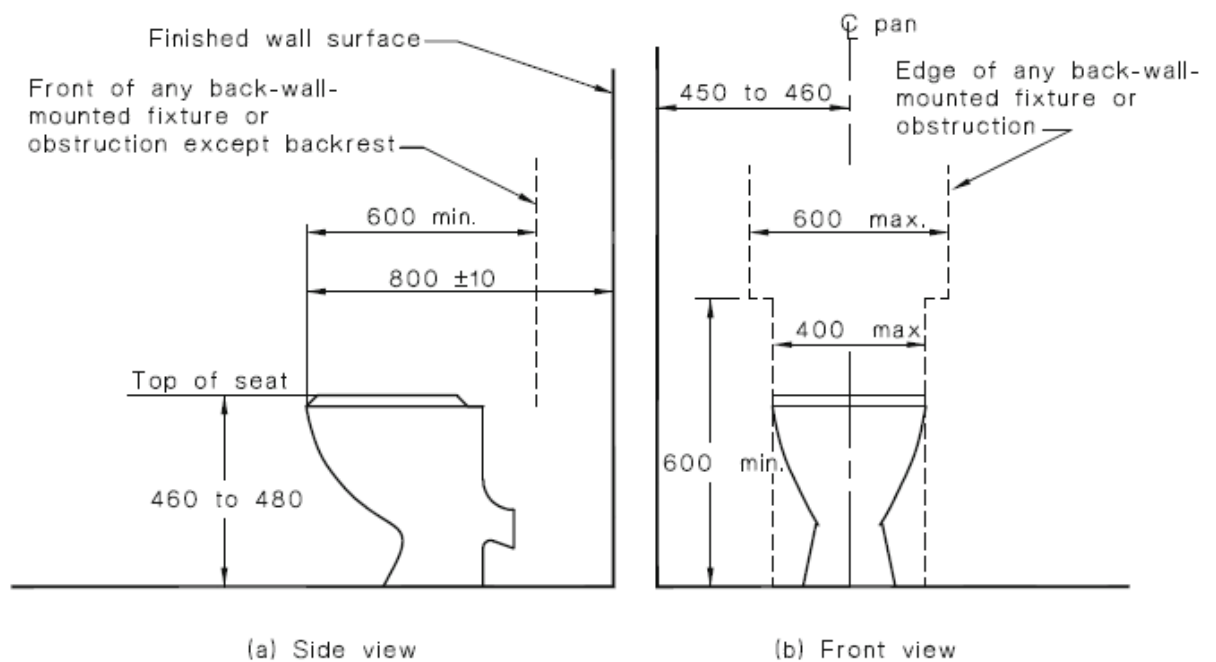


Figure No. 47: Circulation space required within the accessible sanitary facility

Clearances around the water closet are to be in accordance with the figure below:



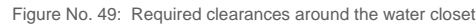
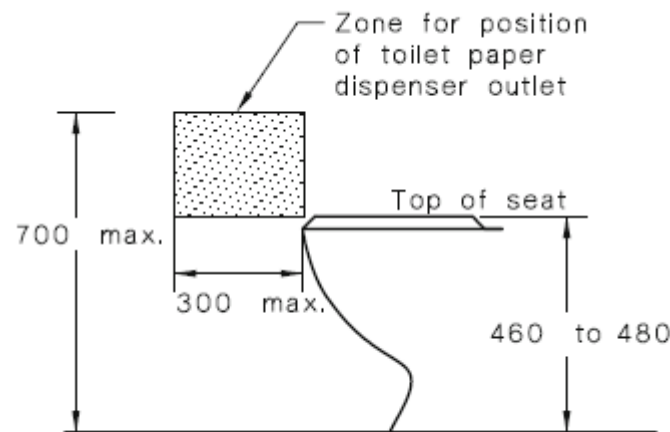


Figure 10.10 consists of three plan views of a lavatory, labeled (a), (b), and (c), showing different door swing configurations and dimensions in millimeters.

- (a) Standard Configuration:**
 - Overall width: 1670 mm
 - Overall depth: 900 mm
 - Door swing: 90 degrees
 - Door width: 300 mm (min.)
 - Door height: 110 mm
 - Washbasin width: 450 mm
 - Washbasin height: 800 mm
 - Washbasin circulation space: 700 mm
 - Hinged door circulation space: 850 mm (min.)
 - Washbasin circulation space: 300 mm (min.)
- (b) 180-degree Door Swing Configuration:**
 - Overall width: 1670 mm
 - Overall depth: 900 mm
 - Door swing: 180 degrees
 - Door width: 300 mm (min.)
 - Door height: 110 mm
 - Washbasin width: 450 mm
 - Washbasin height: 800 mm
 - Washbasin circulation space: 700 mm
 - Hinged door circulation space: 850 mm (min.)
 - Washbasin circulation space: 300 mm (min.)
- (c) 90-degree Door Swing Configuration with Larger Circulation Space:**
 - Overall width: 1670 mm
 - Overall depth: 900 mm
 - Door swing: 90 degrees
 - Door width: 300 mm (min.)
 - Door height: 110 mm
 - Washbasin width: 450 mm
 - Washbasin height: 800 mm
 - Washbasin circulation space: 700 mm
 - Hinged door circulation space: 850 mm (min.)
 - Washbasin circulation space: 300 mm (min.)
 - Additional dimensions: 1450 mm (total width), 300 mm (min.) (door width), 850 mm (min.) (door height), 300 mm (max.) (door swing), 530 mm (door swing), 450 mm (door swing), 800 mm (door swing), 700 mm (door swing).

- + Rocker action and toggle switches are required to be installed which have a minimum dimension of 30 mm x 30 mm. Push-pad switches are to have a minimum dimension of 25mm in diameter.
- + General purpose outlets are to be located between 600 mm to 1100 mm above FFL and not less than 500 mm from any internal corner.
- + The outlet for the toilet paper dispenser is to be located in accordance with the following figure. The toilet paper cannot encroach upon the clearance space required around the grabrail.



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- + External to all circulation spaces at a height of 790 mm to 1000 mm with a minimum width of 120 mm and a minimum length of 400 mm.
- + Where provided, Soap dispensers, towel dispensers, hand dryers and similar fittings are required to be operable by one hand and are to be installed with the height of their operative component or outlet not less than 900 mm and not more than 1100 mm above FFL and no closer than 500 mm from an internal corner.
- + A coat hook is to be provided at a height between 1200 mm to 1350 mm above FFL and not less than 500 mm from an internal corner.

Ambulant Sanitary Compartments

The ambulant sanitary compartments contained within the male and female change rooms are required to be designed spatially in accordance with the following Figures:

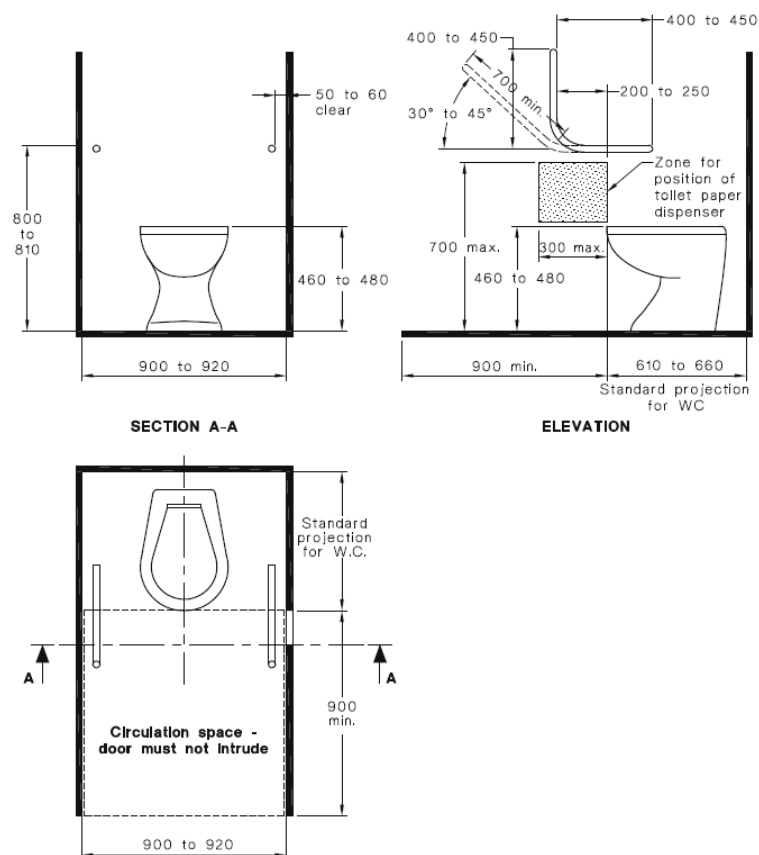


Figure No. 50: Layout requirements for ambulant sanitary compartments

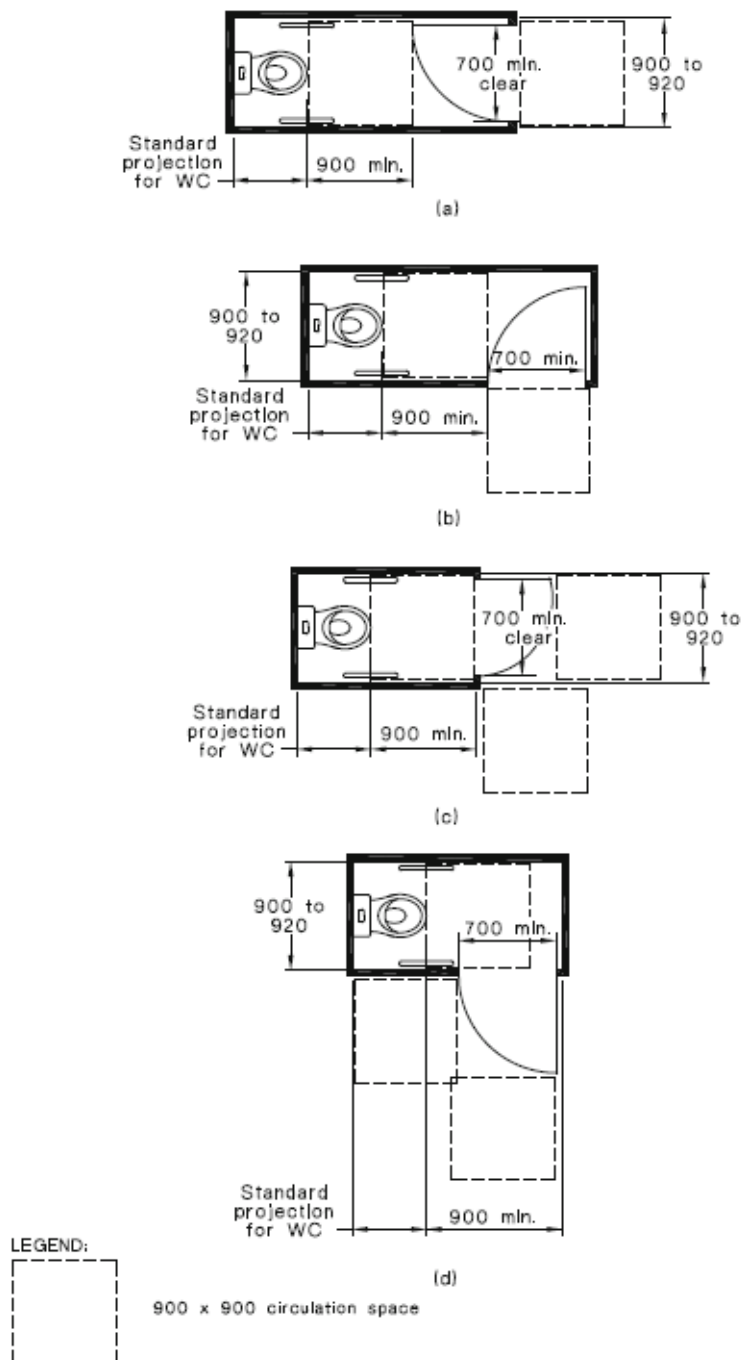


Figure No. 51: Options for doorways leading to ambulant sanitary compartments

PART F3 – ROOM HEIGHTS

56. Clause F3.1 – Height of Rooms

The floor to ceiling heights throughout shall comply with the following:

- + in a patient care area, treatment room, clinic, waiting room, dining room, activity room, passageway, corridor, or the like – 2400 mm; and
- + Workshop Areas – 2400 mm
- + Staff Administration Areas – 2400 mm.
- + Meeting Rooms, Staff Rooms, Board Rooms – 2100 mm



- + Bathrooms, Change Rooms – 2100 mm.
- + Corridors, Hallways – 2100 mm
- + Internal driveways used by Motor Vehicles – 2200 mm

The Architectural Drawings that compliance is achievable in relation to the ceiling heights.

PART F4 – LIGHT AND VENTILATION

57. Clause F4.4 – Artificial Lighting

Natural lighting is not required in accordance with the DTS Provisions to be provided to any of the rooms within the building.

Rooms not provided with natural lighting are required to be provided with artificial lighting.

58. Clause F4.4 – Artificial Lighting

Artificial lighting is required to be designed in accordance with AS 1680.0 - 2009.

Artificial lighting is required to all corridors, passageways, stairways throughout the building.

If natural light of a standard equivalent to that required by Clause F4.2 is not available, and the periods of occupant or use of the room or space will create undue hazard to occupants seeking egress in an emergency then artificial lighting is required to be provided to all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress.

59. Clause F4.5 – Ventilation of Rooms

Mechanical Ventilation and Air Conditioning will be required to all areas not naturally ventilated in accordance with the DTS Provisions of the BCA and AS 1668.2 - 2012.

60. Clause F4.8 – Restriction on Location of Sanitary Compartments

The location of the sanitary compartments complies with the provisions of Clause F28 in that it does not open directly onto a workplace area normally occupied by more than one person.

SECTION G – ANCILLARY PROVISIONS

61. Part G6 – Occupiable Outdoor Areas

Due to the fact that the BBQ area is provided with a stairway from the area which is connected to open space, it has not been assessed as an occupiable outdoor space in accordance with the DTS Provisions of the BCA.

SECTION J – ENERGY EFFICIENCY

62. Parts J1 – J8

The energy efficiency provisions of Section J are applicable to the proposed building.

In this regard Parts J1 - Building Fabric, J2, Part J3 - Building Sealing, Part J5 - Air Conditioning and Mechanical Ventilation, Part J6 - Artificial Lighting and Power, and Part J7 - Hot water supply & Part J8 – Access for Maintenance is required to be provided.

If the proposed design will not comply with the DtS provisions of the BCA, then a JV3 Assessment will be required to be undertaken to demonstrate compliance with the Performance Requirements of the BCA.



E. CONCLUSION

This report contains a BCA2019 and Access to Premises Standards 2010 assessment of the reference 'For Comment' Architectural Drawings for the proposed TAM facility to be construction as part of the proposed Stage 2 Nepean Hospital Redevelopment.

Arising from our assessment we are satisfied that the new works can satisfy the requirements of the BCA2019 Amendment No. 1 and the Access to Premises Standards 2010 if the works are designed and constructed in accordance with the requirements of this BCA Report and the subsequent Fire Engineering Assessment undertaken by Fire Safety Engineer and Access Report prepared by iAccess Consultants.