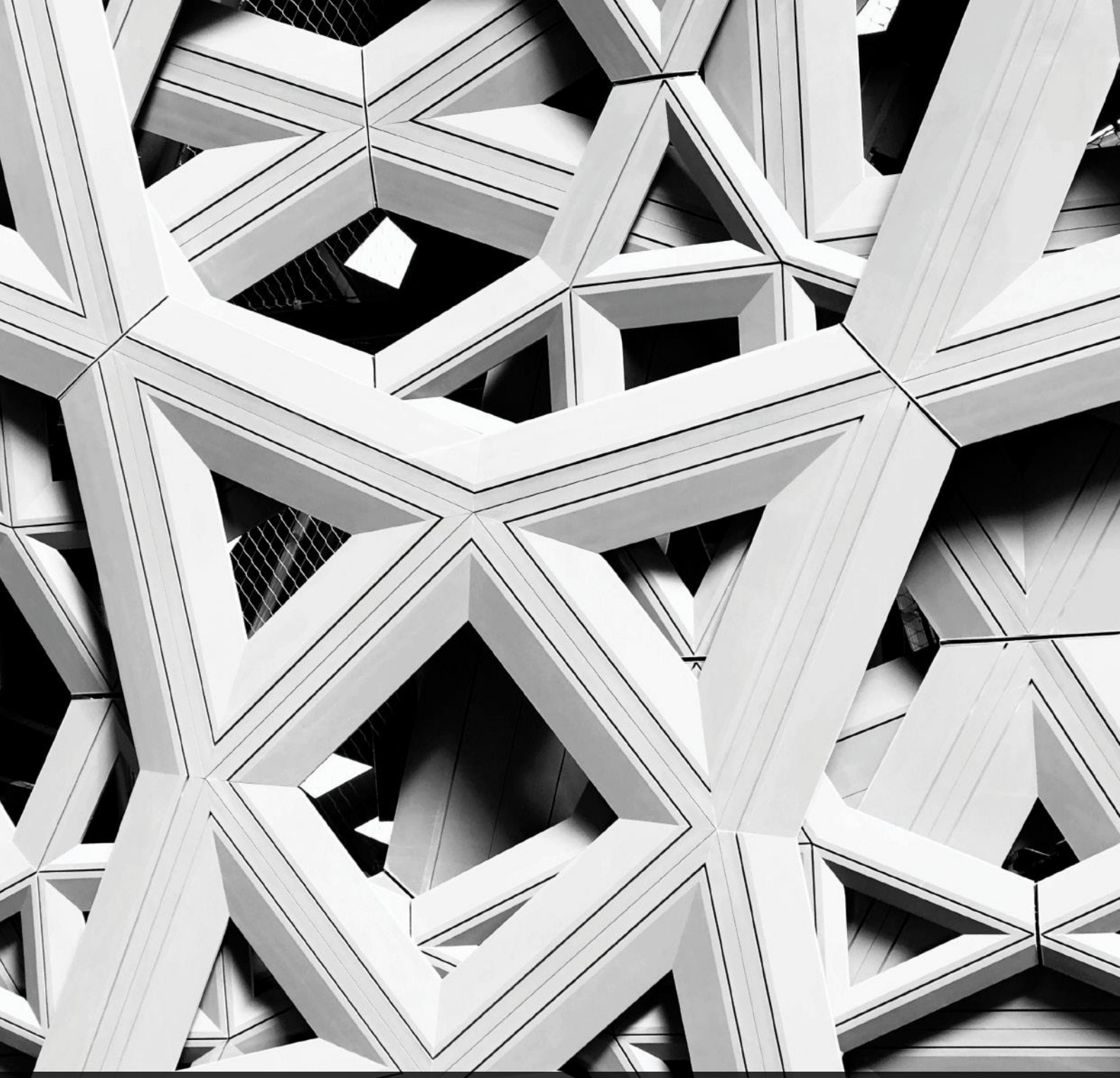


BCA & DDA Capability Statement

Maitland Mental Health Rehabilitation Project

51 Metford St, Metford, NSW 2323

Prepared for:

NSW Health Infrastructure

Revision 1

04 October 2024

Reference: N230033

bmplusg.com.au

1.0 Introduction

This BCA Capability Statement has been prepared by BM+G on behalf of Health Infrastructure (HI) to assess the potential environmental impacts that could arise from infrastructure works at 51 Metford Rd, Metford NSW 2323 (the site). The project is seeking approval for a Development Without Consent (REF) application under Part 5 of the EP&A Act.

This statement has been prepared to confirm that the architectural documentation has been reviewed by an appropriately qualified Building Surveyor and Accredited Certifier and enable the Consent Authority to be satisfied that compliance with the fire & life safety and health & amenity requirements of the BCA will readily be achieved.

This report accompanies a Review of Environmental Factors (REF) for the construction and operation of a new mental health services building within the Maitland Hospital campus, including:

- Site establishment
- Site preparation including earthworks;
- Construction of internal roads and addition of at-grade car parks;
- Construction of 2 storey mental health facility;
- 20 Medium Secure Forensic beds; 24 Low Secure Forensic beds; 20 Rehabilitation and Recovery beds (including high risk civil consumers) (64 beds total);
- Inground building services works and utility adjustments, including service diversions;
- Building foundation works;
- Tree removal;
- Associated landscaping;.
- Bioretention basin.

Refer to the Review of Environmental Factors prepared by Ethos Urban for a full description of works.

1.1 Site Description

The site is located at the Maitland Hospital Campus on Metford Road, Maitland, approximately 6.4km from the CBD of Maitland. The project site is located within the development parcel, legally described as Lot 73 DP 1256781, as identified in the figure below. The site is located to the east of the recently constructed Maitland Hospital.

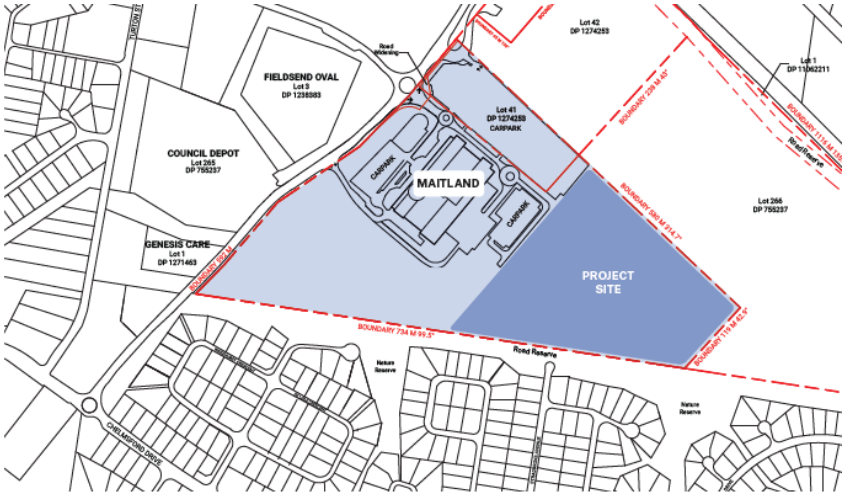


Figure 1: Project locational diagram

1.2 Statement of Significance

Based on the identification of potential issues, and an assessment of the nature and extent of the impacts of the proposed development, it is determined that:

- The extent and nature of potential impacts are moderate, and will not have significant adverse effects on the locality, community and the environment;
- Potential impacts can be appropriately mitigated or managed to ensure that there is minimal effect on the locality, community.

1.3 Capability Statement Objectives

The objectives of this statement are to:

- confirm that the architectural documentation has been reviewed by an appropriately qualified Building Surveyor and Accredited Certifier. To enable the Consent Authority to be satisfied that compliance with the fire & life safety and health & amenity requirements of the BCA will readily be achieved.

1.4 Relevant Version of the BCA

Pursuant to Section 6.28 of the Environmental Planning and Assessment Act 1979, the proposed building is subject to compliance with the relevant requirements of the BCA as in force at the time of the date of invitation for tenders to carry out the Crown building work. The current BCA that is in force is BCA 2022, with BCA 2025 coming in to force 1 May 2025. As the invitation to tender is likely to be / has been lodged after 1 May 2023, this report assesses the design against compliance with the requirements of BCA 2022.

1.5 Referenced Documentation

This statement has been prepared in correlation with the Schematic Design BCA & Access Assessment Report revision 1 prepared by BM+G dated 13 September 2024 (see Appendix 1) and the schematic design architectural plans prepared by Bates Smart:

+ Drawing No.	+ Rev	+ Date
MH.01.01	3	30.08.2024
MH.03.01	3	30.08.2024
MH.03.03	3	30.08.2024
MH.10.01	2	30.08.2024

+ Drawing No.	+ Rev	+ Date
MH.01.03	3	30.08.2024
MH.03.02	3	30.08.2024
MH.09.01	2	30.08.2024
MH.22.02	2	30.08.2024

2.0 REF Deliverables

+ Item	+ REF Requirement	+ Relevant Section of Report
4	+ Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach. + Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality. + Demonstrate how the building design will deliver a high-quality development, including consideration of façade design, articulation, roof design, materials, finishes, colours, any signage and integration of services.	Sections 1.0 - 5.0 of Schematic Design BCA & Access Assessment Report revision 1 prepared by BM+G dated 13 September 2024.
	+ Assess how the development complies with the relevant accessibility requirements.	Sections 3.3 & 3.5 of Schematic Design BCA & Access Assessment Report revision 1 prepared by BM+G dated 13 September 2024.

3.0 Conclusion

This statement and the associated report confirm that BM+G have undertaken a review of the architectural plans of the proposed Maitland Hospital Campus on Metford Road, Maitland against the deemed-to-satisfy provisions of the Building Code of Australia 2022 and the Disability (Access to Premises – Buildings) Standards 2010.

In this instance, we are of the opinion that any amendments required to the design documentation in order to comply with the BCA can be addressed in the preparation of the detailed documentation for Crown Certificate without giving rise to significant changes to the proposal as submitted for REF.

Arising from our review, it is considered that the proposed development can readily achieve compliance with the relevant provisions of the BCA.

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

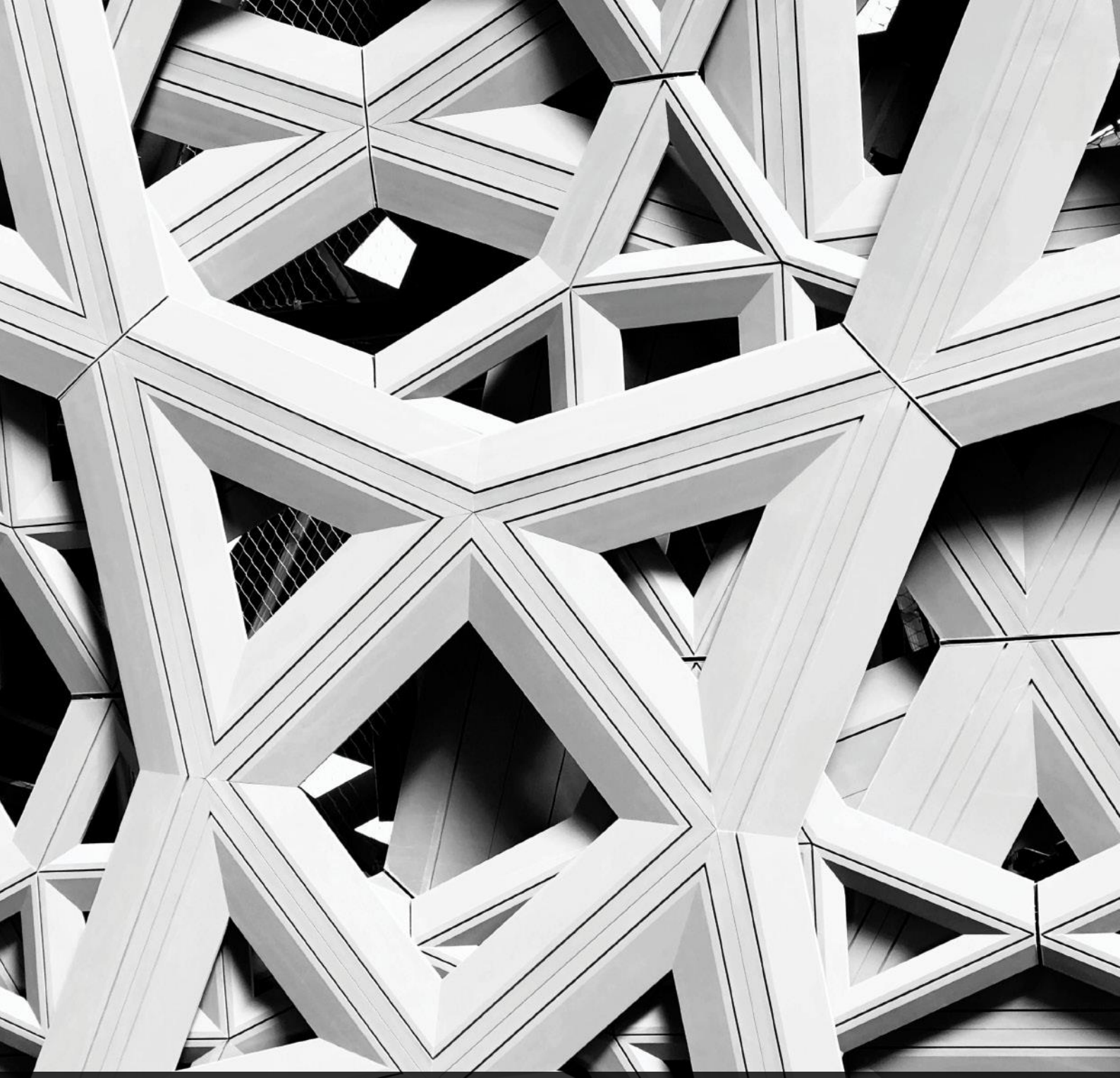
Prepared by:

Jake Hofner
Newcastle + North Coast Manager
BM+G
Building Surveyor-Unrestricted (NSW)
BDC No.: 2309 **ACAA No.:** 731

Beth Simmons
Assistant Building Surveyor
BM+G

Peter Keppie
Senior Building Surveyor
BM+G
Building Surveyor-Unrestricted (NSW)
BDC No.: 04603

Appendix 1 – Schematic Design BCA & Access Assessment Report



BCA & Access Assessment Report

Schematic Design

Maitland Mental Health Rehabilitation Project

Prepared for:

NSW Health Infrastructure

Revision 2

04 October 2024

Reference: N230033

bm+g

bmplusg.com.au

+ Contents

+ Report Status

+ Date	04.10.2024
+ Revision	2
+ Status	Schematic Design Report
+ Author	Peter Keppie + Beth Simmons
+ Reviewed	Jake Hofner

Prepared by:

Peter Keppie
Senior Building Surveyor
BM+G
Building Surveyor-Unrestricted (NSW)
BDC No.: 04603

Beth Simmons
Assistant Building Surveyor
BM+G

Reviewed by:

Jake Hofner
Associate Director
BM+G
Building Surveyor-Unrestricted (NSW)
BDC No.: 0032
Accredited Member of the ACAA
Member No: 731

+ Revision History

+ Revision	0	**+ Date**	21.06.2024
+ Status	Draft Schematic Design Report		

+ Revision	1	**+ Date**	13.09.2024
+ Status	Schematic Design Report		

+ Revision	2	**+ Date**	04.10.2024
+ Status	Amended Schematic Design Report		

1.0 Introduction

This BCA Capability Statement has been prepared by BM+G on behalf of Health Infrastructure (HI) to assess the potential environmental impacts that could arise from infrastructure works at 51 Metford Rd, Metford NSW 2323 (the site). The project is seeking approval for a Development Without Consent (REF) application under Part 5 of the EP&A Act.

This statement has been prepared to confirm that the architectural documentation has been reviewed by an appropriately qualified Building Surveyor and Accredited Certifier and enable the Consent Authority to be satisfied that compliance with the fire & life safety and health & amenity requirements of the BCA will readily be achieved.

This report accompanies a Review of Environmental Factors (REF) for the construction and operation of a new mental health services building within the Maitland Hospital campus, including:

- Site establishment
- Site preparation including earthworks;
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- Construction of 2 storey mental health facility;
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- Building foundation works;
- Tree removal;
- Associated landscaping;.
- Bioretention basin.

Refer to the Review of Environmental Factors prepared by Ethos Urban for a full description of works.

1.1 Site Description

The site is located at the Maitland Hospital Campus on Metford Road, Maitland, approximately 6.4km from the CBD of Maitland. The project site is located within the development parcel, legally described as Lot 73 DP 1256781, as identified in the figure below. The site is located to the east of the recently constructed Maitland Hospital.

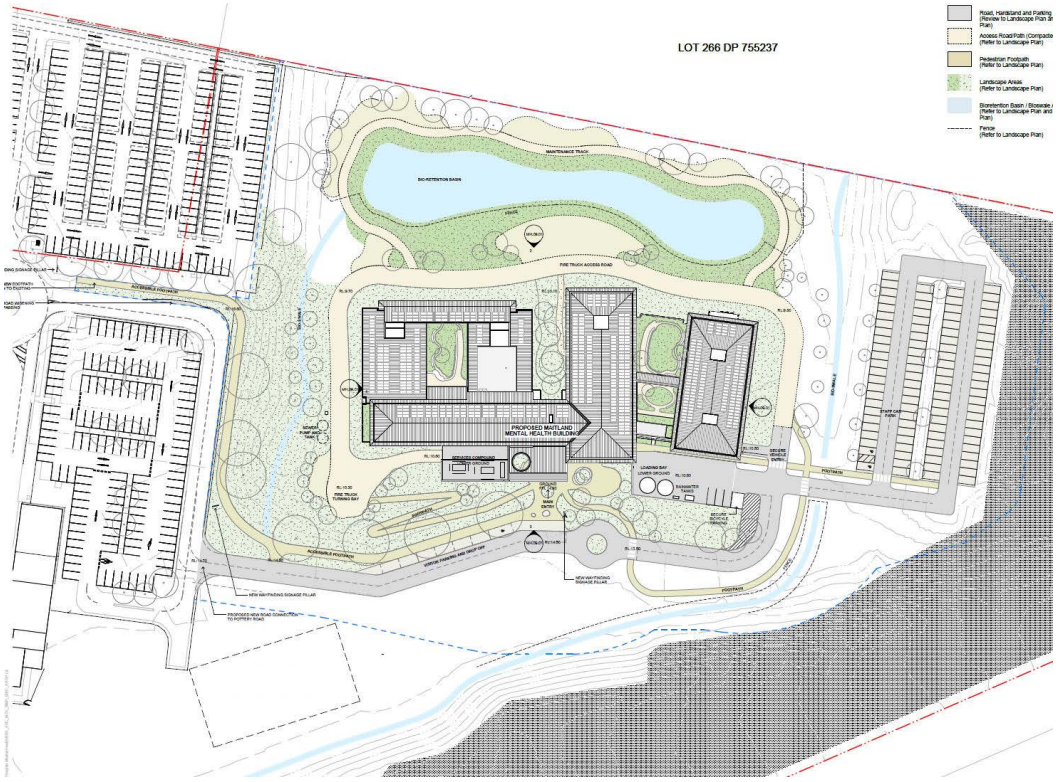

Figure 1: Project locational diagram

1.2 Aim

The aim of this report is to:

- Undertake an assessment of the proposed development against the deemed-to-satisfy provisions of the BCA.
- Identify matters that require plan amendments in order to achieve compliance with the BCA.
- Enable the Public Authority to satisfy its statutory obligations under Section 6.28 of the Environmental Planning and Assessment Act, 1979.
- Undertake an assessment of the proposed development against the Disability (Access to Premises – Buildings) Standards 2010.
- Undertake an assessment of the proposed development against the Part D4 deemed-to-satisfy provisions of the BCA;
- Identify matters that require plan amendments in order to achieve compliance with the Access to Premises Standard and Part D4 of the BCA;
- Identify matters that are to be required to be addressed by Performance Solutions.

1.3 Project Team

The following BM+G team members have contributed to this report:

- **Peter Keppie –** Report Preparation (Senior Building Surveyor) | Building Surveyor-Unrestricted
- **Beth Simmons** – Report Preparation (Assistant Building Surveyor)
- **Jake Hofner** – Peer Review (Associate Director) | Building Surveyor-Unrestricted & ACAA Accredited Member

1.4 Referenced Documentation

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

- Building Code of Australia 2022 (BCA)
- The Guide to the Building Code of Australia 2022
- Disability (Access to Premises – Buildings) Standards 2010
- AS 1428.1:2009 Design for access and mobility - General requirements for access - New building work
- AS1428.2:1992 Design for access and mobility - Enhanced and additional requirements - Buildings and facilities
- AS1428.4.1:2009 Design for access and mobility - Means to assist the orientation of people with vision impairment - Tactile ground surface indicators
- HB198:2014 Guide to the specification and testing of slip resistance of pedestrian surfaces
- NSW Health Infrastructure Design Guidance Note 32.
- NSW Health Engineering Services Guide dated 12 December 2022.
- Architectural Plans prepared by Bates Smart Architects Pty Ltd numbered:

+ Drawing No.	+ Rev	+ Date
MH.01.01	3	30.08.2024
MH.03.01	3	30.08.2024
MH.03.03	3	30.08.2024
MH.10.01	2	30.08.2024

+ Drawing No.	+ Rev	+ Date
MH.01.03	3	30.08.2024
MH.03.02	3	30.08.2024
MH.09.01	2	30.08.2024
MH.22.02	2	30.08.2024

Figure 2: Lower Ground Plan

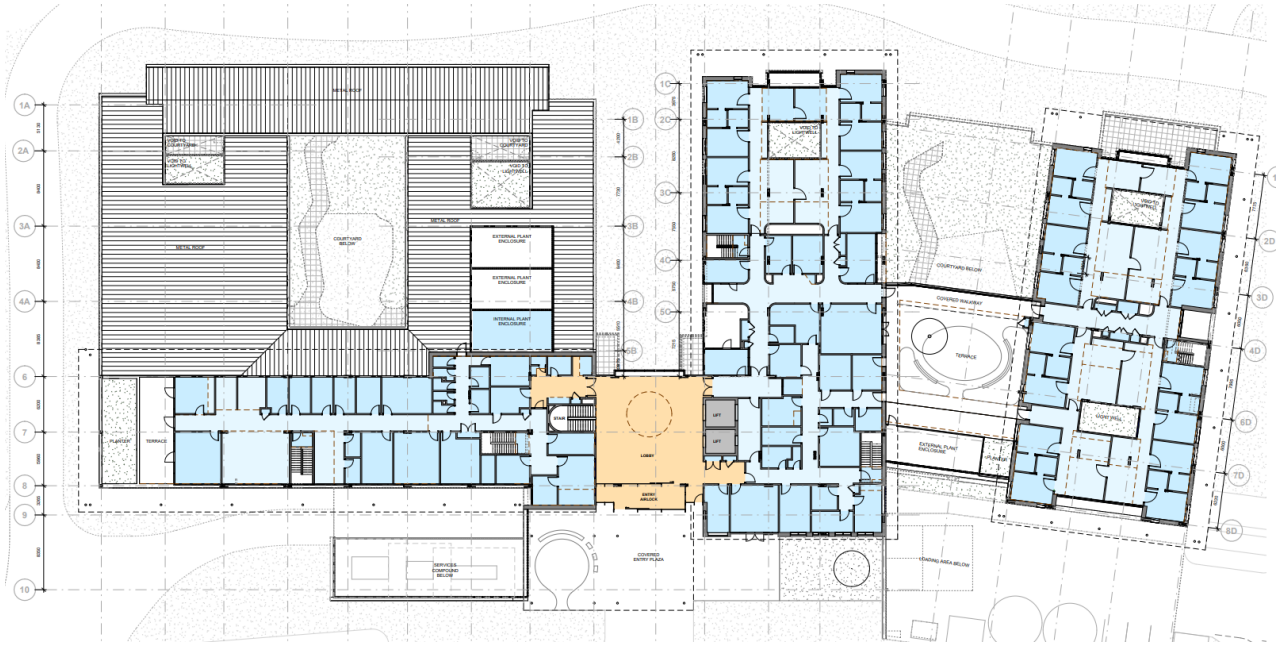

Figure 3: Ground Plan

Figure 4: Building Elevations

1.5 Regulatory Framework

Pursuant to S6.28 of the Environmental Planning and Assessment Act 1979, the proposed building is subject to compliance with the relevant requirements of the BCA as in force at the time of the date of invitation for tenders to carry out the Crown building work.

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

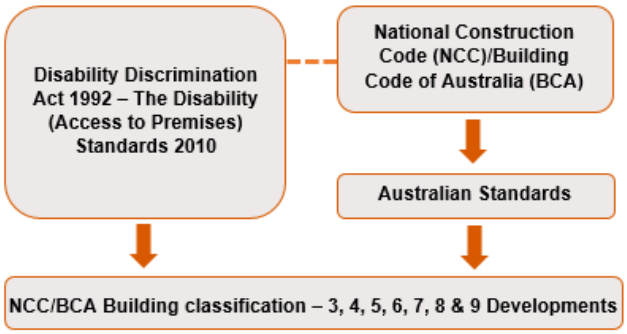

Figure 5

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

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

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

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

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

Section 23 of the Disability Discrimination Act DDA 1992 states;

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

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

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

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

1.6 Relevant Version of the NCC Building Code of Australia

Pursuant to Section 6.28 of the Environmental Planning and Assessment Act 1979, the proposed building is subject to compliance with the relevant requirements of the BCA as in force at the time of the date of invitation for tenders to carry out the Crown building work. The current BCA that is in force is BCA 2022, with BCA 2025 coming in to force 1 May 2025. As the invitation to tender will be lodged prior to 1 May 2025, this report assesses the design against compliance with the requirements of BCA 2022.

1.7 Compliance with the National Construction Code

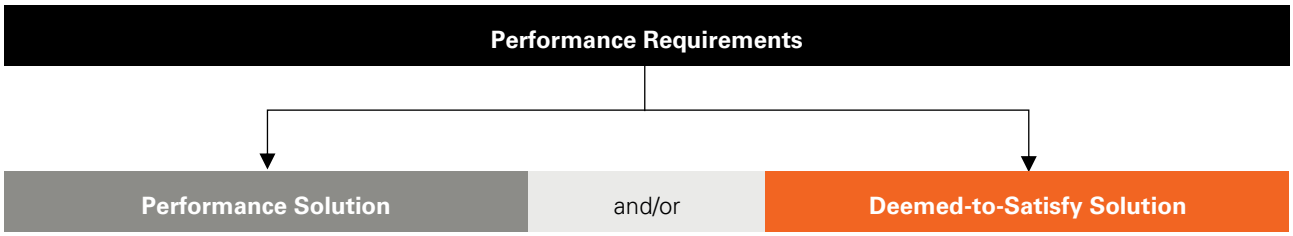

Figure 6

Compliance with the NCC is achieved by complying with:

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

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

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

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

- Prepare a performance-based design brief in consultation with relevant stakeholders.
- Carry out analysis, using one or more of the Assessment Methods listed in A2G2(2), as proposed by the performance-based design brief.
- Evaluation the results against the acceptance criteria in the performance-based design brief.
- Prepare a final report that includes:
  - All Performance Requirements and/or Deemed-to-Satisfy provisions identified through A2.2(3) or A2G4(3) as applicable; and
  - Identification of all Assessment Methods used; and
  - Details of steps (a) to (c); and
  - Confirmation that the Performance Requirement has been met; and
  - Details of conditions or limitations, if any exist, regarding the Performance Solution.

1.8 Limitations and Exclusions

The limitations and exclusions of this report are as follows:

- No assessment has been undertaken with respect to the following areas of the NCC:
  - Structural
  - Weatherproofing
  - Waterproofing
  - Acoustic
  - Passive Fire Protection
  - Section J / ESD
  - Fire Safety Engineering
- This report does not consider BCA Part G5 (Volume 1) which makes provision for construction of buildings in bushfire-prone areas, therefore no assessment has been undertaken in consideration of RFS, Planning for Bushfire Protection and AS 3959. Where Part G is applicable to the site, then it is required that assessment / due diligence is undertaken by a specialist consultant to verify compliance.
- This report does not constitute a detailed assessment of the architectural documentation against the requirements of Section J. It is understood that a suitably qualified consultant will be engaged to determine compliance in this regard.
- Evacuation of occupants with a disability. No assessment has been undertaken to consider the equitable evacuation of all occupants.
- This report is based on a review of the referenced documents. At this point in time, no inspection has been undertaken to ascertain the current level of DDA compliance.
- No assessment has been undertaken unless it explicitly relates to the Access to Premises Standard of Part D4 of the BCA. As an example, AS 1428.2-1992 has not been assessed.
- Please note that whilst the BCA specifies a minimum standard of compliance Part D4 of the BCA for access and facilities for people with disabilities, compliance with such requirements may not necessarily preclude the possibility of a future complaint made under the DDA 1992. The DDA is a complaint-based legislation and is presently not identified by the State Building Codes and Regulations. In this regard the building owner should be satisfied that their obligations under the DDA have been addressed.
- BM+G has not undertaken an assessment of any Performance Solution Reports at the time of the preparation of this report.
- The Report does not address matters in relation to the following Local Government Act and Regulations:
  - Work Health and Safety Act and Regulations.
  - Work Cover Authority requirements.
  - Water, drainage, gas, telecommunications and electricity supply authority requirements.
- **BM+G** Pty Ltd cannot guarantee acceptance of this report by Local Council, Fire & Rescue NSW 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.
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1.9 Report Terminology

BCA Completion Certificate – A certificate issued at the completion of works which confirms the building is suitable for occupation in accordance with its classification under the BCA.

BCA Crown Certificate – A certificate issued against building works carried out by or on behalf of the Crown which verifies that the works comply with the requirements of the BCA prior to works commencing, subject to S6.28 of the Environmental Planning and Assessment Act 1979.

Building Code of Australia – 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 NSW under the provisions of the Environmental Planning & Assessment Act & Regulation.

Climatic Zone – Means an area defined in Figure 2 and in Table 2 (of BCA Schedule 3) for specific locations, having energy efficiency provisions based on a range of similar climatic characteristics.

Construction Certificate – Building Approval issued by the Certifying Authority pursuant to Part 6 of the EP&A Act 1979.

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 C2D2 and Specification 5, except as allowed for:

- certain Class 2, 3 or 9c buildings in C2D6; and
- a Class 4 part of a building located on the top storey in C2D4(2); and
- open spectator stands and indoor sports stadiums in C2D8.

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

Deemed-to-Satisfy (DTS) Provisions of the BCA – Means the prescriptive provisions of the BCA which are deemed to satisfy the performance requirements.

Effective Height – The vertical distance between the floor of the lowest storey included in 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).

Exit – Any, or any combination of the following if they provide egress to a road or open space:

- An internal or external stairway.
- A ramp.
- A fire-isolated passageway.
- A doorway opening to a road or open space.

Fire Compartment – The total space of the building; or when referred to in

- The Performance Requirements – any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or

- The Deemed-to-Satisfy Provisions – any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to-Satisfy Provisions of the relevant part.

Fire Resistance Level (FRL) – The grading periods in minutes for the following criteria:

- structural adequacy; and
- integrity; and
- insulation.

and expressed in that order.

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

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 public or private hospital; or
- a nursing home or similar facility for sick or disabled persons needing full-time care; or
- 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.

Horizontal exit: A required doorway between 2 parts of a building separated from each other by a fire wall.

National Construction Code Series (NCC) – The NCC was introduced 1 May 2011 by the Council of Australian Governments (COAG). The BCA Volume One (Class 2 to 9 Buildings) is now referenced as the National Construction Code Series Volume One — BCA.

Occupiable outdoor area means a space on a roof, balcony or similar part of a building:

- that is open to the sky; and
- to which access is provided, other than access only for maintenance; and
- that is not open space or directly connected with open space.

Occupation Certificate (OC) – Building Occupation Approval issued by the Principal Certifying Authority pursuant to Part 6 of the EPA Act 1979.

Open Space – Means 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.

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-based Design Brief – Means the process and the associated report that defines the scope of work for the performance-based analysis, the technical basis for analysis, and the criteria for acceptance of any relevant Performance Solution as agreed by stakeholders.

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.

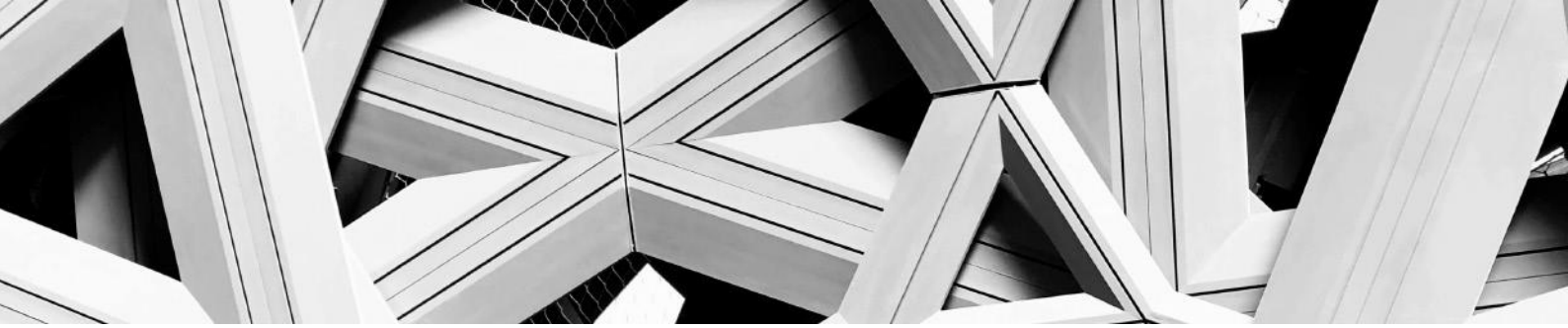
Compliance with the Performance Requirements can only be achieved by-

+ complying with the Deemed-to-Satisfy Provisions; or
+ formulating an Alternative Solution which-
  - complies with the Performance Requirements; or
  - is shown to be at least equivalent to the Deemed-to-Satisfy Provisions; or
+ a combination of the above.

Performance Solution – Means a method of complying with the performance requirements other than by a Deemed-To-Satisfy Solution.

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.



2.0 Building Characteristics

2.1 Proposed Development

The project site is located at the corner of Metford Road and Fieldsend Street, Metford NSW. This report comprises a review of the Masterplan Design of the proposed Mental Health Project of Maitland Hospital.

The Maitland Mental Health Project includes the relocation and redevelopment of mental health services from various facilities within HNELHD district network to the Maitland Hospital Campus as funded by the Statewide Mental Health Infrastructure Project (SWMHIP).

The proposed scope for the Project includes the construction and operation of a new mental health services building within the Maitland Hospital campus, including:

- Site establishment
- Site preparation including earthworks;
- Construction of internal roads and addition of at-grade car parks;
- Construction of 2 storey mental health facility;
- 20 Medium Secure Forensic beds; 24 Low Secure Forensic beds; 20 Rehabilitation and Recovery beds (including high risk civil consumers) (64 beds total);
- Inground building services works and utility adjustments, including service diversions;
- Building foundation works;
- Tree removal;
- Associated landscaping;.
- Bioretention basin.

The building is classified as follows:

+ BCA Classification:	Class 5 – Administration and consultation rooms Class 9a – Health Care Building (patient and non-patient care)
+ Storeys Contained:	Two (2) It is to be confirmed if there is any use proposed to the roof area shown below which would necessitate the Rise in Storeys/Storeys contained to be re-assessed. 
+ Importance Level (Structural):	IL 3
+ Rise in Storeys:	Two (2)
+ Type of Construction:	Type B Construction
+ Effective Height:	Less than 12m (4.2m)
+ Max. Fire Compartment Size:	Refer Below
+ Maximum Floor Area:	Max 3,500m² compartments for Class 9a Health Care buildings (non-patient). Max 5,500m² compartments for Class 5 buildings or parts of buildings *Note: 2,000m² compartments applies to all Patient Care Areas within the building.*
+ Maximum Volume:	Max 21,000m³ compartments for Class 9a Health Care buildings. Max 33,000m³ compartments for Class 5 buildings or parts of buildings
+ Sprinkler protected throughout:	Yes – The building is proposed to be protected throughout with an Automatic Fire Suppression System in accordance with AS 2118.1.
+ Climate Zone:	Zone 5

2.2 Fire Compartment Floor Area Limitations

Maximum size of fire compartment/atria is:

+ Classification		+ Type A	+ Type B	+ Type C
9a	Max. floor area	5,000m²	3,500m²	2,000m²
	Max. volume	30,000m³	21,000m³	21,000m³
5	Max. floor area	8,000m²	5,500m²	3,000m²
	Max. volume	48,000m³	33,000m³	18,000m³

2.3 Distance to Fire Source Features

Based upon a review of the plans, it is noted that each elevation of the building is located within the following distances from fire source features on the site.

+ Elevation	+ Fire Source Feature	+ Distance
North	Side boundary	>18m
East	Side boundary	>18m
West	Building on same allotment	>18m
South	Side boundary	>18m

Figure 7: Site Plan

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

3.0 BCA Assessment

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

3.1 Section B – Structure

Part B1

Structural Provisions:

- Structural engineering details prepared by an appropriately a Charted Professional Engineer listed on the NER are to be provided to demonstrate compliance with Part B1. This will include the following Australian Standards (where relevant):
  - AS 1170.0 – 2002: Structural Design Actions - General Principles
  - AS 1170.1 – 2002: Structural Design Actions – Permanent, Imposed and Other Actions including certification for balustrading (dead and live loads)
  - AS 1170.2 – 2021: Structural Design Actions – Wind Actions
  - AS 1170.4 – 2007: Structural Design Actions – Earthquake Actions in Australia
  - AS 3700 – 2018: Masonry Structures
  - AS 3600 – 2018: Concrete Structures
  - AS 4100 – 2020: Steel Structures
  - AS/NZS 4600 – 2018: Cold formed steel.
  - AS 2047 – 2014: Windows and External Glazed Doors in Buildings
  - AS 1288 – 2021: Glass in buildings.

Importance Levels

- New building works are to comply with the structural provisions of the BCA 2022 and referenced standards including AS 1170.
- The Importance Level provisions of BCA (Section B) are to be acknowledged by the Structural Engineer and addressed to the degree necessary
- New building works to the existing building must be compliant with earthquake provisions of AS1170.4 – Earthquake Actions in Australia.

Comment: Design certification and documentation demonstrating compliance with the requirements of this clause to be provided along with the application for Construction Certificate.

Balustrades shall be designed by structural reengineer (NER) to certify loading compliance wo AS1170.1. Particular attention required for glass balustrades and the like.

All designers (including services) shall ensure compliance with AS1170.4- 2007 section 8 nonloadbearing components for seismic restraint for their services for ILU4.

Architect shall ensure compliance for AS1170.4- 2007 section 8 nonloadbearing components for any feature over 2m e.g. storage racks, joinery.

3.2 Section C – Fire Resistance

C2D2 / Spec 5

Type of Construction Required: The building is required to comply with the requirements of Type B Construction as stated within Specification 5. The table below provides an overview of the requirements of each. Refer to Appendix 1 for the FRL requirements of Type B Construction.

+ Type B Construction:
+ Load-bearing external walls and columns need not achieve an FRL if >18m from a boundary / separate building.
+ Non-load-bearing external walls (and columns incorporated within) need not achieve an FRL if >3m from a boundary or separate building.
+ Floors must be protected in accordance with Spec 5, subject to complying with S5C3.
+ Roof must be of non-combustible construction.
+ Loadbearing internal walls/fire walls must be constructed from concrete, masonry.
+ Internal columns on the floor immediately below the roof need not achieve an FRL.

Comment: Notwithstanding the requirements of this clause the separating floors are required to achieve a minimum of 120min construction under C3D6 of the BCA for the purpose of maintaining the required compartmentation within the building. Note, a higher FRL may be required where a classification other than Class 5 or 9 is proposed in the building this is to be refined as part of design finalization accordingly.

Structural engineer to review and ensure the proposed structural system complies with the requirements of this clause in terms of the fire rating requirements. Design certification and drawings to be provided along with the application for Crown Certificate.

Architect and structural engineer are to provide details confirm there are no elements other than 75 x 50mm roof battens that cross firewalls. Any elements shall be confirmed for consideration with fire engineered strategy. Firewalls are not to have any cleats or bracing that breaks firewall without inclusion in fire engineered strategy. Further information is required in this regard with respect to the proposed structural design where a lightweight structure is proposed.

Further details are to be provided for review and comment particularly with respect of the fire wall and separating floor termination at the external wall junctions where fire separation is not maintained to the external face of the external wall and there is continuity between compartments within the building this is to be addressed by way of a Fire Engineering Strategy.

C2D12

Performance of external walls in fire: Concrete external walls that could collapse as complete panels in a building having a rise in storeys of not more than two (2) must comply with Specification 8.

Comment: External wall makeup to be confirmed, where tilt up concrete panels are proposed to be used compliance with the requirements of Specification 8 will be required. Further coordination is required in this regard, as applicable design certification is to be provided along with the application for the Crown Certificate.

C2D10 / C2D14

Non-Combustible Building Elements: All materials and or components incorporated in an external wall or fire-rated wall must be non-combustible. This includes but not limited to:

+ Any external wall claddings.
+ Any framing or integral formwork systems. I.e. timber framing, sacrificial formwork, etc.
+ Any external linings or trims. I.e. external UPVC window linings, timber window blades, etc.
+ Any sarking or insulation contained within the wall assembly.

This is not an exhaustive list, and any element incorporated within any external wall assembly must be identified and approved prior to the issue of a Crown Certificate.

Refer to Table 1 in Appendix 1 for the elements required to be non-combustible.

Note that these works are subject to NSW HI DGN 32 and as such bonded laminate cladding is not permitted.

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

Comment: Architect shall provide external wall disclosure statement along with associated test certificates/report and elevations and sections prior to issue of Crown Certificate to demonstrate compliance with the requirements of this clause relating to the external wall makeup and any proposed ancillary elements.

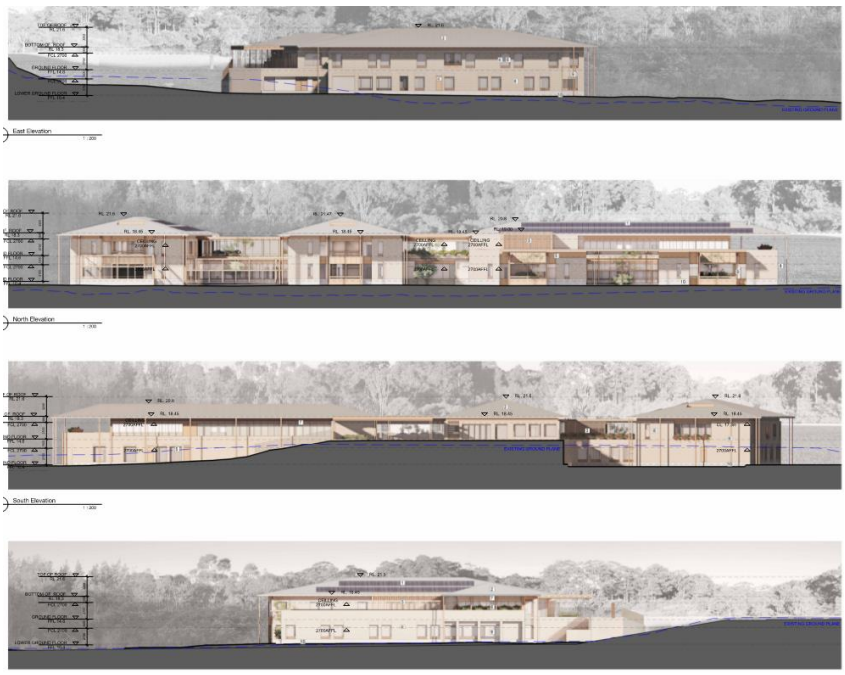


Figure 8: Architectural to include any proposed Ancillary Elements

All attachments to external walls will need to comply with the requirements of this clause unless a concession is available. This also applies to any building identification signage where a sign is proposed which is not non-combustible or does not comply with the concessions under C2D14 of the BCA, this is to be addressed in the Fire Engineering Strategy. Architect to confirm location of any identification signage and provide details for assessment in this regard.

Makeup of proposed external awnings and the like will need to be confirmed with details being provided to BM+G for review and comment to confirm compliance with the requirements of the BCA.

Non-combustible building elements by way of vinyl flooring is to be addressed in FER for fire/smoke walls and doors. Confirmation is also required for any timber elements within fire rated walls such as those required for handrail installation, door hold opening devices and the like for consideration within fire engineered strategy.

C2D11 & Spec. 7

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

+ Minimum Group Numbers apply to wall and ceiling linings. AS 5637 test reports must be provided to determine compliance.

+ Minimum Critical Radiant Flux values apply to floor linings. AS ISO 9239.1 test reports must be provided to determine compliance

Refer to Table 2 and 3 in Appendix 1 below for the required fire hazard properties.

Comment: Compliance readily achieved details to be provide for review and comment as part of the design development.

C3D3

General Floor Area and Volume Limitations: The building is to achieve fire compartment sizes not in excess of the DtS requirements of this clause.

Comment: The following maximum fire compartment sizes outlined in clause C3D6 below apply to the building:

Class 9a	3,500m^2
	21,000m^3
Class 5	5,500m^2
	33,000m^3

The compartmentation plan demonstrates compliance is readily achieved based on the location of compartment walls and the proposed compartmentation strategy.

C3D6

Class 9a Buildings: The following fire and smoke compartmentation requirements apply to Class 9a patient care areas.

+ Fire and Smoke Compartments:

Patient care areas need to be separated into maximum 2,000m^2 fire compartments by fire walls having an FRL of 120/120/120. Non-patient care areas may be increased to maximum 5,000m^2 fire compartments.

Compartmentation is to be as follows: -

A. In Ward Areas –

i) Where the floor area exceeds 1,000m^2, then it must be divided into compartments of not more than 1,000m^2, by walls with an FRL of not less than 60/60/60, and

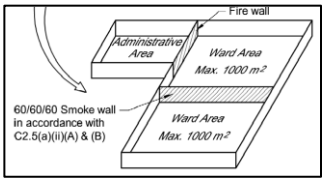


Figure 9

ii) Where the floor area exceeds 500m^2, then it must be separated into further compartments of not more than 500m2, by smoke proof walls complying with the requirements of Specification 11, and

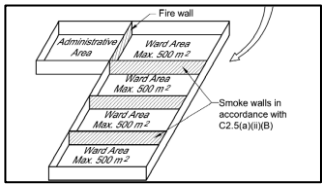


Figure 10

B. Treatment areas must be divided into compartments of not more than 1,000m^2, by smoke proof walls complying with Specification 11.

+ All fire walls are considered combined fire and smoke walls.

+ Ancillary use spaces are required to be 1-hour fire separated from patient care areas. Ancillary use spaces in a Class 9a comprise:

- A kitchen and related food preparation areas having a combined floor area of more than 30m^2.
- A room containing a hyperbaric facility.

- A room used predominately for the storage of medical records having a floor area of more than 10m^2.
- A laundry, where items of equipment are the type that are potential fire sources (e.g. gas fire dryers).

Refer below to the schedule of fire/smoke compartment sizes which exceed the maximum floor areas permitted by the BCA.

Comment: Having regards to the proposed compartmentation plan the following is noted:

+ A legend has not been provided nominating the FRL of the different colour coded walls – Note for the purpose of this assessment we have assumed that the highlighted walls have been assumed to be 120min combined fire and smoke walls.

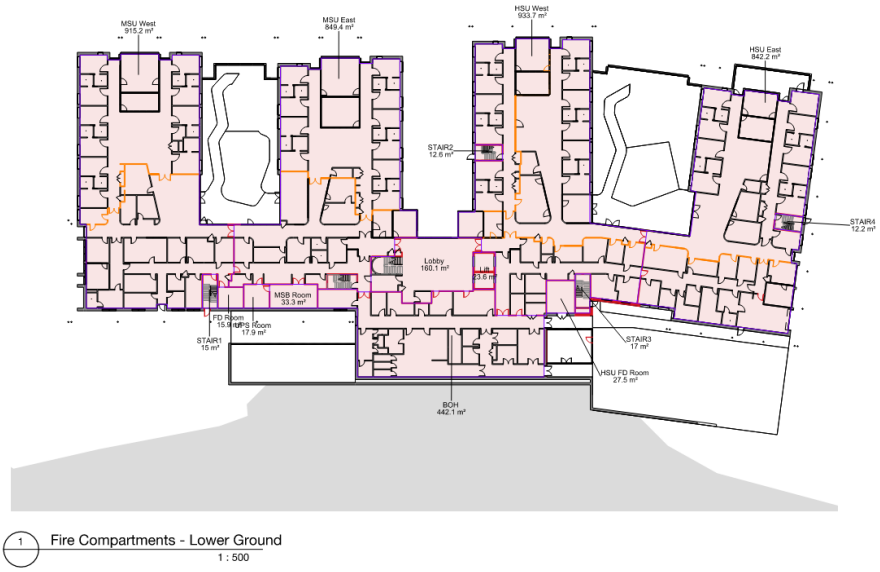


Figure 11: FRL of Walls to be Confirmed

+ All of the proposed fire walls are to be combined fire and smoke walls, Services consultant to ensure allowance is made for the protection of services and the like and the protection is in line with fire and smoke protection as required.
+ Provision of a standard detail showing how a compliant smoke reservoir of 400mm is being achieved above all compartment door sets throughout the building fire/smoke.
+ All separating floors throughout the building are to achieve an FRL of not less than 120min this is to be reflected in the compartmentation plan.
+ Smoke walls are to be documented as 120min fire walls for travel distance purposes in order to create Horizontal Exits and to future proof the works with respect of the Performance solution around bushfire compliance.
+ Coordination between the design team is required having regards to the building structure and proposed fire-resistant walls, including any proposed structural steel structural members, must be designed so as not to cross the fire walls, unless address in the FER.
+ Courtyards are to be included in Fire/Smoke compartments where enclosed or contributing to the fuel load for the purpose of calculating the maximum size of compartments under this clause.

  Further information is to be provided in this regard to confirm whether the courtyards form part of the proposed fire and smoke compartments.
+ The locations of compartment walls are to be placed to avoid any proposed secure lines noting the operational issues associated with incorporating secure lines with compartment walls i.e. fire and smoke walls.

- With the project being a mental health facility the location of any proposed glazed elements is to be shown on the architectural documentation and ensuring where located on the proposed compartment wall locations appropriate protection is provided and or being addressed by way of a Fire Engineered Strategy.
- Kitchen and associated related food preparation areas where greater than 30m^2 are required to be fire separated off from the remainder of the patient care area by 60min construction architect is to coordinate in the design in this regard.

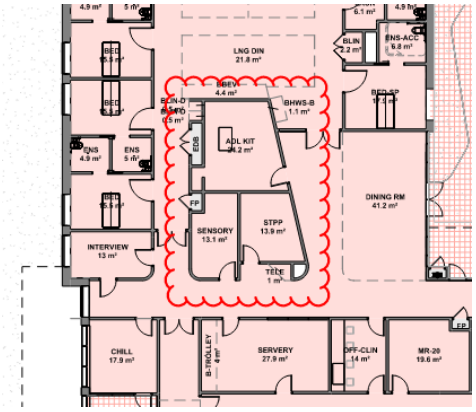


Figure 12: Food Preparation Spaces

- It is to be confirmed whether there are any covered areas over the courtyards areas other than those nominated on the architectural plans which would necessitate consideration from a fire compartmentation strategy (typical examples below)
- The projects fire safety engineer is to address the following having regards to the size of compartments within the building
    - Fire compartments of up to 1100m^2 in lieu of 1000m^2 in the ward areas
    - Smoke compartments of up to 550m^2 in lieu of 500m^2 noting there are areas which are above the typical 10% threshold which will be subject to further coordination and resolution with the projects Fire Safety Engineer.

Figure 13: Fire Compartments

C3D8

Separation by Fire Walls:

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

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

- The lower roof if its covering is non-combustible and the lower part is sprinkler protected.

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

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

Comment: The location of fire and smoke walls will need to consider two factors; compartmentation and the provision of horizontal exits (through the inclusion of 2-hour fire walls) to bring egress distances into compliance or within the acceptable limits of fire engineering and address comments noted above having regards to the proposed fire compartmentation strategy.

Compliance is readily achievable, and the location of these walls will need to be strategically positioned, noting also the two respective buildings will have fire walls separating the pedestrian links that connect the adjoining buildings.

Firewalls are required to terminate to the inside face of external wall lining. Architect shall confirm details to confirm any cavity which will require smoke seal and inclusion by way of fire engineered strategy.

C3D9/ C3D10

Separation of Classifications: Where parts of a building with different classifications are located adjacent one another, the fire resisting construction requirements of the most stringent classification apply throughout – unless the classifications are separated via a fire wall with an FRL of that required for the most stringent classification.

Where different classifications are located above and below one another, the floor is required to achieve the FRL of that required for the classification in the storey below.

Comment: The building is generally of Class 5 and 9a. No separation is required under this clause as a result. This will be subject to further review as part of the design finalisation.

C3D11

Separation of Lift Shafts: The lift shafts are required to achieve a 120/120/120-hour FRL and have fire rated lid in both directions.

Comment: Compliance readily achieved; the lifts are shown to be fire separated as such compliance is readily achieved. Fire separation is also shown between the lifts and therefore separation in accordance with Emergency Lift requirements would readily be achieved.

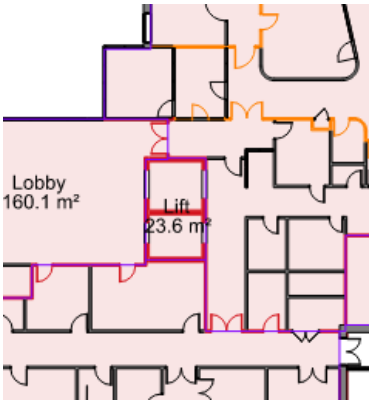


Figure 14: Fire Separated Lift Shafts

C3D13

Separation of Equipment / Electricity Supply Systems: Dependent on plant and equipment to be housed within the plant rooms, FRL 120/120/120 fire separation may be required to separate these areas from the building remainder. The following equipment required FRL120/120/120 fire separation from the building:

+ Main switch rooms / boards; or
+ Electricity substations; or
+ Light motors and lift control panels; or

- Emergency generators used to sustain emergency equipment operating in the emergency mode; or
- Central smoke control plant; or
- Boilers; or
- A battery or batteries installed in the building that have a voltage exceeding 12 volts and a capacity exceeding 200kWh.

Comment: Compartmentation plans provided depict fire rating of switch and comms rooms as such compliance is readily achieved for these elements. This is to be monitored for compliance as the design developed in this regard.

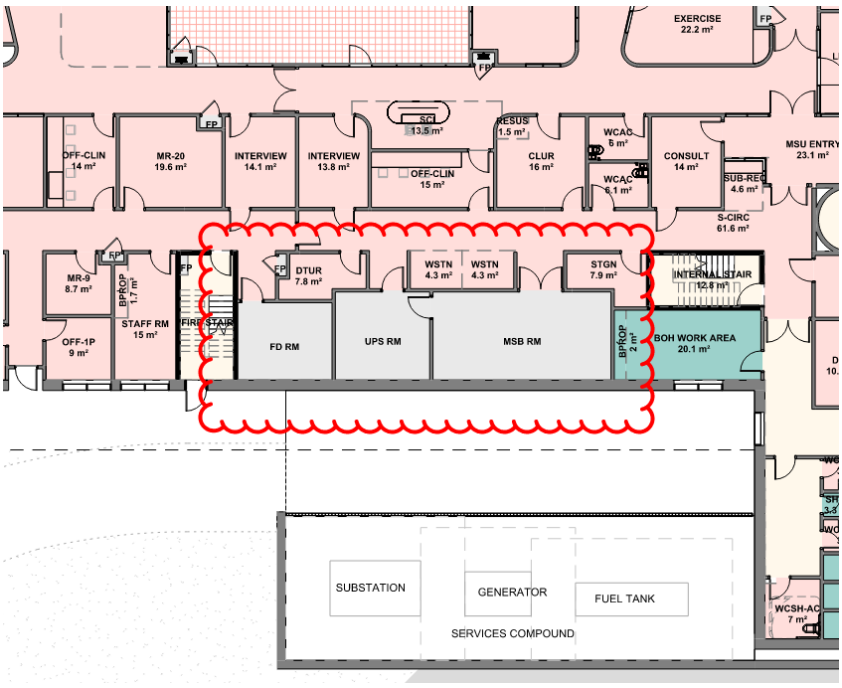


Figure 15: Fire Separation of Equipment to be Confirmed

The location of any other services or equipment requiring separation under this clause will need to be shown on the architectural documentation with the required 120min construction

Particular attention also needs to be paid to any distribution boards associated with a smoke hazard management system which will need to be fire separated under this clause. Mechanical consultant to review and ensure compliance with details being shown in the architectural documentation this is particularly relevant where the infrastructure is located in the proposed plant rooms.

Where additional fire separation is incorporated under this clause as necessary omission of FHR coverage to these areas would need to be addressed in the Fire Engineering Strategy.

C4D3 & C4D5

Protection of Openings in External Walls: Openings in an external wall that is required to have n FRL must be protected in accordance with C4D5 if the distance between the opening and a separate building or allotment boundary to which it is exposed to is less than:

- 3m from a side or rear boundary of the allotment; or
- 6m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or
- 6m from another building on the allotment that is not Class 10.

Note: If wall-wetting sprinklers are used, they are to be located externally.

Comment: The building is not proposed to be positioned in a location where additional protection would be required under this clause.

C4D4

Separation of external walls and associated openings in different fire compartments: External walls and openings of adjacent fire compartments must be protected in accordance with this clause where exposed to one another. The extent of fire-rating is driven by the angle of exposure, refer to the below table for the applicable distances.

+ Angle between walls	+ Min. Distance
0^0 (walls opposite)	6m
More than 0^0 to 45^0	5m
More than 45^0 to 90^0	4m
More than 90^0 to 135^0	3m
More than 135^0 to 180^0	2m
0^0 or more	Nil

Comment: Exposure occurs between adjacent fire compartments in a number of locations as shown below. This is to be monitored for compliance as part of the design development and will be reassessed as required once the compartmentation strategy has been developed.

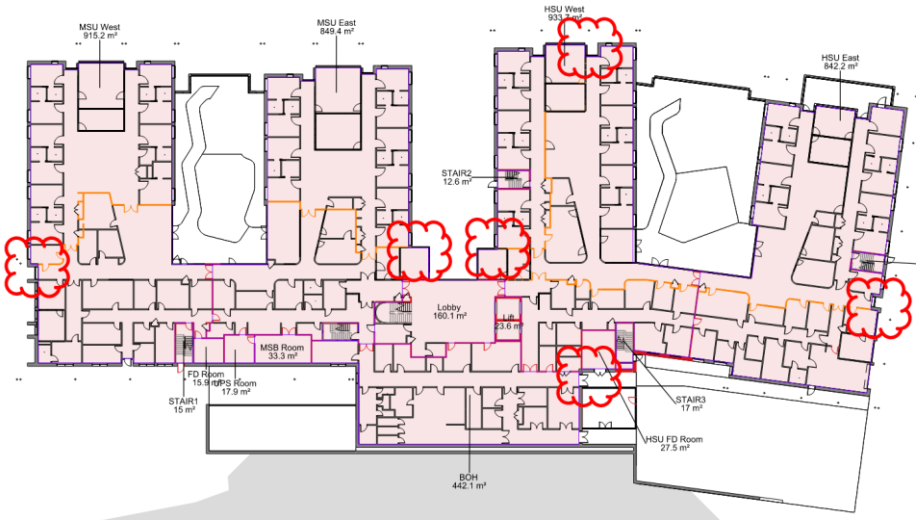


Figure 16: Exposure between Fire Compartments – Lower Ground

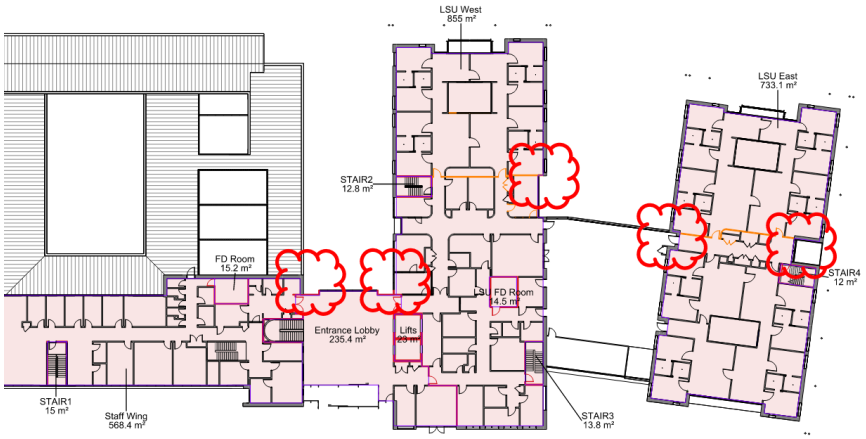


Figure 17: Exposure between Fire Compartments –Ground

There would be an opportunity for the exposure between fire compartments to be addressed by way of a Fire Engineered Strategy where the design incorporates two-way protection. This would necessitate further plan amendments in this regard with all protection being shown on the architectural documentation in this regard.

Spec. 12	**Fire Doors, Smoke Doors, Fire Windows and Shutters:** Fire doors and smoke doors must comply with the requirements of this specification. ***Smoke Reservoir above Fire Safety Doors*** A smoke reservoir of 400 mm must be provided above every fire safety door located within a fire / smoke wall. The smoke reservoir must extend to the underside of: + A roof covering; or + The floor above; or + An imperforate false ceiling that will prevent the free passage of smoke. Note: The smoke reservoir should extend for the full length of the corridor. Where a perforated ceiling is proposed further consultation with an infection control consultant would be required to confirm feasibility for the current project. Smoke doors must be constructed so that smoke will not pass from one side of the doorway to the other and, if they are glazed, there is minimal danger of a person being injured by accidentally walking into them. ***Swing of Smoke Doors*** Smoke doors are required to swing: - + in the direction of egress, or + in both directions There are a number of fire safety doors located in fire and smoke walls located on both levels which will be required to swing in two directions for egress to comply from within the subject parts of the building. Should the subject doorways be required to swing in one direction only, these doors will need to be assessed as part of the Fire Engineering Assessment in order to demonstrate compliance with the nominated Performance Requirements of the BCA. **Comment:** The direction of swing of compartment doors will be subject to further coordination as part of the design finalisation and refinement of the compartmentation strategy. As required the projects fire safety engineer is to address any single swing fire/smoke doors and or where dual swing doors are proposed smoke leakage is to be addressed under the fire engineering strategy. A typical RCP is to be provided for review and comment to confirm min 400mm smoke reservoir or perforated ceiling is installed on both sides of all fire and smoke doors. See D3D26 for further commentary regarding potential firebolt / fire door issues for the purpose of this project the contractor is to ensure that the compartment doors are sourced without being a system which incorporates a fire bolt which will create a non-compliance with the requirements of the BCA.
C4D15	Openings for Services Penetrations Where service installations penetrate the walls or floors required to have an FRL with respect to integrity and insulation they are to be protected by fire seals having an FRL of the building element concerned. Fire seals are required to comply with Specification 13. Where the mechanical ventilation system penetrates floors or walls that require an FRL the installation is to comply with AS/NZS 1668.1.

The proposed installation of pipework containing combustible liquids or gas (i.e., natural gas) is prohibited in accordance with this clause unless it is a tested system.

Water Filled Pipes Systems Comprised of Metal

A tested system is not required to comply with the insultation criteria relating to the service subject to the pipe system being constructed of entirely of metal and not having any combustible building elements being located within 100mm for a distance of 2000mm from the penetration and combustible materials not being able to be located within 100mm of service for a distance of 2000mm from the penetration. For the purpose of this assessment insulation is to be documented having regards to the services penetrations to ensure compliance with the requirements of this clause.

Note 1: -

Where a wall is required to achieve both smoke and fire compartmentation, the penetrations must be protected to accommodate both i.e., combined fire and smoke dampers through all fire walls that bound or separate patient care areas throughout the building.

All fire walls double up as smoke walls when they are within or bound patient care areas and thus must be combined fire and smoke dampers.

The motorised component of the Damper is to be located no more than 600mm from the fire/smoke wall.

Note 2: -

A pipe system comprised entirely of metal that is not normally filled with liquid must not be located within 100mm, for a distance of 2000mm from the penetration of any combustible building element or a position where a combustible material may be located and must be constructed of:

- *Copper alloy or stainless steel with a wall thickness of at least 1mm; or*
- *Cast iron or steel (other than stainless steel) with a wall thickness of at least 2mm.*

Note 3: -

All pipes normally filled with water cannot be less than 200mm from another service penetration unless protected with a fire wrap installed in accordance with a Tested System approved by a registered Testing Authority.

Note 4: -

A Tested System approved by a registered Testing Authority may be used as an alternative to complying Specification 13.

Note all penetrations shall be tested to AS1530.4 – 2014.

3.3 Parts D – Provision for Escape and Construction of Exits

D2D3	**Number of Exits Required:** The building is required to be provided with 2 exits from each part of the storey. **Comment:** Compliance is readily achieved, the number and location of the exits from the building will be refined as part of the design development and finalisation of the compartmentation strategy.
D2D4	**When Fire-Isolated Stairways and Ramps are Required:** This clause sets out the requirements for stairways and ramps to be fire-isolated in buildings. Fire isolated stairways are required in a class 9a building in a patient care area. A required exit stair must be fire-isolated if it connects, passes through, or passes by more than two storey in a non-patient care area of a Class 9a building. **Comment:** There are four (4) proposed fire isolated stairways in the current design.

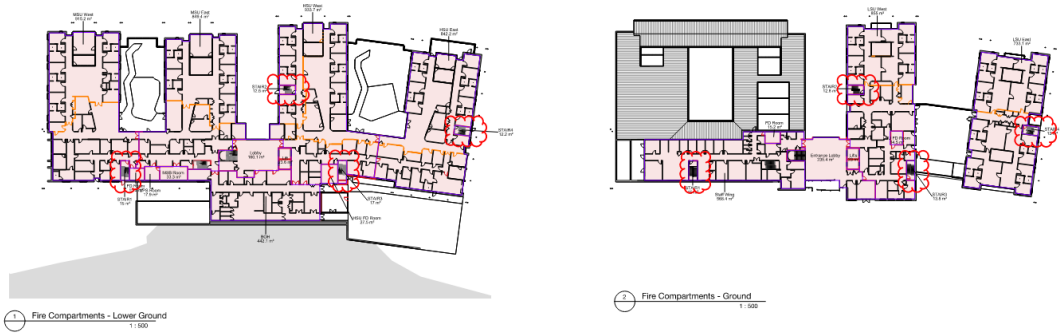


Figure 18: Proposed Fire Isolated Stairways

Note: There may be opportunity for the design to incorporate external stairways in lieu of fire isolated stairways. This is pending further design coordination achieving ventilation requirements and exposure to the building.

The external face of the below fire isolated stairway and the associated openings in the fire isolated stairway are required to be protected with fire rated construction equivalent of the stairway and openings in accordance with a method under C4D5 of the BCA. Updated architectural documentation to be provided in this regard.

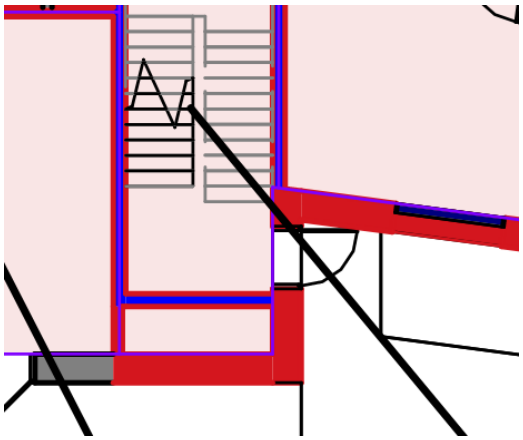


Figure 19: FRL of Stair to be Confimed

D2D5

Exit Travel Distances/ Distance Between Alternative Exits: Egress from the building will rely on a combination of exit stairways and horizontal exits across the floor plate. The following is noted in relation to egress:

- Travel distances are permitted to extend to 20m to a point of choice and 40m to a single exit in non-patient care areas.
- Travel distances in patient care areas are permitted to extend to 12m to a point of choice and 30m to a single exit in patient care areas
- Travel between alterative exits is not to exceed 60m between alternative exits in non-patient care areas and 45m between alternative exits.

Egress from the larger internal courtyard areas on the lower ground floor will need to be confirmed, in the current design egress doors would need to be provided in the external fenced area in order to achieved acceptable travel distances. As an alternative the extent of landscaped area would need to be reduced in order to achieve acceptable travel distances back through the building.

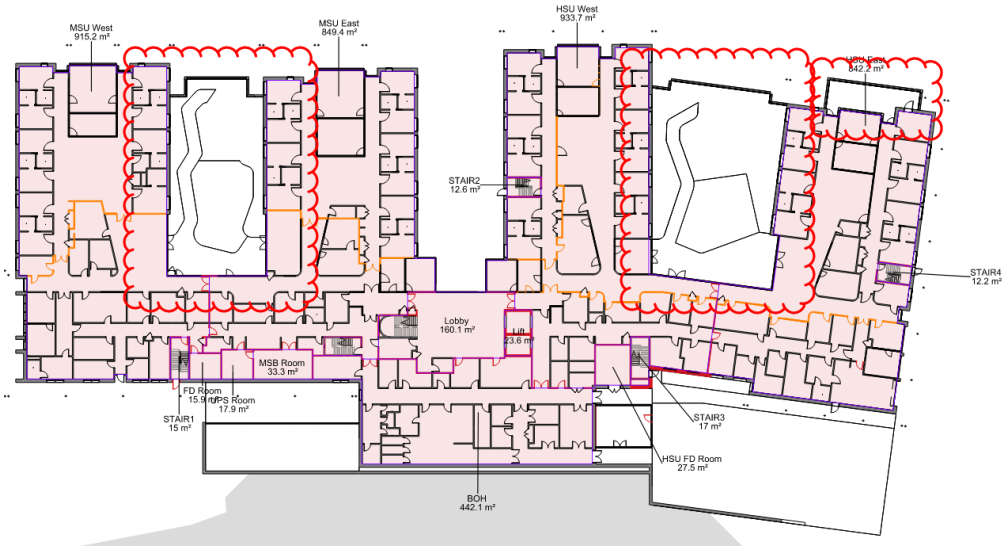


Figure 20: Confirm Egress via Internal Courtyards

The proposed smoke walls are to be designed as fire walls in order to achieve acceptable travel distances – Alternatively additional egress doors, to open space, are to be introduced to reduce distances to an acceptable level.

- Excessive travel in the high support area is to be resolved through the relocation of the breakthrough door providing an alternative path of travel
- Breakthrough doors are required within the low secure IPU pod areas ensuring that the position of breakthrough doors and egress corridors are provided at intervals in line with the DTS travel distance limits.
- Horizontal exits will need to be incorporated into the design in the position below to achieve acceptable travel distances – compartmentation plan to be updated in this regard.
- Egress from proposed plant rooms will be further reviewed as part of the design finalisation.

Whilst the egress assessment will need to be revisited once the compartmentation plan is updated to reflect the comments above. Based on the current documentation, the following is to be addressed by the projects fire safety engineer with respect of extended travel distances

- Up to 14.5m to a point of choice from patient bedrooms and external courtyard areas in lieu of 12m
- Up to 31m to the nearest of two exits in lieu of 30m from the external courtyard areas
- Up to 52m between alternative exits in lieu of 45m worst case including within the Low Secure IPU Pod B area.

D2D7/ D2D8/ D2D9/ D2D10/ D2D11	**Dimensions of Paths of Travel to an Exit:** The minimum clear height through all egress paths is required to be no less than 2m, and a minimum of 1m wide (this width dimension is measured clear of any obstructions such as handrails and joinery). Aggregate exit widths must be achieved which are driven by occupancy numbers of each floor. In patient care areas through which patients would normally be transported in beds: + if the doorway provides access to, or from, a corridor of width + less than 2.2 m — 1200 mm; or + 2.2 m or greater — 1070 mm. Comment: The plans are capable of complying with the requirements of the above, this will be subject to further review as part of the design finalisation and development of the design documentation and associated door schedule. Doorways forming horizontal exits must achieve no less than 1250mm. The compartmentation plan is still being developed and finalised wherever a single door is proposed it is to be documented at a width of not less than 1250mm clear. Noting currently there are a number of single smoke doors proposed in walls which are proposed to form part of the egress strategy from the building. Corridors in a Class 9a health-care facility must achieve 1.8m in corridors normally used for the transportation of patients in beds. The architect is to develop a bed transportation plan to ensure min 1.8m unobstructed widths. All feature nibs in corridors shall not encroach on 1.8m corridor width. Plans capable of complying, however minimal tolerances are shown in the architectural documentation which requires further coordination and will be monitored for compliance as part of the design finalisation.

D2D12	**Travel via Fire Isolated Exits:** A fire isolated stairway is required to provide independent egress from each storey that it serves and discharge directly –
	
	+ To a road open space; or
	+ To a point –
	  - In a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter; and
	  - From which an unimpeded path of travel, not further than 20m, is available to a road or open space
	
	External walls and openings exposed to the discharge path of a fire-isolated stairway (less than 6m, measured perpendicular to the path of travel) must be protected with a 1-hour fire-rating for external walls, and C4D5 for openings.
	
	Comment: All fire isolated exits are shown to discharge to open space as such compliance is readily achieved with respect to the discharge position of the proposed stairways however the location of any covered areas bounding the stairways would need to be confirmed shown on the architectural documentation
	
	The discharge of the fire stair from the high support area into the internal courtyard shown below will need to be altered to ensure not less than 6m is maintained from the building line and a minimum 1m clear unobstructed width is maintained to the point at which open space is reached, otherwise all of the façade and other openings within 6m of the path of travel will need to be fire rated by 60min construction and have any openings protected in accordance with C4D5 of the BCA. Where this discharge location is to remain, it requires further coordination with the design team including the projects architect.

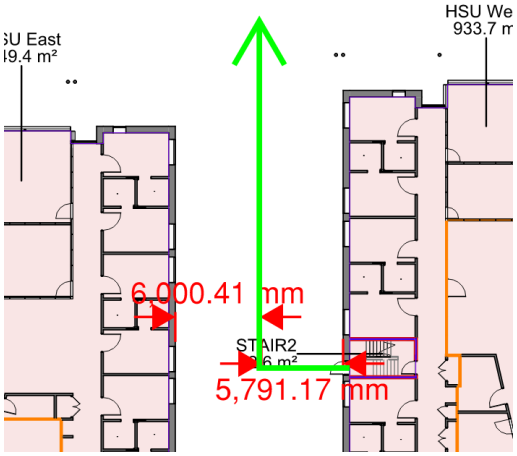


Figure 21: Discharge within 6m of External Walls

Where the paths of travel from the fire isolated exit provides the occupants with an opportunity to travel in opposite directions at the point of discharge then there would be an opportunity for the exposure to the external wall to be addressed under the Fire Engineered strategy typical example below.

Figure 22: Discharge within 6m of External Walls

D2D14

Discharge of Exits: In accordance with the DTS provisions of the BCA, the discharge of exits to open space cannot incorporate any steps to connect the discharge point to the adjoining roadway.

Verification will be required as to whether there are any proposed stairways connecting the exits to the public roadways that a person is required to travel via (where there is no alternative ramp).

Where ramps are used, the gradient cannot exceed 1:8 at any part or 1:14 where the ramp is also used for access for a person with a disability.

Comment: Location of and characteristics of path of travel from the building to the adjoining public road is still to be finalised to ensure compliance with the requirements of this clause further coordination is required between the design team including the project architect, landscape architect.

All of the proposed egress paths from the building will need to be provided with a compliant path of travel as required above. The architectural design is to identify all gradients and crossfalls proposed which will need to be provided for review and comment.

Where the design proposes stairways between the discharge points of the building and the adjoining public road this is to be documented as a fire engineered strategy by the projects Fire Safety Engineer.

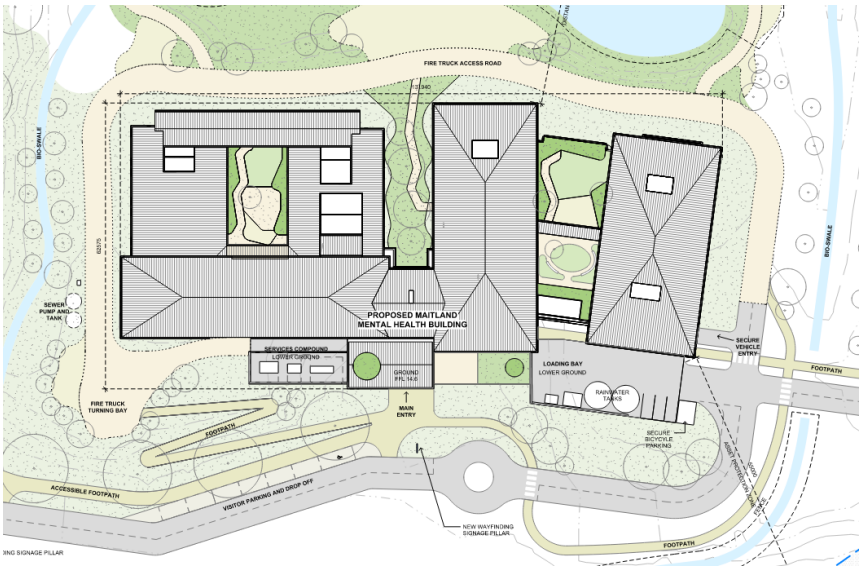


Figure 23: Path of Egress from the Building to be Confirmed

D2D16

Horizontal Exits: Horizontal exits are provided as detailed above, to reduce egress distances to an acceptable level.

All fire doors nominated as horizontal exits must maintain a clear open width not less than 1250mm. Horizontal exits for the design are double door set achieving compliance with this requirement.

All required HEs and fire/smoke doors in all fire/smoke walls require a minimum 400mm smoke reservoir immediately above the door.

Comment: The location of and number of horizontal exits required in the building is subject to further refinement as part of the compartmentation strategy finalisation and to address the comments in the above report.

A fire engineered performance solution is required to address the need for occupants to travel via multiple horizontal exits to reach a final exit (i.e. door to open space or fire-isolated exit).

See D3D26 for Horizontal exits and fire doors not permitted to have firebolts installed.

Architect is to coordinate the location of any secure zones with respect of the location of compartment walls noting the issues around having secure lines located on compartment walls with doors required to open in fire mode and potential use of motorized locking devices which will present ongoing maintenance issues. Where this is required further consultation with BM+G, the projects fire engineer and HI will be required.

Dual swing doors are to be nominated wherever possible to the proposed fire and smoke doors within the building, where single swing doors are proposed this will need to be addressed by way of the Fire Engineering Strategy for the building.

Architect shall ensure any airlocks on the side of Horizontal exit person is egressing to unlatches on activation of fire/smoke alarm to enable bed transfer.

Operationally the architect is to confirm if there are any requirements for doors leading to the fire isolated exits from the mental health areas to swing against the direction of egress for security reasons where required this will need to be addressed under the fire engineering strategy.

D2D17

Non required stairway: A non requires, non-fire isolated stairway must not be used between patient care areas of a Class 9a health care building and must not connect more than 2 storeys provided that the storeys are consecutive and one of those storeys are situated at the level there is direct egress to road or open space.

	Comment: The non-fire isolated non-required stairway is to be addressed under the Fire Engineering strategy.
D3D9	Enclosure of space under stairs and ramps: The space below a required non-fire isolated stairway or ramp must not be enclosed to form a cupboard or other enclosed space unless – The enclosing walls and ceilings have an FRL of not less than 60/60/60 and any access doorway to the enclosed space is fitted with a self-closing -/60/30 fire door. A space below a required fire isolated stairways must not be enclosed to form a cupboard or similar enclosure. **Comment:** The design does not show any proposed enclosures under any of the stairways. This is to be monitored for compliance as part of the design development in this regard.
D3D14/ D3D15/ D3D16/ D3D22	Stairways, Balustrades, and Handrails: Stairways: + A stairway must have no more than 18, nor less than 2, risers in each flight. + Landings must be not less than 750mm in length. + Floor finishes are subject to compliance with the slip resistance requirements of AS 1428.1 - 2009 in requiring compliance with AS 4586 – 2013 and associated handbooks HB197 and HB198. This applies to all hard floor surfaces. Furthermore, the stair landings must: + 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.

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. 8 – 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
External Car Park	P4 or R11
Loading Dock	P5 or R12
External walkways etc.	P4 or R11
Bathrooms and ensuites	P3 or R10
Wards and corridors	P2 or R9

Note: Where handwash basins are contained within a corridor, a minimum Slip Rating of P3 or R10 should be maintained for a radius of 2m from the basin.	
Consultation Areas	P2 or R9
Building Entry (wet area)	P3 or R10
Building Entry (transitional area)	P3 or R10
Building Entry (dry area)	P2 or R9
Passenger Lifts	P2 or R9

Balustrades:

- All balustrades must achieve a minimum height of 1m above finished floor level.
- Balustrades (except for fire-isolated stairs) must not permit a 125mm sphere to pass through any opening.
- Balustrades in fire-isolated exits must comprise no gap larger than 150mm between nosing line (or landing) and bottom rail. Other openings in the balustrade must not exceed 460mm. If the fire-isolated exit also functions as a circulation stair, the 125mm gap requirement applies
- Balustrades shall not be combined with handrail top rail as there is no construction tolerance. Balustrades are to be no less than 1m.
- Where fire-isolated stairs are also intended to be used as circulation stairs, they must be designed to comply with the 125mm sphere balustrade requirements.
- Balustrades shall have loading requirement confirmed by structural NER by way of design certificate.

Handrails:

- Handrails must be located on both sides of all stairways and ramps except for fire-isolated stairs. Handrails must comply with AS 1428.1 as relevant.
- Where fire-isolated stairs are also intended to be used as circulation stairs, they must be designed to comply fully with AS 1428.1 – 2009 with respect to handrails.

Comment: Architect shall provide stair details, handrails (865 -1m) shall be offset from balustrade (min 1m), Combined handrail/ balustrade is not recommended to be documented as this cannot be constructed in a compliant manner (zero construction tolerance).

The assessment assumes only the open stairs will be general circulation and all other fire isolated stairs will serve egress function only. Where any fire isolated stairs are intended for general circulation handrail both and balustrades <125mm is required. Confirmation is required if any fire isolated stairs are required to serve egress function.

Raising of balustrades to a minimum of 1.5m-1.8m is recommended with additional height/non-climbability features being recommended and or incorporated where the characteristics of the occupants requires.

Landings:

- The area of any landing must be sufficient to move a stretcher, 2 m long and 600 mm wide, at a gradient not more than the gradient of the stairs, with at least one end of the stretcher on the landing while changing direction between flights; or
- the stair must have a change of direction of 180°, and the landing a clear width of not less than 1.6 m and a clear length of not less than 2.7 m.

Comment: Note- stretcher diagrams provided for all the fire isolated stairs, this is to be coordinated to ensure any fire services located within the stair are not obstructed, which is of particular note

where a combined hydrant sprinkler system is proposed in the building. Early coordination is required to ensure sufficient spatial allowance to the proposed stair shafts noting the design does not appear as though compliance will be achieved.

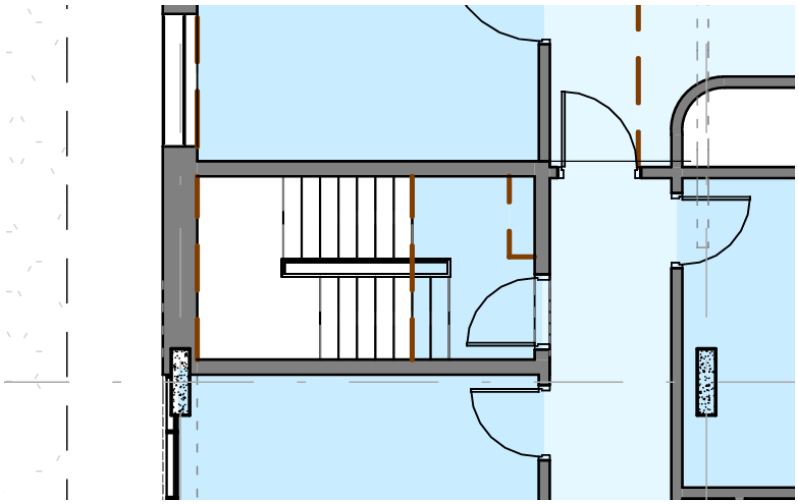


Figure 24: Internal Hydrants to be Accommodated in FIS

Thresholds

No steps can be located within the internal or external door thresholds unless the doorway opens to a road or open space and is provided with a threshold ramp or step ramp in accordance with AS 1428.1.

Particular attention is required to all doorways leading to external terraces and balconies.

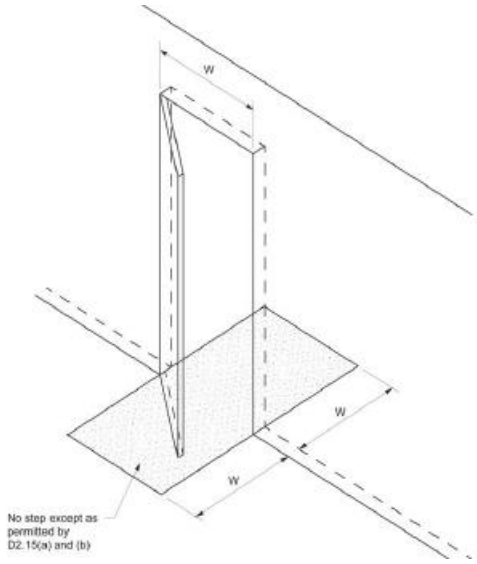


Figure 25: Door thresholds to contain no step or ramp.

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 about a wall, the edges of the threshold ramp are required to be tapered or splayed at a minimum of 45°.

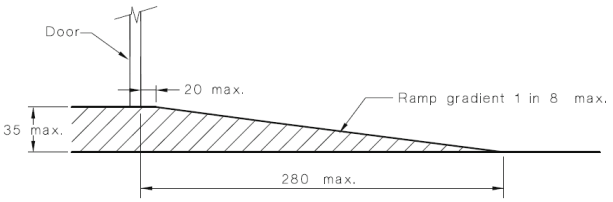


Figure 26: Threshold ramp dimensions

Particular attention is required to all doorways leading to external terraces and balconies.

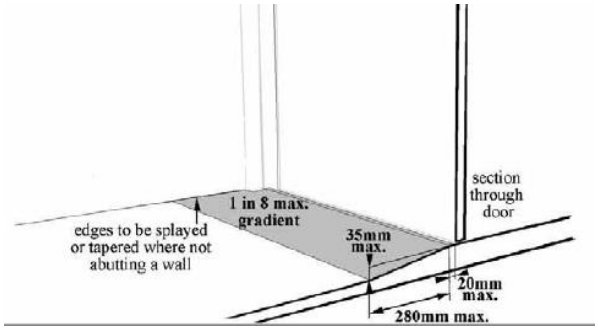


Figure 27: Threshold Ramp

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 the step ramp are required to have a 45° splay where there is pedestrian cross-traffic, otherwise it is required to be protected by a suitable barrier as detailed in the below figures such as a wall or suitable barrier with a minimum height of 450 mm or a when an open balustrade is provided a kerb or kerb rail is to be provided.

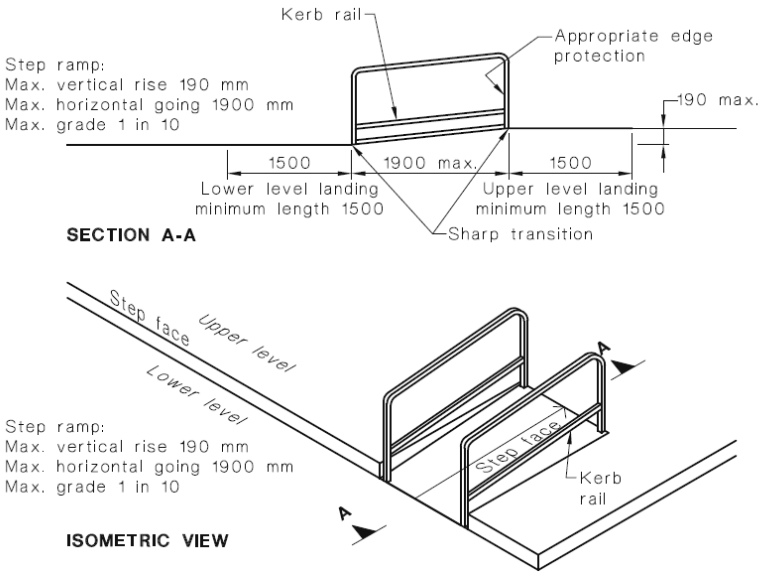


Figure 28: Step ramp kerb rails

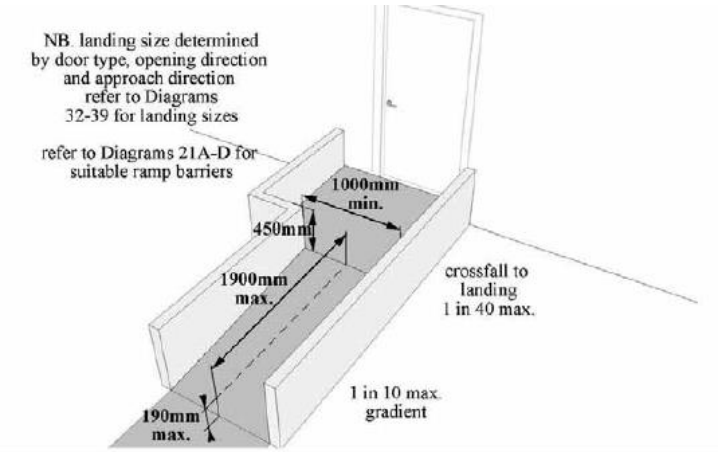


Figure 29: Step Ramp at External Doorway – Front Approach

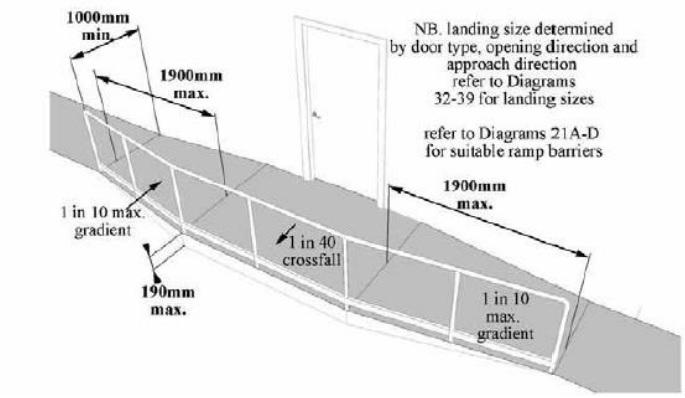


Figure 30: Step Ramp at External Doorway – Side Approach

Notwithstanding the above, maximum doorway threshold from a Class 9a patient care area cannot exceed 25mm.

Comment: All thresholds to external areas shall have a smooth and level transition or ramp complying with AS1428.1. Add grading to be depicted on GA plans. See DDA review for further information.

Consider *upgrading lighting of the pathways for night-time use.*

Consider *warning (hazard) TGSIs provided at changes in direction on the pathway and warning TGSIs (hazard) provided at changes in direction of directional indicators on the pathway*

Consider *incorporating objects located on the accessways to achieve an intensity of light reflectivity of not less than (30%) to background or surrounding surfaces*

D3D24/ D3D25/ D3D26/ D3D28

Doorways and Doors: Doorways located in a patient care area must not incorporate a sliding door unless that door leads directly to open space and is able to be manually opened under a force of not more than 110 N and open automatically upon fire trip or power failure.

A swinging door in a required exit or forming part of a required exit must not encroach at any point of its swing by more than 500mm of the required width of a stairway, ramp or passageway if it is likely to impede the path of travel of the people using the exit and where fully open, by more than 100mm of the required width of the required exit.

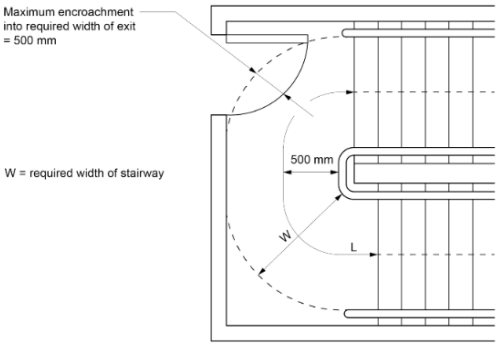


Figure 31

Doors in a path of travel in patient care areas are not permitted to be sliding doors

Comment: The proposed sliding doors in the patient care areas will need to be addressed in the Fire Engineering strategy.

Figure 32: Sliding Doors in Patient Care Areas

Sliding fire doors are not permitted and will need to be removed and replaced with an alternative i.e. swinging doors where the compartment wall remains in this location with it being on a required path of travel for the horizontal egress strategy.

Spatially the size of the proposed stairway shafts and the door location opening is to be reviewed by the project architect the current design would not comply spatially with respect of the door swing and size of landings as it encroaches by more than 500mm. Updated documentation is to be provided to BM+G demonstrating compliance in this regard.

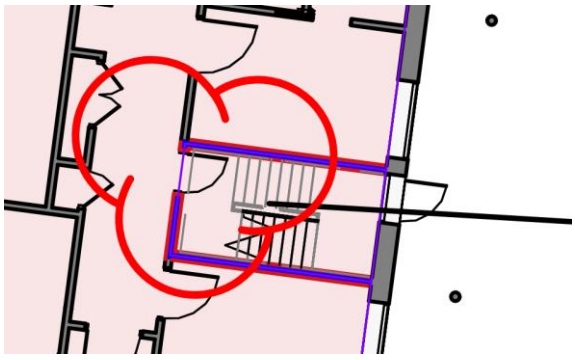


Figure 33: Door Circulation and Landing Non-compliance

The location of any FHR cupboard, EDB/Comms cupboard doors are to be positioned so that when opened they do not encroach on the adjacent compartment doors and or doors located on the path of travel. This will be subject to further review as part of the design finalization indicative areas of concern are as shown below.

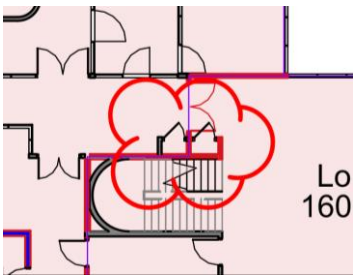


Figure 34

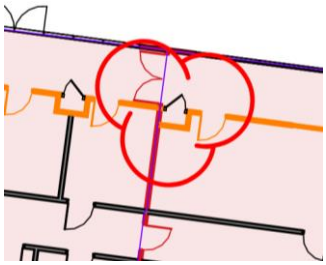


Figure 35

Should the swing of final egress doors and any compartment doors that are not able to be swung in the direction of egress due to operational restrictions or the like will need to be addressed under the Fire Engineering Strategy

Door hardware

Doors and Latching: All egress doorways must swing in the direction of egress and must be readily openable without a key from the side that faces a person seeking egress, by a single handed downward or pushing action on a single device which is located between 900mm and 1100mm from the floor.

Comment: Architect to review and ensure compliance with door schedule to be developed and is to demonstrate compliance with the requirements of this clause.

The use of firebolts is not permitted to be installed within fire doors and doors in the path of travel to exits. This does not comply with egress provisions of the BCA or for FRNSW intervention. It is understood for bolts are located in many fire door tested systems as a path to comply with the requirements of AS1530.4 – 2014.

Architect / builder shall confirm fire door tested systems proposed for use and confirm no firebolts are installed. A fire engineered solution will be required to omit or use previous tested system by way of superseded Australian Standard. Contractor shall confirm as matter of urgency to enable adequate time for Performance pathway.

A developing issue in the fire industry has recently arisen which may impact our Projects.

To comply with relevant testing standard (AS1530.4-2014) some fire door manufacturers are changing the manufacturing of their fire doors by including Firebolts in their design. This new design has been rejected by FRNSW on a few projects.

Until FRNSW announces a formal position, Capital Projects need to:

1. Ensure the door specifications are reviewed during design, procurement or installation
2. If Firebolts are included in the door specification, Capital Projects need to:
   - Allow additional time to undergo the Fire Engineering Brief Questionnaire (FEBQ) process
   - Contact Tony Jones, Senior Project Director, Facilities Compliance Support Program for further advice

Background

Changes to the door fire testing standard occurred approximately 3 years ago to align the Australian Standard with the current International Standards. Manufacturers were given 3 years to modify their products to comply.

Doors are now required to comply to AS1530.4-2014. To achieve compliance, manufacturers have installed Firebolts to minimise bowing in a fire environment.

The Firebolts are typically a spring activated, metal bolt, held in place (inside the door) by a layer of plastic which when melted, between 100ºC & 400ºC (temperature activation isn't regulated), will cause the bolt to slide into the frame.

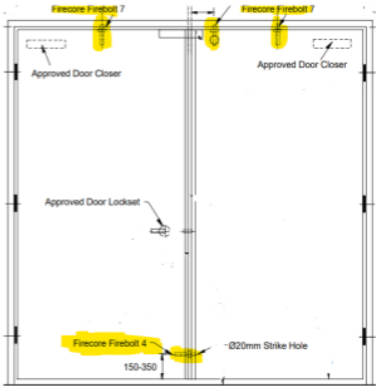


Figure 36: FRNSW Firebolts Statement

Due to the nature of the facility, the operation of latch requirements of Clause D2.21 of the BCA i.e., single hand downward action on a single device is not required to be complied with subject to the doorways being unlocked immediately in accordance with the following:

- By operating a failsafe device control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or
- By hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire.

Confirmation will be required to be provided from the LHD as to which operational option will be implemented into the design and operation of the building. The design will proceed on the basis door operation will unlatch on fire mode. Details to be confirmed where the above is to be implemented.

Note also the use of anti-ligature door hardware is addressed in both the FER and also access performance solution

Statutory Signage

All self-closing fire and/or smoke doors located within fire and smoke walls throughout the building together with the fire doors providing access to the external stairways are to be provided with signage that states:

FIRE SAFETY DOOR

DO NOT OBSTRUCT

DO NOT KEEP OPEN

All automatic closing fire and/or smoke doors located within fire and smoke walls throughout the building together with automatic closing fire doors leading to the external stairways are to be provided with signage that states:

FIRE SAFETY DOOR

DO NOT OBSTRUCT

The doors discharging from the fire isolated stairways are to be provided with signage as follows (on both sides of the doorways):

FIRE SAFETY DOOR

DO NOT OBSTRUCT

The doors discharging to the external stairways provided in lieu of fire isolated stairways are to be provided with the following additional signage installed on the wall on the latch side of the door.

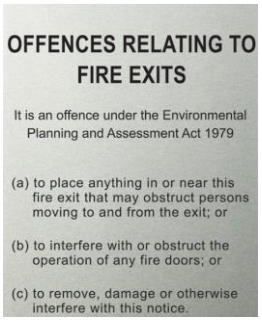


Figure 37

D3D27

Re-entry from Fire-Isolated Exits: Doors of a fire-isolated exit must not be locked from the inside in a Class 9a health-care building, throughout the exit.

This clause details the exceptions to the above requirements if the doors are fitted with an automatic failsafe device that automatically unlocks the door upon the activation of a fire alarm as follows:

- On at least every fourth storey, the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available; or
- An intercommunication system, or an audible or visual alarm system, operated from within the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation.

Comment: Compliance will be required architect is to coordinate the design with the projects Electrical engineer with design certification and associated details demonstrating compliance to be provided along with the application for Crown Certificate.

Part D4

Access for People with a Disability: Compliance with the requirements of Part D4 and AS 1428.1-2009 is applicable to the subject development.

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

D4D2

General Building Access Requirements: In a Class 9a health-care building, access must be provided to and within all areas normally used by the building occupants.

Health care facilities, including mental health, have unique requirements in relation to accessibility, noting a variety of operational and functional circumstances that impact on accessibility and DDA obligations.

Putting aside the DTS provisions of the NCC in relation to accessibility, it needs to be appreciated that a health care facility, albeit clinical and non-clinical parts, command specific requirements for accessibility due to the nature of use and the specialised mobility requirements of occupants within these spaces.

As a result we are in a position to identify, in conjunction with the LHD, parts of the building which are deemed inappropriate for independent access for people with disabilities due to the nature of use of such parts in accordance with the requirements of D4D5 of the BCA.

Comment: A performance solution is required to address noncompliant circulation space to a number of patient areas including ward areas and associated ensuites. Typical example shown below.

Note: Refer also to additional information in the report below with respect to circulation space.

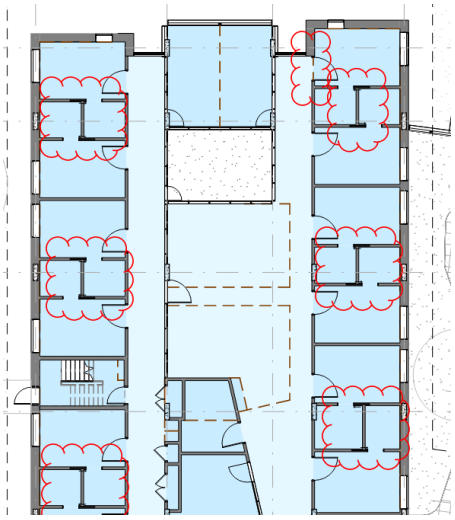


Figure 38: Non-compliant Door Circulation

General Access items

Customer Service Area

Consider *providing a wheelchair accessible section into existing reception counter at a height of 830-870mm with leg clearances at a height of 800-840mm underneath with a min, length of 900mm*

Consider *seating provided 450 – 520mm high, with armrests at a height of 220 – 300mm above the seat and a seat back, for use in the customer service area*

Consider *incorporating display and information stands within common reach ranges (230 – 1350mm) for wheelchair users (Note: different angles of approach e.g. side approach)*

Consider *incorporating security alarm pads at an accessible height*

Consider *incorporating contrast to vertical and horizontal connections e.g. floor and wall*

Consider *incorporating clear and concise signage within the reception area.*

Landscaping

Consider *incorporating plants providing orientation and direction cues for people with vision impairment and dense plantings are maintained to provide a clear line of sight to the ground floor around the lift access and pathways between accessible buildings on the allotment.*

D4D3

Access to Buildings: An accessway must be provided to a building required to be accessible from:

- The main points of a pedestrian entry at the allotment boundary.
- Another accessible building connected by a pedestrian link.
- Any required accessible car parking space on the allotment.

The accessway to principal entry is required to be depicted on plans.

An accessway must be provided through the principal pedestrian entrance and through not less than 50% of all pedestrian entrances.

Comment: The following is noted having regard to the requirements of this clause.

- Access from the allotment boundary where pedestrian entrance is proposed is not provided as such in lieu of providing a dedicated path of travel from the allotment boundary - The access arrangement will be based on a performance-based design with

dedicated accessible car parking bays being provided within proximity of the proposed building.

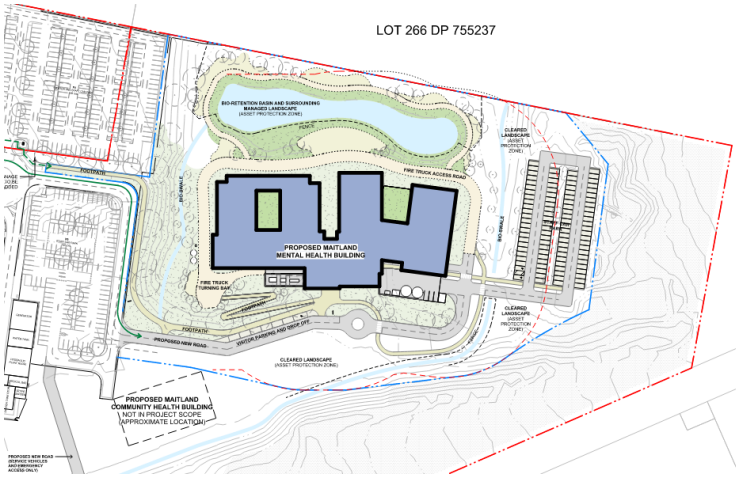


Figure 39: Access from Site Boundary to be Confirmed

- The design does not show an accessible path of travel being provided between the existing hospital and proposed mental health facility – This is to be subject to further review as part of the design finalisation however there would be an ability for the omission of an accessible path of travel being rationalised under a Performance Solution.

- The location and number of accessible car parking spaces will need to be shown on the architectural documentation and submitted for review and assessment. The design is to incorporate an accessible path of travel from the designated accessible carparking bays to the subject building. The location of the accessible bays are recommended to be positioned within close proximity to the building entrance.

With respect to the proposed drop off area and or the pedestrian entrance the following is required to be incorporated into the design.

- Where a pedestrian area joins a carriageway at grade (same level) or to delineate the pedestrian area from the carriageway, TGSI's shall be provided in accordance with Figures 2.5(A) and 2.5(B)B

- For public drop off / set down areas, if a kerb is provided separating the drop-off area from the pavement, a compliant kerb ramp will need to be provided. The detailing of the parallel set down will need to satisfy the provisions of AS 2890.6 – 2006.

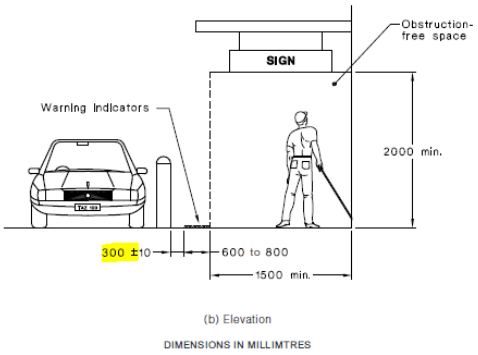


Figure 40

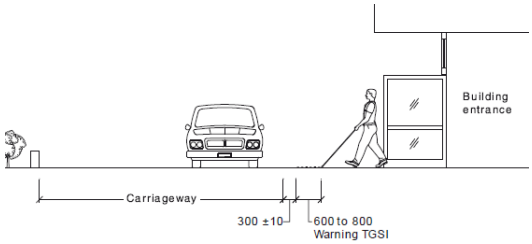


Figure 41

Consider *Any proposed bollards/columns/signs and other vertical projects located along the accessible path of travel are recommended to be provided with a 30% contrast to the surrounding surfaces.*

	Having regards to the existing site conditions and accessways from the allotment boundary appears achievable. An accessway shall be confirmed on site, where necessary upgrades required to comply with AS1428.1. Any deviation is to be addressed by way of Performance solution. ***Consider*** *It is recommended floor finishes throughout be designed and use material which will reduce/remove glare i.e., reduce use of polished stainless steel with overhead lighting.* ***Consider****: it is recommended that luminance contrast between the following be implemented.* + *Bollards* + *Columns* + *Wayfinding/Identification signage* + *Horizontal vertical wall surfaces along continuous path of travel* + *Public seating along paths of travel* + *Raised surfaces around trafficable areas* *It is recommended to be provided with a 30% contrast to the surrounding surfaces. This consideration is to apply throughout the building including all landscaped areas.*
D4D5	Exemptions: Areas (including paths of travel to and from) where access for the disabled would be inappropriate or otherwise posing a risk to health and safety are exempt from complying as accessible. Comment: Areas / rooms that may not require to be accessible for a person with a disability include the following: + Dirty Utility Rooms + Clean Utility Rooms + Equipment Store Rooms + General Store Rooms + Cleaners Rooms The extent of exemptions under this clause will be subject to refinement as part of the design finalisation.
D4D7	Signage: Braille and tactile signage must be provided to identify each door required to be provided with an exit sign as well as identifying accessible sanitary facilities – *Braille and tactile signage is to be provided with details to be reviewed as the design develops.* Signage Specification: - The signage is to be: - + Located between 1200-1600mm above FFL + Signs with single lines of characters are to have the line of the tactile characters between 1250mm-1350mm above FFL + Signage tactile characters must be raised or embossed to a height between 1mm-1.5mm + Upper case letter to be between 20mm-55mm Signage is to be contrasting & is to comply with BCA Specification E3D7 Signage Locations 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)

+ Forms part of a horizontal exit (–/120/30 fire doors in the fire compartment walls)

The below signage is an *example* of what is required –

Figure 42

Figure 43

The below signs are examples of required sanitary facility signage.

The signs shall be positioned so that the raised braille is between 1200-1600mm above FFL.

Figure 44

Comment: A signage plan/package is to be developed and submitted to BMG for review and comment this is to include a typical installation detail showing heights and signage contents and the like.

D4D8

Hearing Augmentation: A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning is installed in a meeting room, or a reception area where the public is screened from the service provider.

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.

The below symbol shall be provided on a sign in ultramarine blue in accordance with clause 5.1 of AS 1428.5-2010.

Figure 45

Comment: Subject to further refinement as part of the design development, the project's electrical engineer to confirm compliance with details demonstrating compliance being provide along with the application for Crown Certificate.

Architect to ensure signage specified to all rooms with hearing augmentation in accordance with the requirements of this clause details to be included in the signage package to be provided to BMG in this regard.

D4D6

AS2890.6

Accessible Parking: Minimum Accessible car parking spaces must comply with the requirements of AS 2890.6 – 2009. The provision of spaces is to be in accordance with the following table:

Comment: Total number of occupants within the building will need to be confirmed in order to identify the minimum number of accessible carparking bays required for the development.

Insufficient detail provided to identify whether compliance is achieved in the design, further information and updated documentation will be required in this regard with regards to the car space and shared zone, compliance with AS2890.6 is required for all aspects.

Considering the above, updated design details and associated design certification from the relevant traffic/civil consultant will need to be provided to BM+G for review and comment in this regard.

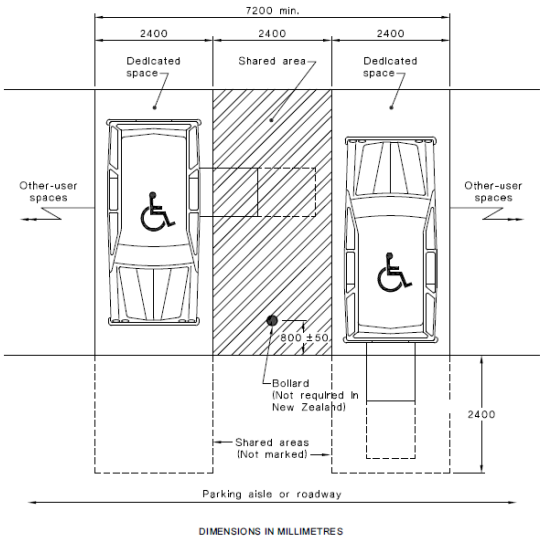
Class of building to which the carpark or car parking area is associated:		Number of accessible car parking spaces required:
Class 9a	Hospital (non-outpatient area) –	1 space for every 100 car parking spaces or part thereof.
	Hospital (outpatient area) –	
	(a) Up to 1000 car parking spaces and	1 space for every 50 car parking spaces or part thereof.
	(b) For each additional 100 car parking spaces or part thereof in excess of 1000 car parking spaces	1 space.
		

Figure 46

D4D9

Tactile indicators: Tactile ground surface indicators must be provided to:

- A stairway, other than a fire-isolated stairway; and
- An escalator or passenger conveyor; and
- A ramp other than a fire-isolated ramp; and
- In the absence of a suitable barrier-
  - a) An overhead obstruction <2m above floor level; and
  - b) An accessway meeting a vehicular way adjacent to any pedestrian entrance to a building including a pedestrian entrance serving an area referred to in D4D5, if there is no kerb or kerb ramp at that point.

Tactile indicators are required to be designed in accordance with AS 1428.4.1-2009

A raised dome button in accordance with AS 1428.4.1 is permitted in lieu of TGSIs in the building based on it being a class 9a building.

Comment: Insufficient information provided on the architectural documentation to confirm compliance with the requirements of this part.

Architect to review and ensure compliance with the requirements of this part in the design which will then be subject to a subsequent review by BM+G

Consider *installation of directional TGSIs on the accessible path of travel and vehicular crossings*

Consider *installing directional indicators to provide direction to bus stops street furniture road crossings.*

Consider *installation of TGSIs at changes in direction on the accessways (pathways) to the Principal Pedestrian Entrance including pathways leading to the lift providing access to all storeys of the building*

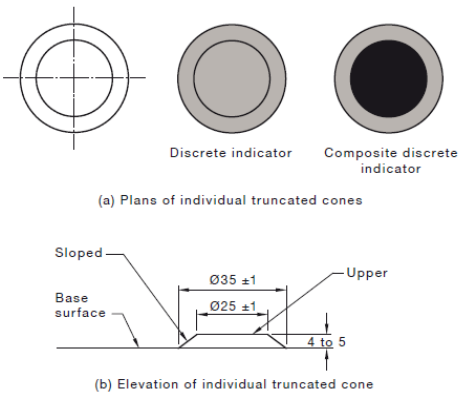


Figure 47

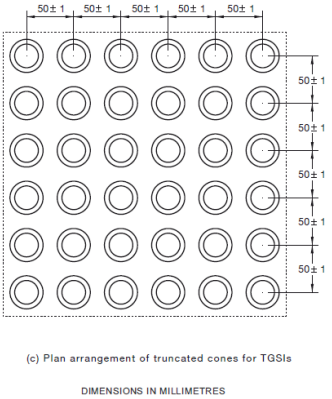


Figure 48

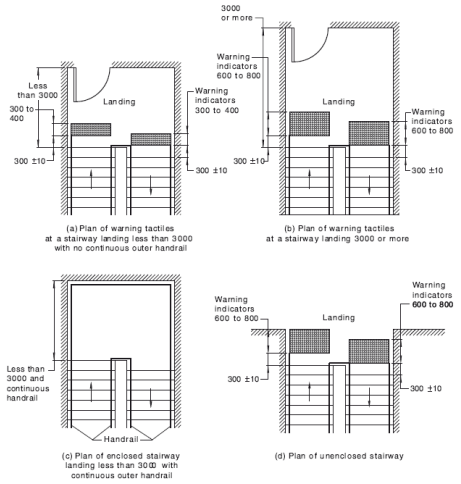


Figure 49

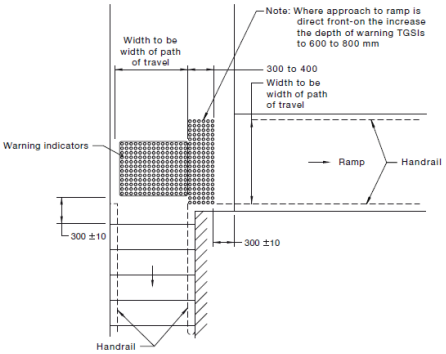


Figure 50

D4D13

Glazing on an accessway: On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1 - 2009.

Where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights, including any glazing capable of being mistaken for a doorway or opening, shall be clearly marked for their full width with a solid and non-transparent contrasting line. The contrasting line shall be not less than 75 mm wide and shall extend across the full width of the glazing panel. The lower edge of the contrasting line shall be located between 900 mm and 1000 mm above the plane of the finished floor level.

Any contrasting line on the glazing shall provide a minimum of 30% luminance contrast when viewed against the floor surface or surfaces within 2 m of the glazing on the opposite side.

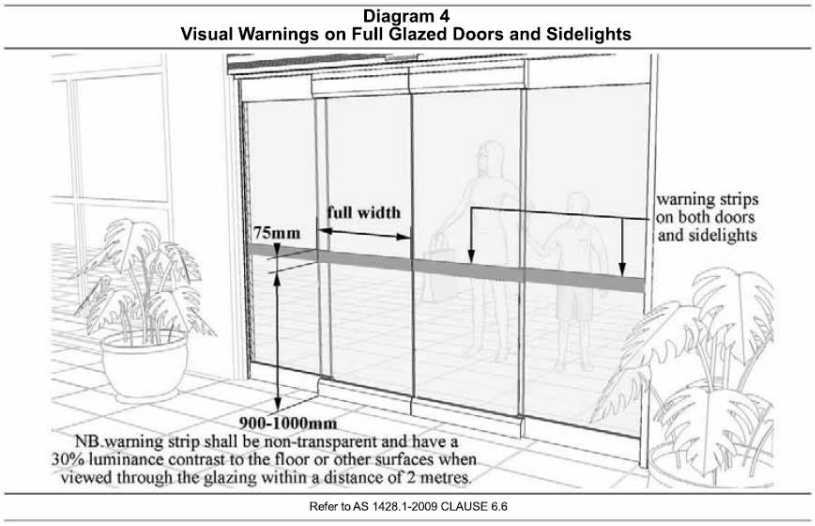


Figure 51

Comment: Architect to ensure compliance in the design, details demonstrating compliance to be provided on the door schedule and is to be provided to BM+G for review as part of the design development.

D4D4

AS1428.1 - 2009

Continuous Accessible Path of Travel

A continuous accessible path of travel must be provided throughout all areas required to be accessible. This requires consideration on wheelchair turning space, passing space, and the like.

Tolerances for Abutment of Surfaces:

Transitions between floor finishes will need to comply with Clause 7.2 of AS1428.1-2009.

Recessed / Soft Floor Coverings:

- Pile height or pile thickness shall not exceed 11mm and the carpet backing thickness shall not exceed 4mm.
- Exposed edges of floor coverings be fastened to the floor with a trim along any exposed edges.
- At leading edges, carpet or other soft materials shall have a vertical face no higher than 3mm or a rounded bevelled edge no higher than 5mm. Up to 10mm is permitted at a 1:8 gradient.
- Recessed matting must be no more than a 3mm vertical, or 5mm rounded, proud of the adjacent floor surface. This also applies when the matting is depressed below surface level

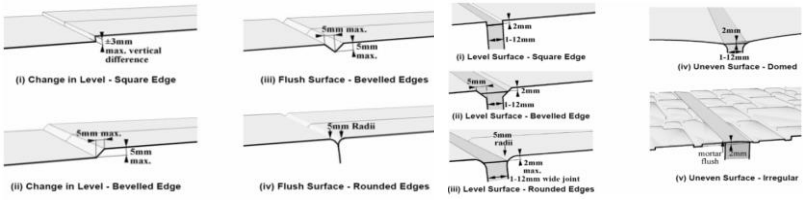


Figure 52

Figure 53

Comment: Insufficient details on architecture plans to confirm compliance. This is to be monitored for compliance as part of the design development.

Architect, landscape architect and civil engineer to confirm compliant abutment of surfaces throughout the building including all external areas and the like.

Stair nosing profiles shall—

- have a sharp intersection;
- be rounded up to 5 mm radius; or

- be chamfered up to 5 mm × 5 mm.
- At the nosing, each tread shall have a strip not less than 50 mm and not more than 75 mm deep across the full width of the path of travel. The strip may be set back a maximum of 15 mm from the front of the nosing. The strip shall have a minimum luminance contrast of 30% to the background. Where the luminous contrasting strip is affixed to the surface of the tread, any change in level shall comply with Clause 7.2 and Clause 7.3.
- Where the luminance contrasting strip is not set back from the front of the nosing then any area of luminance contrast shall not extend down the riser more than 10 mm.

TGSIs shall be installed in accordance with AS 1428.4.1.

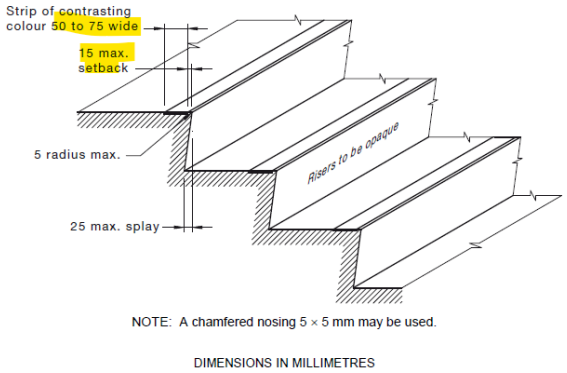


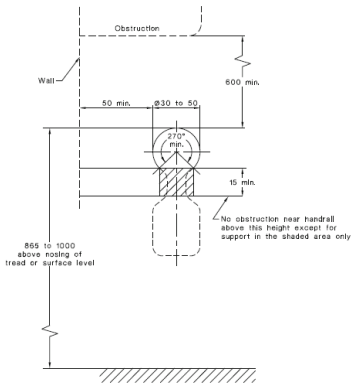
Figure 54

Comment: Insufficient details to confirm compliance in the current design architect is to prepare stair details incorporating accessible features in accordance with this requirement and submit to BM+G for review and comment.

Handrails shall be continuous throughout the stair flight and, where practicable, around landings and have no obstruction on or above up to a height of 600 mm and as follows:

- The design and construction of handrails shall comply with Clause 12 of AS 1428.1 – 2009.
- Handrails shall be installed on both sides of the stairs.
- Handrails shall have no vertical sections and shall follow the angle of the stairway nosing's.
- Where a handrail terminates at the bottom of a flight of stairs, the handrail shall extend at least one tread depth parallel to the line of nosing's plus minimum of 300 mm horizontally from the last riser.
- The handrail shall extend a minimum of 300 mm horizontally past the nosing on the top riser.
- Where the handrail is continuous, the 300 mm extension is not required in the inner handrail at intermediate landings.

The dimensions indicating the heights of handrails shall be taken vertically from the nosing of the tread to the top of the handrail or from the landing to the top of the handrail.

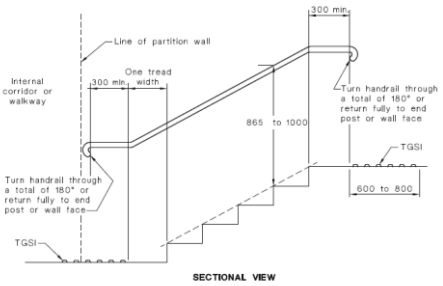


(a) Circular

DIMENSIONS IN MILLIMETRES

FIGURE 29 (in part) HANDRAILS

Figure 55

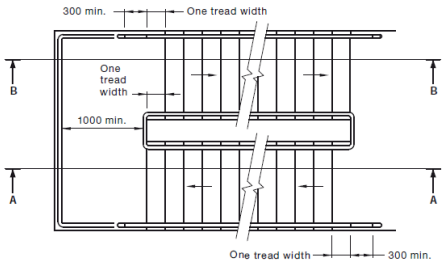


SECTIONAL VIEW

DIMENSIONS IN MILLIMETRES

FIGURE 26(B) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT END OF STAIRWAY OTHER THAN AT LINE OF BOUNDARY

Figure 56



(a) Plan

DIMENSIONS IN MILLIMETRES

FIGURE 28 (in part) HANDRAILS TO STAIRS WITH INTERMEDIATE LANDINGS

Figure 57

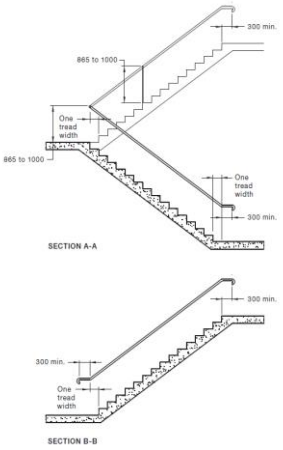


Figure 58

Comment: Insufficient details to confirm compliance in the current design architect is to prepare stair details incorporating accessible features in accordance with this requirement and submit to BM+G for review and comment.

Risers are offset to enable continuous handrail (no vertical drop permitted). Insufficient details for handrail termination to confirm compliance. Nosings to concrete stairs must be black and not project beyond the face of the riser.

Internal Accessways:

- Each accessway within the building is required to have:
- Passing spaces complying with AS 1428.1 at maximum 20m intervals on those parts of the accessway where a direct line of sight is not available; and
- Turning spaces complying with AS 1428.1 –
- Within 2m of the end of accessways where it is not possible to continue travelling along the accessway; and
- At maximum 20m intervals along the accessway

Passing Space:

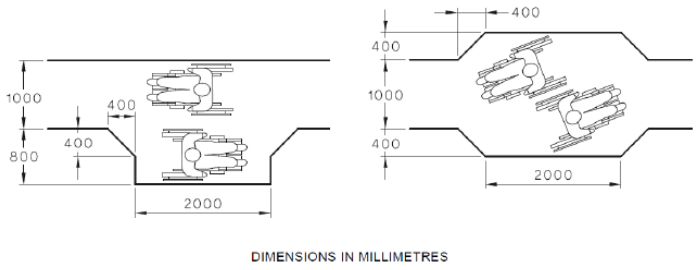


Figure 59

Turning Space:

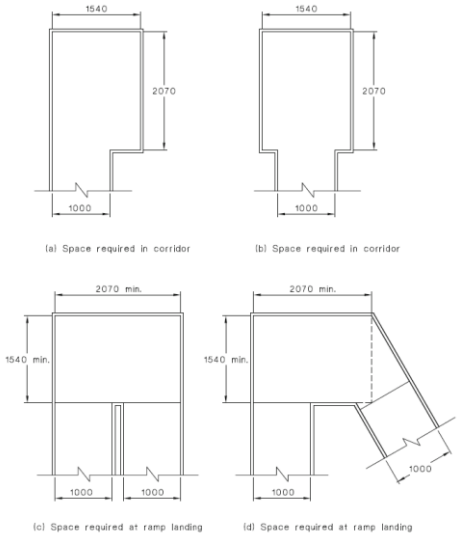


Figure 60

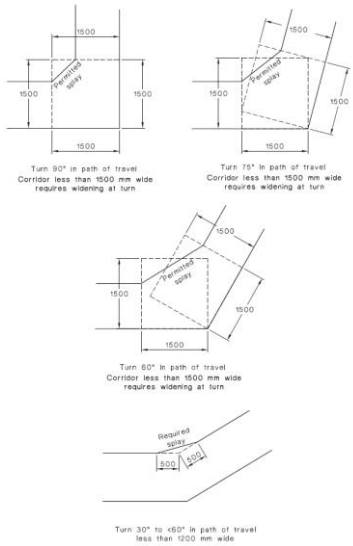


Figure 61

Any glazing on an accessible path of travel which is capable of being mistaken for a doorway or opening must be provided with a full-width solid and non-transparent contrasting line. The contrasting line must be not less than 75mm wide and shall extend across the full width of the glazing panel. The lower edge of the contrasting line shall be located between 900mm and 1000mm above the plane of the finished floor level.

Doorways, Doors and Circulation Space at Doorways

All doorways shall have a minimum luminance contrast of 30% provided between—

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

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

Comment: Details demonstrating compliance to be included on the Door schedule which is to include typical detail to be reviewed.

Notations and product specification showing the required luminance contrast is required. Glazed portioning shall ensure 30% contrast is achieved to identify doorway.

Consider *providing contrast strip to the top of a bollard*

Consider *countertops providing contrast between the top and the supporting surface being introduced with a contrast to the background*

Consider *Equipment controls (fans, air conditioners, heaters etc) being introduced with a contrast to the background*

Consider *incorporating contrast to vertical building supports posts columns within the building*

Consider *incorporating contrast to the flushing controls on cisterns within the building*

Consider *incorporating grab rails and handrails which has a contrast to the background*

Consider *incorporating lift controls with a contrast to the background*

Consider *Incorporating taps with contrast to the background*

Consider *incorporating contrast to vertical and horizontal connections e.g. floor and wall finishes*

All doorways within the accessible path of travel must achieve a minimum width of 850mm. This relates to the clear opening of the doorway I.e. between door leaf and door jamb. This will generally require a 920mm door leaf.

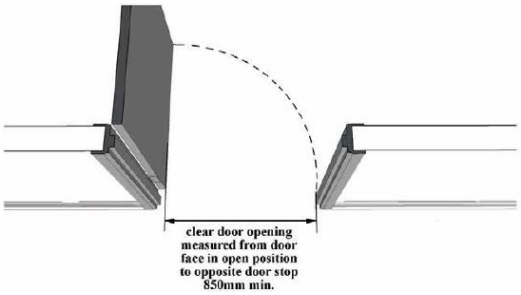
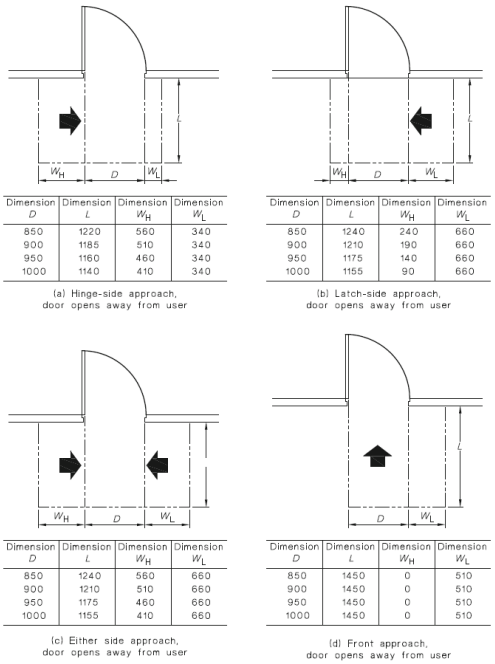


Figure 62

Circulation space must be provided on each side of every doorway, gate, or similar entry way, on a continuous path of travel. Circulation space must be considered based on the following diagrams



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

(a) Hinge-side approach, door opens away from user

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

(b) Latch-side approach, door opens away from user

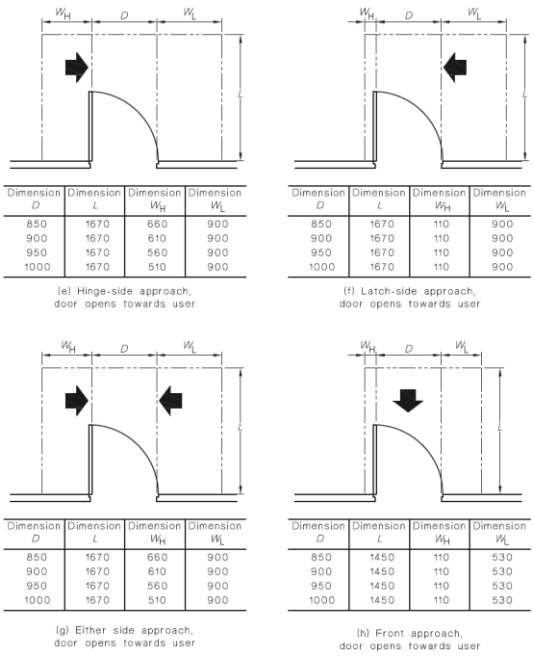
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1240	560	660
900	1210	510	660
950	1175	460	660
1000	1155	410	660

(c) Either side approach, door opens away from user

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

(d) Front approach, door opens away from user

Figure 63



Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	660	900
900	1670	610	900
950	1670	560	900
1000	1670	510	900

(e) Hinge-side approach, door opens towards user

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	110	900
900	1670	110	900
950	1670	110	900
1000	1670	110	900

(f) Latch-side approach, door opens towards user

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	660	900
900	1670	610	900
950	1670	560	900
1000	1670	510	900

(g) Either side approach, door opens towards user

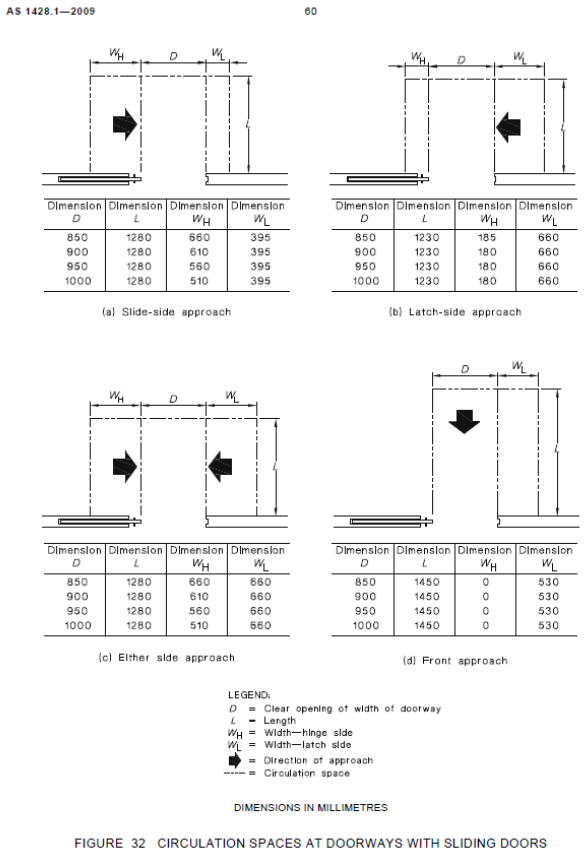
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1450	110	530
900	1450	110	530
950	1450	110	530
1000	1450	110	530

(h) Front approach, door opens towards user

Figure 64

Comment: Non-compliant circulation space to the proposed ward rooms and ensuites as mentioned earlier in this report will need to be addressed by way of a Performance Solution.

Architect to ensure compliance in the design will be subject to further review and comment as part of the design development noting that coordination is required to achieve compliance with the above throughout the building.



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

(a) Slide-side approach

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

(b) Latch-side approach

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

(c) Either side approach

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

(d) Front approach

LEGEND:
D = Clear opening of width of doorway
L = Length
W_H = Width—hinge side
W_L = Width—latch side
= Direction of approach
----- = Circulation space

DIMENSIONS IN MILLIMETRES

FIGURE 32 CIRCULATION SPACES AT DOORWAYS WITH SLIDING DOORS

Figure 65

Comment: At the end of accessways 1540 x 2070mm turn space is required within 2m of the end of the accessible path of travel. Particular areas of concern are in the low secure areas and the like where the internal planning is still being undertaken which will likely further encroach on the required unobstructed widths of the building.

The design is still subject to refinement however this needs to be accommodated throughout all accessible areas within the building and external landscaped areas. BM+G will carry out further reviews as required in this regard.

Doorways, Doors and Circulation Space at Doorways

All doorways within the accessible path of travel must achieve a minimum width of 850mm. This relates to the clear opening of the doorway I.e. between door leaf and door jamb. This will generally require a 920mm door leaf.

Comment: All doors in accessways require a minimum 850mm clear width (920mm door). Where dual leaf doors are used at least one leaf shall be 920mm door, a cat and kitten may be required to ensure compliance.

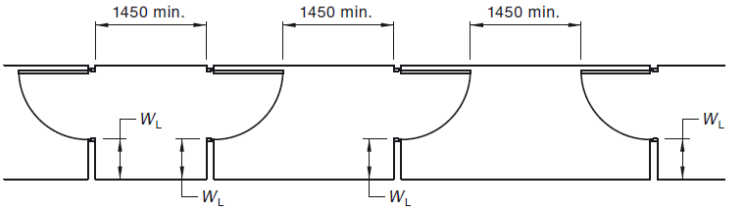
Architect to confirm compliance throughout all accessible areas to comply. Detailed door schedule and dimensioned plans will need to be provided to BM+G for review and comment in this regard.

Circulation space must be provided on each side of every doorway, gate, or similar entry way, on a continuous path of travel. Circulation space must be considered based on the following diagrams. Doorway circulation space will need to be confirmed as compliant during the detailed design. Any deviations from the above will require consideration by an accredited Access Consultant to justify any departures under a performance solution.

Fixed furniture is not permitted to obstruct circulation space. Architect to rectify in all areas where this occurs typical locations below, rectify on all areas where this occurs.

Note LHD/ HI to confirm acceptance of any performance solution as key stakeholder.

The distance between successive doorways in in accessible paths of travel shall comply with AS1428.1 – 13.4 being min 1450mm between successive doorways.



(a) Continuous accessible path of travel

DIMENSIONS IN MILLIMETRES

FIGURE 34 (in part) DISTANCE BETWEEN SUCCESSIVE DOORWAYS IN VESTIBULES AND AIR LOCKS

Figure 66

Comment: A number of doors do not achieve 1450mm clear width in between successive doorways require design development by way of altering direction of door swing or relocating door to different position within the wall. Typical doors below, rectify in all areas where this occurs.

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 (non-patient care) 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.

Note: Where FER requires auto door on horizontal existing swinging against the direction of egress location of push buttons shall comply with the requirements of this Clause. Architect shall ensure compliance in this regard.

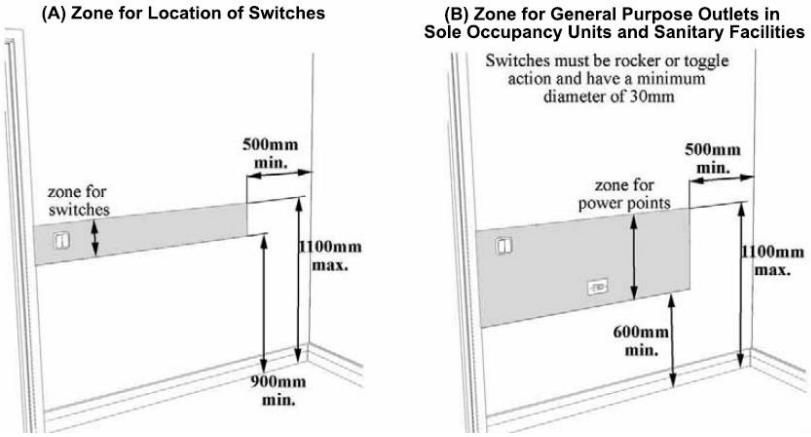


Figure 67

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.

Architect to review and ensure compliance in the design.

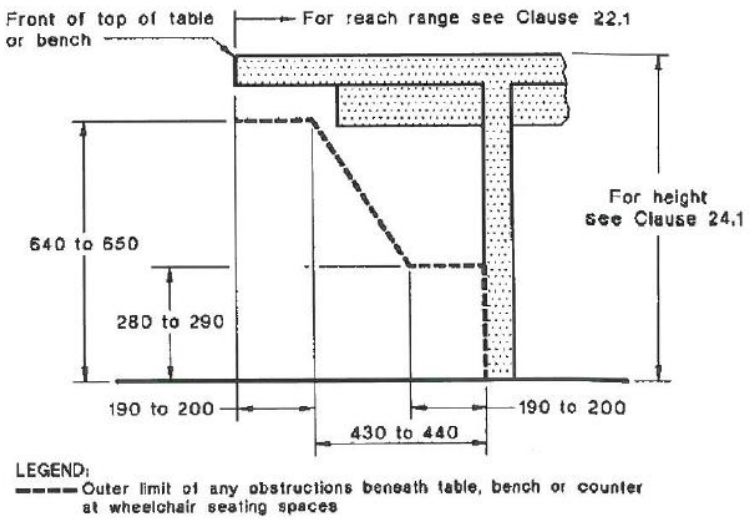


Figure 68: Clearances below an accessible counter or bench

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.

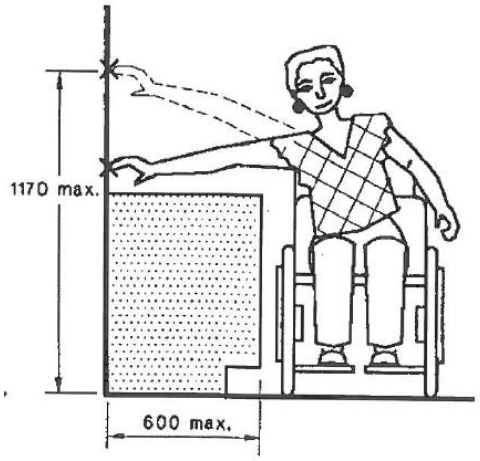


Figure 69

Accessible Fixtures & Fittings

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

Anti-ligature Door Hardware

Due to the nature of the Mental Health Facility, it is noted that door hardware, handrails and other fixtures and fittings throughout the facility will be required to be anti-ligature.

The provision of anti-ligature throughout the building will be required to be required to be assessed as part of an Access Performance Solution.

3.4 Section E – Services and Equipment

E1D1

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

Note: The below comprises a limited summary of requirements under AS 2419.1 – 2021. Refer to the full standard for all applicable requirements.

Fire Brigade Booster Assemblies:

A fire brigade booster assembly shall be located (including but not limited to) -

- within or affixed to the facade of the building containing the principal pedestrian entrance and not more than 20 m from the principal pedestrian entrance;
- within or affixed to the facade of the building containing the principal pedestrian entrance and identified by a visual alarm device (VAD) in accordance with Clause 7.3.2; or
- remote from the building and within sight of the principal pedestrian entrance to the building -
  - adjacent to the site boundary and the principal vehicle access for the fire brigade pumping appliance to the building or site; or
  - not more than 20 m from the facade of the building containing the principal pedestrian entrance and not more than 20 m from the main pedestrian entrance.

In addition, a fire brigade booster assembly shall be (including but not limited to):

- Not more than 10m from a hardstand
- Not less than 10m from:
  - Any high voltage electrical distribution equipment such as transformers and distribution boards
  - Any electric vehicle charging station regardless of voltage
  - Any stored quantity of dangerous goods
  - Any external combustible storage
- Not less than 3m from the vent terminal of any gas assembly or gas measurement systems
- Not less than 3m from the discharge outlet of any building exhaust system when operating in fire mode.

Where located less than 10m from a non-sprinkler protected building, the booster shall be protected in accordance with the requirements of Cl. 7.6.2 of AS 2419.1 -2021.

Internal Hydrants

Any Internal Hydrants are to be located within the fire isolated exits or within 4m of the top riser of the non-fire isolated exits (external stairs in lieu of fire stairs). In addition, if floor coverage cannot be achieved a Performance Solution is required to locate hydrants >4m from an exit in Class 5-9 buildings.

Comment: Any proposed non-compliances with AS 2419 including the location of the Fire Hydrant infrastructure will need to be addressed by way of a fire engineered strategy. For the purpose of this SD report, we assume that the existing site wide infrastructure is to be relied upon and as such the location of the infrastructure is to be addressed in the FER for the building.

Internal fire hydrants shall be within all fire isolated stairs in accordance with AS2419.1 – 2021.

All internal fire hydrants not located within fire isolated stairs shall be depicted on compartment plans for assessment noting that agree to be co located within FHR which are addressed in FER for being further than 4m from an exit. The locations of all compartment doors are not to impact

any adjacent fire and or smoke doors when in the open position this is to be reviewed as part of the design finalisation.

The hydraulic consultant will need to review the existing sitewide infrastructure and confirm the capacity for it to support the proposed new building, and any upgrades required for inclusion into the design.

Confirm location of all Fire hydrants on compartment plans and submit for review and comment.

Any additional internal fire hydrants (supplementary) on the floor plate will need to be addressed by way of the fire engineering strategy. A location plan shall be developed in accordance with the FER and AS2419.1-2021 - 3.6.3. All internal fire hydrants shall have location confirmed on compartment plans.

External Hydrants

External hydrants are required to be located:

- Not less than 10m from:
  - Any high voltage electrical distribution equipment such as transformers and distribution boards
  - Any electric vehicle charging station regardless of voltage
  - Any stored quantity of dangerous goods
  - Any external combustible storage
- Not less than 3m from the vent terminal of any gas assembly or gas measurement systems
- Not less than 3m from the discharge outlet of any building exhaust system when operating in fire mode.

Hydrant Pump Rooms

Where required, a hydrant pump room is required to have a door opening to a road or open space, or a door opening direct into a fire isolated airlock connected to a fire stair. Pump rooms shall be weatherproof and only contain firefighting pump sets and associated equipment. A minimum of 1m clearance must be provided around all sides of each pump set. For additional requirements refer to Cl. 6.11 of AS 2419.1 – 2021.

Comment: Internal wet fire designer shall confirm any other non-compliances associated with their design which has not already been addressed within the fire engineered strategy. Any lockable type cabinets within mental health areas will need to be addressed by way of the Fire Engineering Strategy.

Compliance with the wet fire design is to be subject to further review as part of subsequent design stages in this regard

Architect shall locate all FH on compartment plans. Where any internal are >4m from an exit this shall be advised for consideration within fire engineered strategy.

Location of FH within fire isolated stairs shall not obstruct stretcher flight path diagrams.

E1D3

Fire Hose Reels: Fire hose reels are required to be provided to comply 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; and
- Within 4m of the horizontal exits or adjacent to an internal fire hydrant depending on coverage

Fire hose reels are not permitted to be pass through fire or smoke doors separating compartments.

Comment: If any of the doors accessing cupboards containing fire hose reels are secured locked in Mental Health and are not readily accessible to occupants, then the enclosures will be required to be constructed in accordance with Clause 10.4.4 of AS 2441 – 2005. In this instance any locked

	cabinet or cupboard is to be provided with a frangible panel to provide access to the latching device. If the above design as required by AS 2441 is not adopted, then a Fire Engineering Performance Solution will be required to be undertaken by the appointed Fire Safety Engineer in order to demonstrate compliance with the nominated Performance Requirements of the BCA. 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 180o 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 Architectural documentation is to be updated to show all the proposed FHR locations throughout the building and be submitted to BM+G for review and comment. A copy of the coverage diagrams and design certification will need to be submitted along with the application for Crown Certificate demonstrating compliance with the requirements of this clause. Should FHR coverage be rationalised from the fire separated comms rooms and the like, this is to be addressed under the Fire Engineering strategy for the building.
E1D4 – E1D13	**Sprinklers:** An automatic fire sprinkler system is required to be provided in accordance with AS 2118.1 – 2017, it is understood that a AS2118.6 system is not permissible based on the building having a rise in storeys of not more than two (2). Comment: Type of sprinkler system proposed is to be confirmed. It is noted however, based on the number of storeys a Part 6 system would not be permissible. Design documentation and supporting design certification is to be provided along with the application for Crown Certificate demonstrating compliance with the requirements of this clause The location of infrastructure associated with the sprinkler system is to be shown on the architectural documentation, this is to include any booster, pump sets, control valves and the like noting that the plans don't show the location of any infrastructure. The FER is to address omission of sprinklers form any electrical rooms, any recessed heads which don't achieve the required RTI. Being a mental health facility, the hydraulic consultant will need to ensure that the design complies with anti-ligature requirements this is subject to further coordination with the design team in this regard.
E1D14	**Fire Extinguishers:** To be provided and designed in accordance with AS 2444-2001. Powder Type fire extinguishers are not permitted to be provided within any patient care areas. This includes the provision of Class Type A & E Class Portable Fire Extinguishers throughout each floor. In accordance with Clause E1D14, Type E Extinguishers are permitted to be installed nurse and staff stations. Powder fire extinguishers are not permitted to be installed in areas containing patient care areas throughout the building. Comment: Design certification and associated supporting documentation will need to be provided along with the application for Crown Certification. If any of the doors accessing cupboards containing portable fire extinguishers are secured locked in Mental Health and are not readily accessible to occupants, then the enclosures will be required to be constructed in accordance with Clause 3.6 of AS 2444 – 2001. In this instance any locked cabinet or cupboard is to be provided with a frangible panel to provide access to the latching device. If the above design as required by AS 2444 is not adopted, then a Fire Engineering Performance Solution will be required to be undertaken by the appointed Fire Safety Engineer in order to demonstrate compliance with the nominated Performance Requirements of the BCA.

E1D17	**Provision for special hazards:** Where solar panels are proposed they are to be included in FER trial design.
E2D4/ E2D9/ E2D11/ E2D12/ E2D13	Smoke Hazard Management: + An AS 2118.1 – 2017 Sprinkler System is to be installed throughout. + An AS 1670.1 – 2018 Fire Detection and Alarm System is to be installed throughout. The fire panels (fully function sub panel) in the is to be inter-phased with the existing main building FIP. Automatic Fire Detection & Alarm System An Automatic Fire Detection & Alarm System is required to be installed throughout the building in accordance with AS 1670.1 - 2018. Photoelectric type smoke detectors are required to be installed in patient care areas and in paths of travel to exits from patient care areas. Smoke detectors may be omitted from rooms that are considered a spurious alarm environment i.e., Dirty Utility Rooms, Clean Utility Room with slop hoppers, sterilizers etc. on the basis that the room is provided with a sprinkler system. Smoke dampers are required where mechanical duct crosses fire/ smoke wall. Particular attention required for fire walls and comms/ switch rooms fire/ smoke separated from balance potential connecting multiple compartments. Mech design shall ensure compliance in this regard. Key elements of AS 1670.1 which require close attention are as follows: + 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 >3m3 is required to be protected. + All electrical cupboards, comms cupboards etc., irrespective of the size are required to be protected. + Detectors are to be installed to the lift shafts, service shafts etc as required by AS 1670.1 – 2018. + Any ducted mechanical air handling systems, or non-ducted systems exceeding a capacity of 1000L/s, must shut down on activation of smoke detection. Comment: Stairway pressurisation will be required where the stairways are constructed as fire isolated exits in lieu of external stairways in lieu of unless the provision of pressurisation is rationalised under the Fire Engineering strategy Dry fire consultant is to ensure compliance with the requirements of this clause include details on the architectural documentation including showing the location of the dry fire infrastructure panels and the like.
Part E3	**Lifts:** A minimum number of two (2) emergency lifts will be required to be provided to serve each storey of the building that is served by the passenger lifts. It is noted that the mental health building has single lift only.

The emergency lifts must be installed within separate banks so that an emergency lift is available within each bank of lifts, otherwise if they are located within the same bank, they need to be contained in separate fire rated shafts.

The following provisions are required to be provided to the lifts:

+ Fire service controls in accordance with E3D9.
+ Fire service recall control switch in accordance with E3D11.
+ Lift car fire service drive control switch in accordance with E3D12.

All passenger lifts are to possess appropriate internal dimensions of not less than 1400mm (width) x 1600mm (depth) (NCC E3D8) to meet the minimum accessibility requirements. The sizing of the lift cars will be nominated by the lift consultant.

All lifts must be provided with minimum components to meet NCC E3D8, including handrails, tactile and Braille control buttons, and further enhanced features for people with disabilities to meet the parameters of AS 1735.12:1999, including however not limited to, delayed door closing device, visual and audible indication upon lift arrival and arrival at each landing.

Consider *installing handrails which are in contrast to the walls.*

Consider *replacing internal wall finishes with a material which is of a non-reflective material*

Consider *providing emergency procedures so that they are clearly identifies in the event of a lift malfunction*

The below minimum lift car dimensions apply to emergency lifts in a Class 9a building.

+ Lift Component	+ Minimum Dimension (mm)
Minimum depth of car	2280
Minimum width of car	1600
Minimum floor to ceiling height	2300
Minimum door height	2100
Minimum door width	1300

Comment: Details demonstrating compliance with the requirements of this clause will need to be provided along with the application of the Crown Certificate.

Each Emergency lift must be contained within its own fire rated shaft, noting the compartmentation plan show fire rated walls between each emergency lift as such compliance is readily achieved.

E4D2 - E4D8

Emergency Lighting and Exits Signs: Emergency lighting and exit signage to be provided in accordance with E4D2 - E4D8 complying with AS 2293.1 – 2018.

Comment: Details demonstrating compliance with the requirements of this clause will need to be provided along with the application of the Crown Certificate.

E4D9

Emergency Warning & Intercom Systems (EWIS): An Emergency Warning and Intercom System is required to be provided in accordance with AS 1670.4 – 2018.

Comment: Details demonstrating compliance with the requirements of this clause will need to be provided along with the application of the Crown Certificate.

Rationalisation of EWIS Speakers

EWIS speakers may be omitted from patient bedrooms and other sensitive environments where the activation of the speaker within the room may cause trauma to the patient.

Any rationalisation of EWIS system from within patient care areas is to be assessed as part of the Fire Engineering Assessment in order to demonstrate compliance with the nominated Performance Requirements of the BCA

3.5 Section F – Health and Amenity

Part F1	**Damp and Weatherproofing:** Damp and weatherproofing to comply with the prescriptive requirements of this part. The following is noted: + Stormwater drainage shall comply BCA F1D3 and AS3500.3. The hydraulic designer shall confirm floor waste and overflows for any unenclosed balconies. + All external waterproofing shall comply with BCA F1D5, AS4654.1 and AS4654.2. Architect shall ensure external waterproof details comply with AS4654 for smooth and level transition at doorways. This shall be depicted on the damp and weatherproofing Performance Solutions.
F1D8	**Subfloor ventilation:** Subfloor spaces shall comply with BCA F1D8. Comment: Level 1 subfloor required to comply with the requirements of this Clause. Confirmation is required from mechanical engineer/ architect on how this will be achieved.
Part F2	**Wet Areas and Overflow Protection:** Where urinals are installed, an impervious wall lining must be provided up to the top of the urinal. Where any floor waste is installed (including floor waste not required by the BCA), they must be provided with falls in accordance with F2D3 i.e. be between 1:50 – 1:80. Accessible unisex facilities shall also comply with these requirements.
Part F3	**Roof and Wall Cladding:** This section contains DtS provisions for the weatherproofing of certain external wall and roof designs. + Roof coverings must comply with F3D2. + Sarking must comply with F3D3. + Glazed assemblies must comply with F3D4. + Wall cladding must comply with F3D5. **Comment:** A Performance Solution is required to be obtained in relation to the departures from F3D5 with respect to wall cladding systems. A Façade Engineer is required to prepare the Performance Based Design Brief (PBDB) and Performance Solution Report. External wall makeup including materials proposed to be confirmed in order to determine whether performance solution will be required for the project.
Part F4	**Sanitary Facilities:** Sanitary facilities must be provided to comply with the requirements of F4D2 and F4D4 as applicable for the subject part. The following facilities are also required to be provided: + one kitchen or other adequate facility for the preparation and cooking or reheating of food including a kitchen sink and washbasin; and

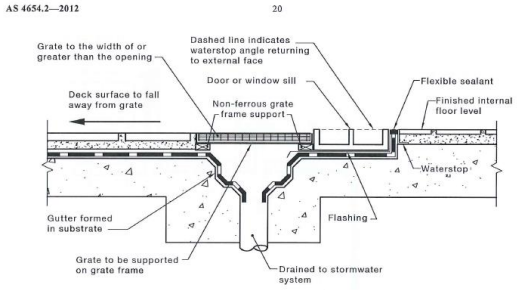


FIGURE 2.9 TYPICAL DETAILS OF MEMBRANE TERMINATION AT WALL OPENINGS WHERE THE INTERNAL AND EXTERNAL FINISHED FLOOR LEVELS DO NOT ALLOW FOR AN UPTURN

Figure 70

- laundry facilities for the cleansing and drying of linen and clothing or adequate facilities for holding and dispatch or treatment of soiled linen and clothing, sanitary products and the like and the receipt and storage of clean linen; and
- one shower for each 8 patients or part thereof; and
- one island-type plunge bath in each storey containing a ward area. It is understood a performance solution is proposed to omit.

Population numbers (staff and visitors) will need to be confirmed in order to accurately determine the required sanitary compartments in the building.

The BCA focuses only on sanitary facilities for patients at above Class 9a table ratios.

This is automatically addressed by each patient 1xbed room having private ensuite.

Operationally however, sanitary facilities would be provided to communal areas as required, albeit over and above min BCA requirement. This includes recreation, lounge and dining. The number and location would often be a design outcome with user groups.

Whilst BCA is silent on WCs for staff and visitors with a patent care area, we recommend, from experience, provision be made for amenities for both staff and visitors. This will mitigate the need for staff to leave patient zones and also remove the need for visitors to use patient ensures / communal faculties.

Accessible Sanitary Facilities:

Accessible unisex sanitary facilities and ambulant WCs are to be provided in the BOH services building.

The accessible WCs and ambulant WCs must comply with the circulation and spatial requirements under AS 1428.1-2009 – refer to advice above.

Comment: Additional information is required for assessment of accessible unisex facilities to confirm compliance to As1428.1. This includes room layout sheets and the like demonstrating compliance with the requirements of this part and AS 1428.1-2009.

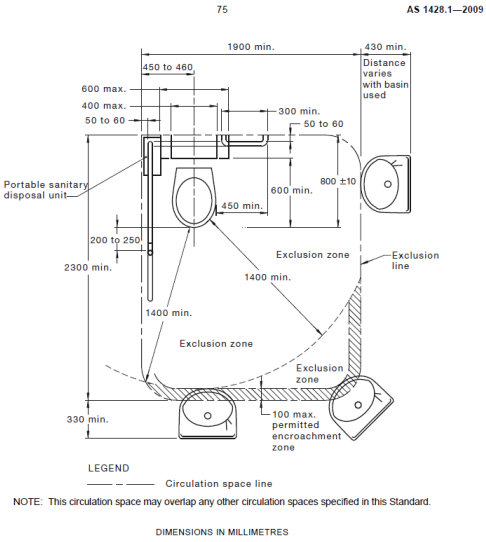


Figure 71

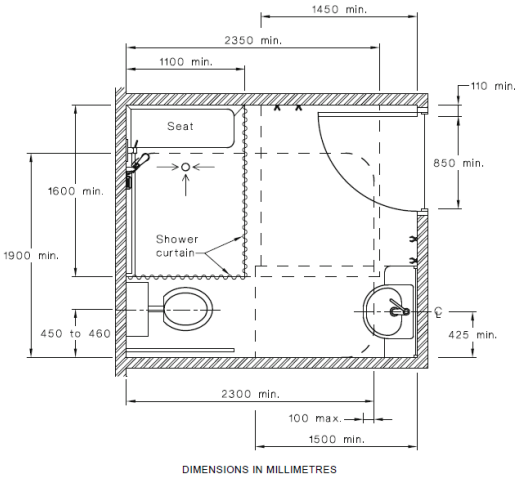


FIGURE 50 SANITARY COMPARTMENT SHOWING OVERLAP OF WASHBASIN FIXTURE INTO SHOWER CIRCULATION SPACE

Figure 72

Ambulant Sanitary Facilities:

In addition to unisex sanitary facilities, there must be the provision of a sanitary compartment for use by people with ambulant disabilities for use by each sex. Where they are required, facilities based on the population numbers for the building. This is to be subject to further confirmation and coordination as part of the design development.

Current design does not comply with spatial requirements for ambulant facility for wall width (900-920) and space in front of pan (900mm min). Updated plans to demonstrate compliance.

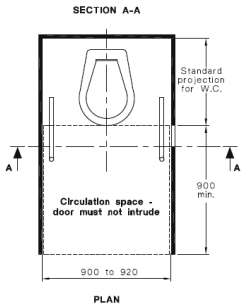


Figure 73

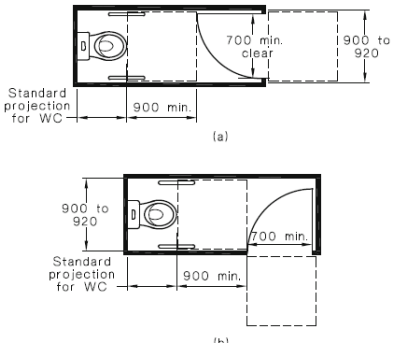


Figure 74

Ambulant facilities are to achieve a width between walls (900-920mm) and 900 x 900mm clear space in front.

Updated plans demonstrating compliance with all accessible facilities to AS1428.1 required prior to issue of Crown Certificate.

Consider *installation of an emergency alarm within the compartment for users who require assistance.*

Consider *painting the door and/or doorframe to achieve a minimum luminance contrast of 30% to the adjacent surfaces.*

Consider *installing identification markers to the mixer identifying the hot and cold including both colour and text.*

Unisex Accessible WCs

Tap sets will need to be specified with lever of capstan handles in the accessible sanitary facilities.

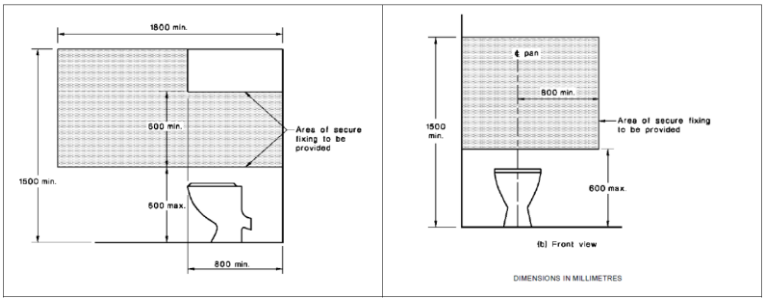


Figure 75

Provision of wall strengthening for grab-rails will need to be provided adjacent to sanitary facilities.

The location and installation of washbasins must comply with the requirements of AS 1428.1-2009.

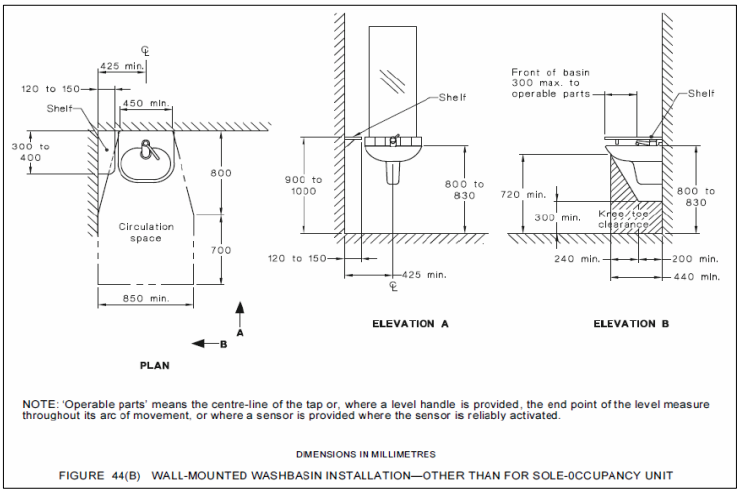
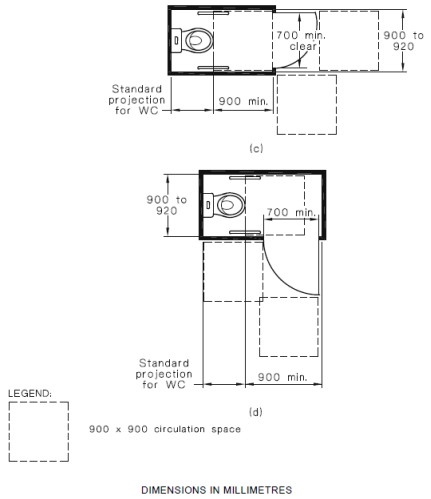


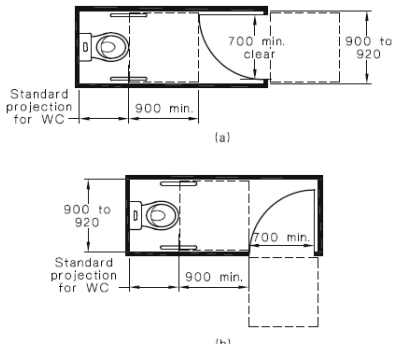
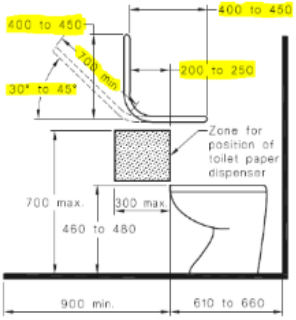
Figure 76

Checklist for Accessible WCs	
Entry Door	The detailing of the circulation at doorways shall comply with the provisions of Clause 13 of AS1428.1:2009
Entry Door	The luminance contrast provisions at the doorway shall comply with the provisions of Clause 13.1 of AS1428.1:2009
Force Required to Operate Door	The force required to operate the door if fitted with a door closer is a maximum of 20N. It is assumed that auto-doors will not be installed
Door Hardware	The position of door hardware is to be located between 900-1100mm AFFL.
WC Pan Circulation	1900×2300mm
Hand Basin Circulation	850×1500mm, the basin may encroach a maximum of 100 mm into the circulation space of the adjacent WC pan circulation
WC Pan Offset from Side Wall	450/460 mm
WC Pan Offset from Rear Wall	800±10 mm
WC Pan Backrest	To code requirements
WC Pan Toilet Seat	The toilet seat will need to be the full round type, securely fixed in position, be rated 250 KG and have a minimum limits contrast of 30% with the background pan, wall or floor against which it is viewed.
WC Pan Grab Rails	Grab rail to be mounted 800 mm above finish floor level, length of grab rail to be 1050 mm from rear wall, install 300mm grab rail to left-hand side of the WC pan. It is assumed that the walls to which the grab rails are fixed will have the required 1100N force rating wall reinforcement required by the standard
Hand Basin Mounting Height	Top of hand basin to be 800/830 mm above finish floor level
Hand Basin Clearances	The clearances around and under the hand basin need to comply with the provisions of clause 15.3 of AES 1428.1:2009. Specific attention is drawn to the plumbing installation where the required clearances under the hand basin necessitate special consideration of the bottle trap associated with the hand basin
Hand Basin Selection	The detailing of the hand basin requires the installation of a shelf unit. It may be possible to specify a hand basin that incorporates a shelf section thereby eliminating an additional component to be installed in the USAT

Hand Basin Mirror	The mirror is to be flush mounted on the wall above the sink the bottom of the mirror is to be no more than 900 mm above the finish floor level and the top of the mirror is to be a minimum of 1850 mm above the finish floor level
Hand Basin Tap	It is recommended that a lever hand basin tap be installed in lieu of the capstan type
Toilet Roll Holder	The position of the toilet roll holder is to be in accordance with code requirements
Coat Hooks	Coat hooks are to be installed 1200 to 1350 mm above finish floor level and not closer than 500 mm from an internal corner. The coat hook can be installed on the wall or on the back of the door
Soap Dispensers/Hand Towel	These items are to be able to be operated by one hand and shall be installed so that the tap or dispenser is not less than 900 and not more than 1100 mm above the finish floor level.
Braille Tactile Signage	The detailing of the Braille Tactile Signage will need to comply with the provision of NCC Clause D$D7 and NCC Specification 15 The location of the Braille Tactile sign is to be mounted on the latch side wall. The sign is to indicate the handing of the grabrails to the WC Pan. The following is an example of the type of information to be provided in the Braille Tactile Sign.

Ambulant WCs

Checklist for Ambulant WCs	
Entry Door	The entry doorway is to achieve a clear width of no less than 750mm.
Door Hardware	Shall be provided with an in-use indicator and a bolt or catch. Where a snip catch is used, the snib-handle shall have a minimum length of 45mm from the centre of the spindle. In an emergency, the latch mechanism shall be openable from the outside.
Internal Dimensions	Width between internal walls is to achieve between 900 – 920mm. A 900x900 clear area must be provided in front of the toilet pan, fixtures (including door swing) cannot encroach on this distance, except for grab rails.  *Figure 77*

	 *Figure 78*
Grab Rails	Grab rails are to be located on either side of the toilet pan and must be located between 800 – 810mm above finished floor level. + Grab rail length and up-turn to be in accordance with Figure 53(A) of AS 1428.1 – 2009. + Grab rails shall have an outside diameter of 30 – 40mm. + Exposed edges and corners of grab rails shall have a radius of not less than 5mm.  *Figure 79* + The fastenings and the materials and construction of grab rails shall be able to withstand a force of 1100 N applied at any position. + Clearance between the grab rail and the adjacent wall shall be between 50 – 60mm.
Toilet Roll Holder	The position of the toilet roll holder is to be in accordance with code requirements
Coat Hook	A coat hook shall be provided within the sanitary compartment at a height between 1350mm to 1500mm from the floor.
Braille Tactile Signage	The detailing of the Braille Tactile Signage will need to comply with the provision of NCC Clause D4D7 and NCC Specification 15 The location of the Braille Tactile sign is to be mounted on the latch-side wall. Signage content is to comply with the requirements of Clause 8 of AS 1428.1 – 2009.

Part F5

Ceiling Heights: The floor to ceiling heights must be as follows:

The minimum ceiling heights in a Class 9a building are as follows –

+ a patient care area -2.4 m;
+ an operating theatre or delivery room – 3 m; and
+ a treatment room, clinic, waiting room, passageway, corridor, or the like – 2.4 m.

In any building:

+ Bathrooms, sanitary compartments, tea preparations rooms, pantries, storerooms or the like – 2.1m,
+ A commercial kitchen – 2.4m,
+ Above a stairway, ramp, landing or the like – 2m.

	Comment: Floor to floor heights have the capacity to comply. The architect shall confirm compliance by way of RCPs as part of the design finalisation.
Part F6	**Light and Ventilation:** Artificial lighting systems are required to comply with Clause F4.4 and AS 1680. All mechanical or air-conditioning installations must be undertaken in accordance with Clauses F4.5(b) and AS 1668.2.-2012. In Class 9a buildings, natural lighting must be provided to all rooms used for sleeping purposes. Comment: Rooms for sleeping have provision for natural light. Internal courtyard providing natural light. Courtyard opening to remain open to the sky at all times this is to be further reviewed and having details demonstrating compliance submitted along with the application for Crown Certificate.

3.6 Section G – Ancillary provisions

Part G5 **NSW G5** **Spec 42.**	**Additional bushfire requirements for Class 9 buildings with Special fire protection purposes:** NSW G5D2 applies to Class 9 building that is a special fire protection purpose located in an annual subject to a Bushfire Attack Level (BAL) not exceeding 12.5, determined in accordance with planning for bushfires. Where in excess of BAL 12.5 a fire engineered solution is required to demonstrate compliance. Comment: Compliance with the requirements of this Part and Specification 43 of the BCA will be required for the subject building. We understand that compliance with this part will be subject to a Performance Based approach in lieu of the prescriptive DTS provisions. The fire engineering strategy is subject to further coordination and development in this regard.

3.7 Section J – Energy Efficiency

Part J	**Energy Efficiency:** The new building works subject to compliance with the Energy Efficiency Provisions of BCA 2022 Section J relating to: + J1: Energy Efficiency Performance Requirements + J2: Energy Efficiency + J3: Elemental Provisions for a Class 2 Building and a Class 4 Part + J4: Building Fabric + J5: Building Sealing + J6: Air-Conditioning and Ventilation + J7: Artificial Lighting and Power + J8: Heated Water Supply and Swimming Pool and Spa Pool Plant + J9: Energy Monitoring and On-Site Distributed Energy Resources Comment: The Crown Certificate documentation from the architect, mechanical, electrical, and hydraulic engineers are to incorporate details demonstrating compliance with the above provisions (as applicable to their respective disciplines).

4.0 Conclusion

This report contains an assessment of the referenced Schematic Design architectural documentation for the proposed Maitland Hospital Mental Health Unit against the relevant provisions of the Building Code of Australia 2022 (BCA) and Disability (Access to Premises – Buildings) Standards 2010 and AS1428.1 – 2009.

Arising from the assessment, key compliance issues have been identified that require further resolution, either by way of fire engineered Performance Solutions or plan amendments as the design develops.

Notwithstanding the above, it is considered that the proposed development can readily achieve compliance with the BCA subject to resolution of the matters identified in this report.

Appendices

+ Appendix 1 – References Tables

Table 1: Non-Combustibility Requirements

+ Building Element	+ Type A Construction
External wall	Non-combustible
Common wall	Non-combustible
Floor and floor framing of lift pit	Non-combustible
All loadbearing internal walls (including those of shafts)	Concrete, masonry or fire-protected timber
Loadbearing fire walls	Concrete, masonry or fire-protected timber
Non-loadbearing internal walls required to be fire-resistant	Non-combustible
Non-loadbearing lift, ventilating, pipe, garbage and the like shafts which do not discharge hot products of combustion.	Non-combustible (subject to conditions outlined in C2D10)

Table 2: Fire Hazard Properties Requirements – Floor Linings

+ Table S7C3 of Specification 7 Critical Radiant Flux or Floor Linings and Floor Coverings			
+ Class of Building	Building Not Fitted with a Sprinkler System	Building Fitted with a Sprinkler System (other than a FPAA101D or FPAA10H System)	Fire-isolated Exits and Fire Control Rooms
Class 5	2.2 kW/m2	1.2 kW/m2	2.2 kW/m2
Class 9a – Patient care areas.	4.5 kW/m2	2.2 kW/m2	4.5 kW/m2
Class 9a – Areas other than patient care areas.	2.2 kW/m2	1.2 kW/m2	4.5 kW/m2

Table 3: Fire Hazard Properties Requirements – Wall and Ceiling Linings

+ Table S7C4 of Specification 7 – Wall and Ceiling Lining Materials (Materials Groups Permitted)				
Class of Building	Fire-isolated Exits and Fire Control Rooms	Public Corridors	Special Areas	Other Areas
Class 5, Sprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 9a, Sprinklered Accommodation for the aged, people with a disability, children and health-care buildings	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3

Table 5: Fire-Resisting Construction – Type B Construction

TYPE B CONSTRUCTION: FRL OF BUILDING ELEMENTS				
+ Building Element	+ Class of Building - FRL: (in minutes) Structural adequacy/integrity/insulation			
	2, 3 or 4 part	**5, 7a or 9**	**6**	**7b or 8**
EXTERNAL WALL – (Including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is:				
For loadbearing parts:				
Less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3m	90/60/30	120/90/60	180/120/90	240/180/120
3 to less than 9m	90/30/30	120/30/30	180/90/60	240/90/60
9 to less than 18m	90/30/-	120/30/-	180/60/-	240/60/-
18m or more	–/–/–	–/–/–	–/–/–	–/–/–
For non-loadbearing parts:				
less than 1.5m	–/90/90	–/120/120	–/180/180	–/240/240
1.5 to less than 3m	–/60/30	–/90/60	–/180/90	–/180/120
3m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN - Not incorporated in an external wall				
For loadbearing columns:				
Less than 18m	90/–/–	120/–/–	180/–/–	240/–/–
18m or more	–/–/–	–/–/–	–/–/–	–/–/–
Non-loadbearing columns:	–/–/–	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS				
Fire-resisting lift and stair shafts				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120s
Non-loadbearing	–/90/90	–/120/120	–/120/120	–/120/120
Bounding public corridors, public lobbies and the like:				
Loadbearing	60/60/60	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/60/60	–/–/–	–/–/–	–/–/–
Between or bounding sole-occupancy units:				
Loadbearing	60/60/60	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/60/60	–/–/–	–/–/–	–/–/–
OTHER LOADBEARING INTERNAL WALLS AND COLUMNS	60/–/—	120/–/–	180/–/–	240/–/–
ROOFS	60/–/—	120/–/–	180/–/–	240/–/–

Notes:

1. Any wall required to have an FRL with respect to integrity and insulation must extend to the underside of the floor next above if that floor has an FRL of at least 30/30/30; or the underside of a ceiling with a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or the underside of a non-combustible roof covering; or 400mm above the roof covering if it is combustible.
2. Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must typically achieve the same FRL. Where that part is also required to be non-combustible, the supporting part must also be non-combustible.
3. The method of attaching or installing a finish, lining, ancillary element, or service installation to a building must not reduce the fire-resistance of that element to below that required.
4. A loadbearing internal wall and a loadbearing fire wall must be constructed from concrete, masonry, or a combination of the two.
5. In the storey immediately below the roof, internal columns and internal walls other than fire walls and shaft walls need not comply with S5C21.
6. Any lightweight construction in a fire wall or an internal wall required to have an FRL is to comply with Specification 6.
7. Non-loadbearing parts of an external wall that are more than 18m from a fire source feature need not be fire rated.

+ Appendix 2 – Fire Safety Schedule

The following table is a list of the required fire safety measures within the building. These measures may be subject to further change pending the outcomes of the final Fire Safety Engineering Review to confirm the works are permissible and do not contradict the base building Performance Solutions.

Table 7: Fire Safety Schedule – Maitland MHU

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Access Panels, Doors & Hoppers	BCA 2022 Clause C4D14 AS 1530.4 – 2014 and Manufacturer's Specifications		✓
Alarm Signalling Equipment	AS 1670.3 – 2018		✓
Automatic Fail-Safe Devices	BCA 2022 Clause D3D24, D3D26		✓
Automatic Fire Detection & Alarm System	BCA 2022 Spec. 20 & BCA Spec 23 AS 1670.1 – 2018		✓
Automatic Fire Suppression Systems	BCA 2022 Spec. 17 & BCA Spec 18 AS 2118.1 – 2017		✓
Emergency Lifts	BCA 2022 Clause E3D5 AS 1735.2 – 2001		✓
Emergency Lighting	BCA 2022 Clause E4D2 & E4D4 AS 2293.1 – 2018		✓
Emergency Evacuation Plan	AS 3745 - 2010		✓
Emergency Warning Intercom System (EWIS)	BCA 2022 E4D9, S31C19 of BCA Spec G3.8 AS1670.4 - 2018		✓
Exit Signs	BCA 2022 Clauses E4D5, NSW E4D6 & E4D8 AS 2293.1 – 2018		✓
Fire Blankets	AS 3504 – 1995 & AS2444 – 2001		✓
Fire Dampers	BCA 2022 Clause C4D15 AS 1668.1 – 2015 & AS 1682.1 & 2 – 2015 and Manufacturer's Specification		✓
Fire Doors	BCA 2022 Clause C3D13, C3D14, C4D3, C4D5, C4D6, C4D7, C4D8 & C4D12 AS 1905.1 – 2015 and Manufacturer's Specification		✓
Fire Hose Reels	BCA 2022 Clause E1D3 AS 2441 – 2005		✓
Fire Hydrant Systems	BCA 2022 Clause E1D2		✓

	AS 2419.1 – 2021		
Fire Seals	BCA 2022 Clause C4D15, AS 1530.4 – 2014 & AS 4072.1 – 2014 and Manufacturer's Specification		✓
Lightweight Construction	BCA 2022 Clause C2D9 AS 1530.4 – 2014 and Manufacturer's Specification		✓
Mechanical Air Handling Systems (Automatic Shutdown)	BCA 2022 Clause E2D3 AS/NZS 1668.1 – 2015 & AS 1668.2 – 2012		✓
Portable Fire Extinguishers	BCA 2022 Clause E1D14 AS 2444 – 2001		✓
Required Exit Doors (Power Operated)	BCA 2022 Clause D3D24(2)		✓
Smoke Dampers	BCA 2022 Spec 11 AS/NZS 1668.1 – 2015		✓
Smoke Doors	BCA 2022 Spec 11 & 12		✓
Stand-by Power Systems	BCA 2022 Spec 31 AS 3000 – 2018		✓
Wall-Wetting Sprinklers	BCA 2022 Clause C4D5 AS 2118.2 – 2010		✓
Warning & Operational Signs	BCA 2022 Clause C4D7, D3D28, D4D7, E4D4 & I4D14. AS 1905.1 – 2015 & Section 108 of the EP&A (DCFS) Regulation 2021		✓
Fire Engineered Performance Solutions	TBC		✓

+ Appendix 3 – Locations of Exits

TBC – pending finalisation of the compartmentation plan