



Accessibility Design Review

Concord Hospital – Main Works
Hospital Road, Concord, NSW

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EXECUTIVE SUMMARY

The following report is the initial review of the ‘Main Works’ documentation and provides a summary of the compliance strategy of the proposed works highlighting the key principles of accessibility as well as the technical requirements of a building to ensure the public, staff and visitors, have equitable and dignified use.

This SSDA report seeks consent for the proposed redevelopment of Concord Repatriation General Hospital to improve and replace outmoded facilities to meet the substantial growth in clinical service demand across the hospital’s catchment:

- Concept approval is sought for the redevelopment indicatively comprising 82,000sqm GFA, to be undertaken in two (2) stages including:
 - Clinical Services Building (CSB) and multi storey carpark (Stage 1); and
 - Acute Services Building (ASB) and multistorey carpark (Stage 2).

Detailed approval is sought for the Stage 1 construction of the proposed CSB (44,000sqm GFA) and the construction of a multi-storey car park located to the north of Hospital Road.

Detailed development approval for the proposed Stage 2 works will be completed at a later date and does form not part of this SSDA. The Concept redevelopment has an indicative delivery timeframe of 25 years. The Stage 1 Detailed works are estimated to be completed by end 2021.

The proposed Concept redevelopment is in accordance with the concept architectural package prepared by Jacobs.

The proposed Stage 1 detailed development (CSB and multistorey carpark) is in accordance with the architectural drawings prepared by Jacobs.

Compliance Summary

Key accessibility issues that require further review are detailed below.

No.	Item For Review
1.	Please advise if there are any proposed performance based solutions with regard to accessibility matters
2.	Please provide a copy of the project design brief relevant to accessibility matters for the development (where applicable)
3.	Please advise if the Room Designation Strategy is applicable to this development
4.	Consider access along the affected part – from existing works/paths of travel to the new/refurbished works. Ongoing review.
5.	Provide a minimum of 1x accessible car parking space and shared zone within the new carparking bays provided to Ambulatory Care Drop-off zone
6.	Provide stair & ramp details to determine compliance with AS1428.1-2009
7.	Ensure stair design accommodates the following design considerations: <ul style="list-style-type: none"> ▪ off set stair at the mid landing to avoid use of a vertical section of handrail ▪ Any Fire-isolated stair encouraged for general circulation use is to be designed to full compliance with AS1428.1-2009 ▪ Stairs shall be set back from internal corners/transverse path of travel to avoid handrails/TGSIs protrusion.
8.	Review multiple door circulation spaces, particularly latch side clearances and distances between successive doors i.e. Ante rooms

No.	Item For Review
9.	Provision of Sanitary Facilities to consider the following: <ul style="list-style-type: none"> • Provide male and female ambulant cubicles in lieu of unisex cubicles • Provide an equal mix of LH & RH unisex accessible sanitary facilities throughout levels/departments (staff, patient and public) • A lack of ambulant cubicles are provided for staff/patient use throughout ward/patient care areas
10.	Provide adequate turning spaces within the office, workstation areas, particularly on level 4, to accommodate directional turns (multiple locations)

Performance Based Solutions

The assessment of the design documentation has revealed that the following areas may require assessment against the relevant performance requirements of the BCA.

Item	BCA Clause	Relevant Performance Requirements	Description
1.	D3.1	DP1	Clinical and operational areas of the hospital will not provide compliant accessible paths of travel 'to and within all areas' for a staff member with a disability.
2.	F2.4	FP2.1	Male and female ambulant cubicles will not be provided at every bank of toilets for staff and patient use

1. INTRODUCTION

Johnstaff have engaged the services of McKenzie Group Consulting as Accessibility and DDA consultants to conduct a review of the project documentation to ensure that functional and compliant accessibility has been applied to the design. As members of the Access Consultants Association of Australia (ACAA), McKenzie Group Consulting use expert accessibility knowledge to ensure the project complies with the spirit and intent of the Disability Discrimination Act (DDA), within the project scope.

This SSDA report seeks consent for the proposed redevelopment of Concord Repatriation General Hospital to improve and replace outmoded facilities to meet the substantial growth in clinical service demand across the hospital's catchment:

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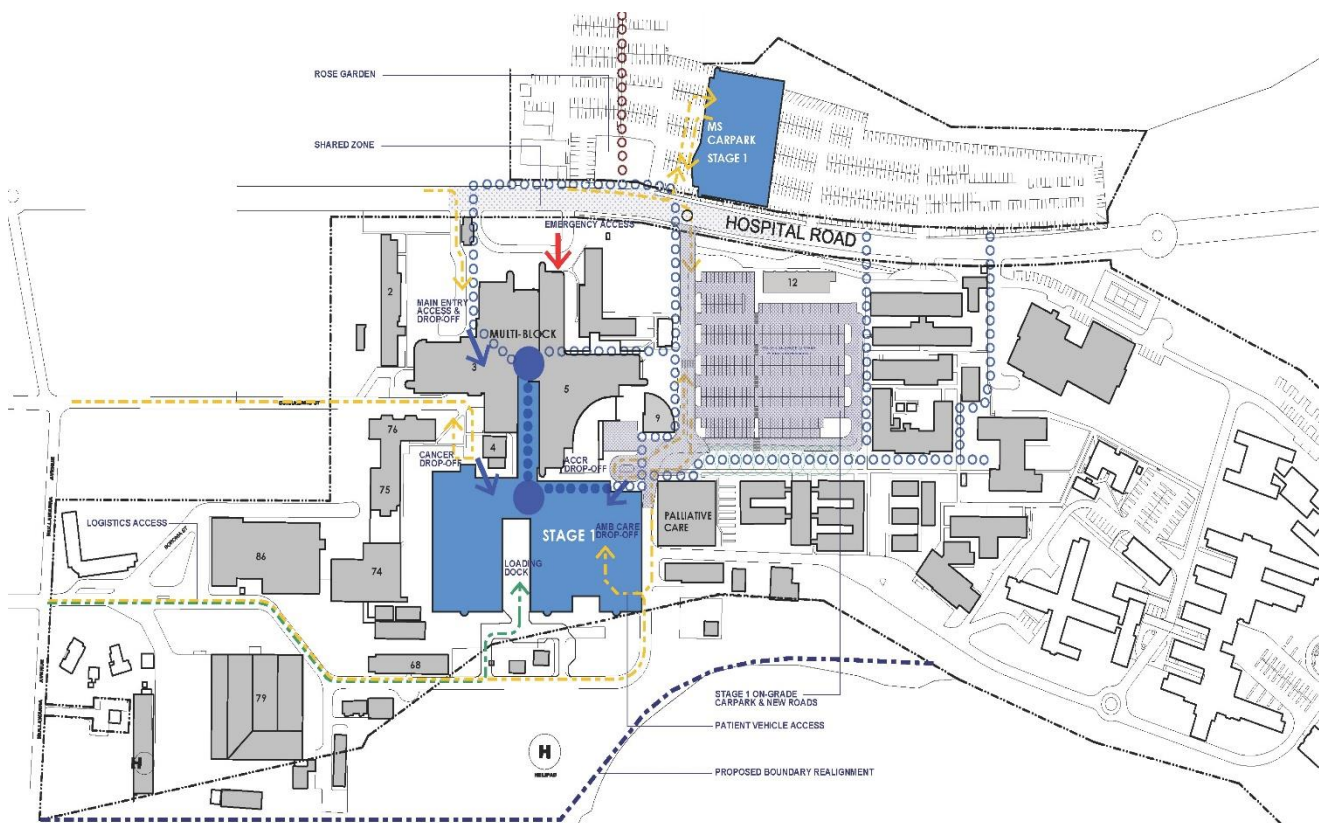
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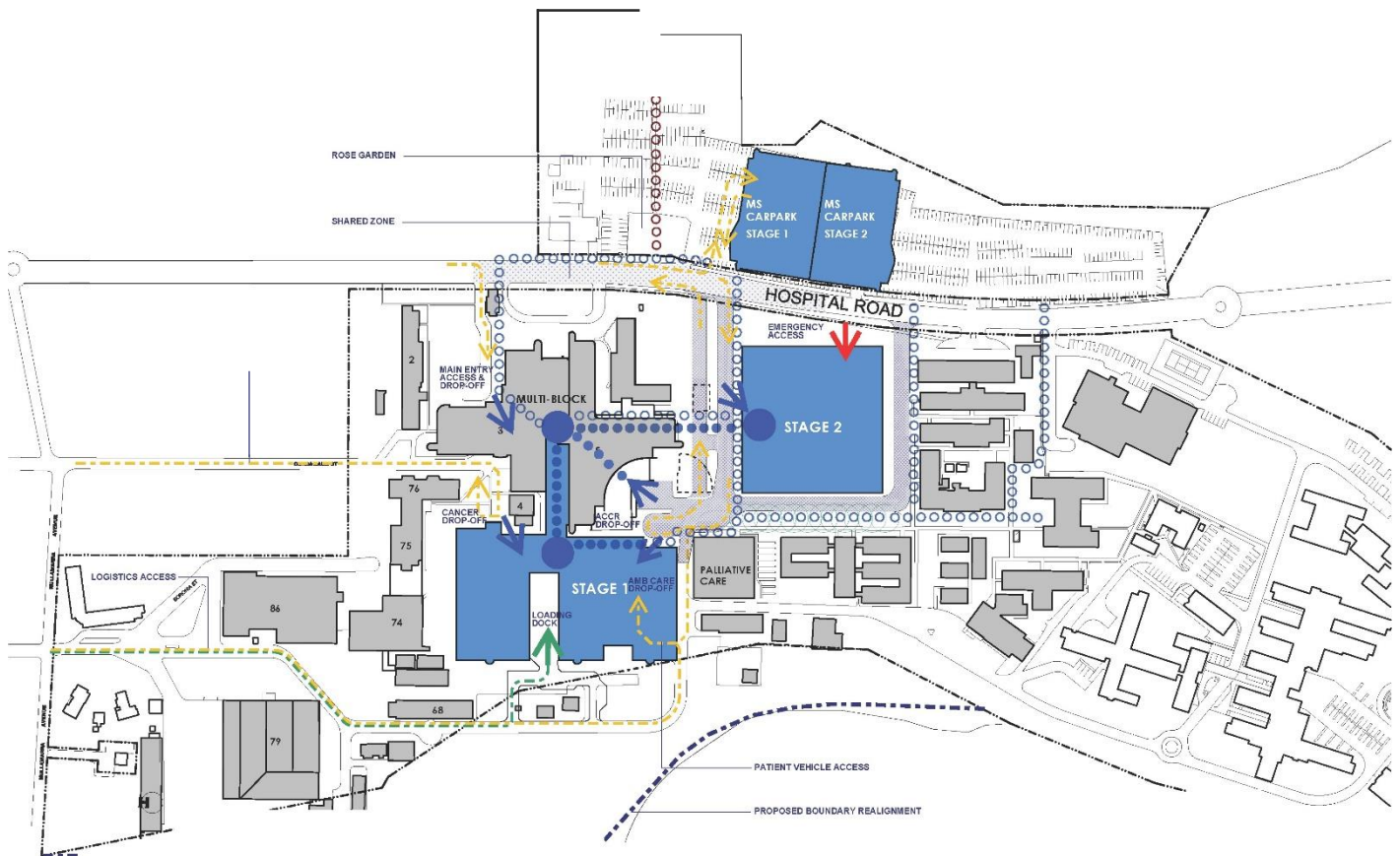
The areas in the below staging plans have been assessed and are included within this report.

STAGE 1 PROPOSAL



The areas in the below staging plans will be assessed in the next phase of design.

STAGE 2 (FUTURE EXPANSION)



1.1. Purpose of Report

This report provides a compliance overview of the project with respect to achieving compliance with the Building Code of Australia (BCA) and the Disability Discrimination Act (and Disability Standards) (DDA), within the project scope. Detailed Design documentation and compliance assessment will be undertaken as the design develops.

The report is prepared as required by the 'Secretary's Environmental Assessment Requirements (SEARs)' for SSD18_9036.

1.2. Project Description

This report forms part of the initial documentation review of the Concord Repatriation General Hospital project.

The scope of the proposed 'Stage 1' Concord Hospital Redevelopment includes:

- Clinical Services Building:
A CSB providing new and expanded clinical services for Aged Complex Care and Rehabilitation (ACC&R), an integrated Cancer Care Centre and Defence Force Centre of Excellence. These services will be provided in a new building comprising:
 - Basement level connecting new support services with existing support service lifts in the Multi-Block building on the lower ground floor.

- A one (1) storey podium level for the provision of outpatient clinics with dedicated drop off and entry areas.
- Two six (6) storey wings and one three (3) storey wing connected by a ‘Support Bar’ (plus rooftop plant) including ground floor day treatment centres and inpatients units. At ground level a link via a three (3) storey atrium to the existing Multi-Block building is created. On levels one and two overhead bridge links, within the atrium, are provided for patient movements between the new and existing Multi-Block building.
- Car Parking:
 - Construction of a five (5) storey multi-storey car on the existing public at grade car park adjacent (north) of the existing main public hospital building, to the north of Hospital Road. Note car park capacity is to be confirmed.
 - Construction of an at grade car park adjacent (north east) of the existing main public hospital building, to the south of Hospital Road. Note car park capacity is yet to be confirmed, however this at grade car park will provide for overflow parking whilst the multi-storey car park is under construction, and will provide for construction vehicle parking and management ongoing.
- Associated Works:
 - Associated works associated are likely to include, however are not limited to:
 - Minor alterations and additions to the existing public hospital building to facilitate connection to the proposed CSB works;
 - Construction of a new loading dock, minor internal road realignment and widening to facilitate service access to the proposed CSB;
 - Excavation, earthworks, site grading and preparation;
 - Tree removal; and
 - Landscaping works.



Figure 8. Indicative photomontage of proposed CSB when viewed to the North West

2. LEGISLATIVE REQUIREMENTS

The legislative requirements for this project comprise both Federal and State legislation.

Federal

The Disability Discrimination Act (DDA - 1992) is Federal Government legislation enacted in 1993 that seeks to ensure all new building infrastructure, refurbishments, services and transport projects provide functional and equitable accessibility. The DDA is a complaints based legislation, which is administered by the Australian Human Rights Commission (AHRC). For any built environment the key requirement of the DDA is to ensure functionality, equality and dignity of people with disabilities, their companions, family and carer givers.

The DDA utilises statutory instruments known as Disability Standards to provide detailed requirements. The Disability Standards are: Disability (Access to Premises – Buildings) Standards 2010, Disability Standards for Education 2005 and the Disability Standards for Accessible Public Transport 2002. These Disability Standards draw extensively on technical provisions in the AS 1428 series details technical requirements related to design for access and mobility.

State

The Building Code of Australia has adopted key accessibility and DDA legislation into the 2011 and subsequent BCA. In particular adherence to the Access to Premises Standard (2010) (APS); AS1428.1 2009; AS1428.4.1 2009 and AS2890.6 2009 has become mandatory. This means that compliance with the relevant sections of the BCA, ensures compliance with the relevant 'Premises' component of the DDA.

However, compliance with the BCA alone does not necessarily mean compliance with the Disability Discrimination Act if the elements of equality, dignity and functionality remain compromised within an environment. The building owner/occupier should therefore ensure that their policies, practices and procedures promote equality in all employment, education and services provided, within their built environment.

2.1. Access to Premises Standards application and exemptions to existing buildings

Where the project involves the internal works within part of an existing building by the building owner; The Access to Premises Legislation (2010) defines these new works as the new part of the building and requires that the affected parts of a building are also made accessible and compliant to the requirements of AS1428.1 2009 and the Access to Premises Legislation (2010) technical provisions. Affected parts are defined as the principal pedestrian entrance and a continuous path of travel between the primary entrance and the new part. (PS 2010 pg. 5-6). In this case this also includes the condition of the existing lift to travel between levels.

Where the project involves internal alterations within an existing building in which the client is a lessee; The Access to Premises Standard (2010) defines new works as the new part of a building and requires that affected parts of the building are also accessible. Affected parts are defined as the principal pedestrian entrance and a continuous path of travel from the entrance to the new part. There is an exemption to this requirement whereby if the lessees (not building owner) submit an application for approval for building works they are exempt from this requirement. As such there is no requirement under the Access to Premises Standard (2010) to provide alteration to the lift/ building entry.

Exemptions may also apply to existing sanitary facilities and to lift car size.

Application of legislation to this development

With regard to this project, upgrading works for an affected part may include:

- Providing lift access between the levels to the new works
- Providing accessible and ambulant sanitary facilities to each level where sanitary facilities are provided
- Upgrading the main entrances of existing building

- Minimum width requirements of doorways or passageways, including passing and turning spaces along the access path from the main entrance to and within all new works.
- Upgrading the stair/ramp/doors located along the ‘affected part’ path of travel

2.2. Referenced Legislation and Standards

The review of the project has been undertaken against the following legislation;

- Disability Discrimination Act (DDA) 1992.
- Disability (Access to Premises – Buildings) Standards 2010 (DAPS 2010).
- Building Code of Australia (BCA) and BCA referenced standards including:
 - AS1428.1 2009 Part 1: General Requirements for access – new building work.
 - AS1428.2 1992 Part 2: Enhanced and additional requirements – Buildings and facilities.
 - AS1428.4.1 2009 Part 4.1: Means to assist the orientation of people with vision impairment – TGSi.
 - AS2890.1 2004 Part 1: Off-street car parking.
 - AS2890.6 2009 Part 6: Off-street parking for people with disabilities.
 - AS1735.12 1999 Lift facilities for people with disabilities.

3. DOCUMENTATION

The report has been prepared based on a review of the drawings listed in Appendix A.

Marked-up plans are provided in Appendix B for further reference.

4. ROOM DESIGNATION STRATEGY

Given the function of a Hospital, and the complexity of operational requirements, it is accepted that it is not necessarily possible or practical that as per the deemed to satisfy provisions of the BCA (for a Class 9a and 9c building) that access can be provided “to and within all areas normally used by the occupants.”

It is also understood that within some clinical areas of a hospital building and aged care facility, every patient and visitor is escorted on a supervised basis for a number of reasons.

McKenzie Group Consulting devised a strategy which designates each room within the new work in terms of a compliance level with regard to accessibility requirements in terms of the intended use of that space and 4 different compliance levels were determined as follows:

Level 1 – BCA deemed to satisfy compliance required

Level 2 – Staff assisted areas where full deemed to satisfy compliance not required

Level 3 – Areas in which operational requirements of the Health Facility Guidelines conflict with deemed to satisfy requirements

Level 4 – Exempt areas (areas in which access is inappropriate due to the nature of the space)

Colour coded plans are to be developed by the design team in accordance with the above levels of assessment and provided for information purposes.

Level 2 Assessment – Staff-assisted rooms/spaces

The rooms/spaces designated as Level 2 compliance level have been designed to provide the required door circulation spaces, internal circulation but permits controls to be located outside of the range of the minimum requirements of AS1428.1.

This however does not mean that all rooms designated as Level 2 do not have all controls within the required range. This may be applicable for some rooms only.

Level 3 Assessment – Clinical rooms/spaces

Within the clinical areas of the hospital, there is a requirement for a level of mobility, dexterity and safety that would reasonably exclude staff member with a disability from accessing/working within these areas.

This however does not mean that all rooms designated as Level 3 do not have compliant door circulation spaces, but if required for operational reasons, this may be applicable for some rooms.

Level 4 & Exempt Areas

In accordance with D3.4 of the BCA, accessibility does not need to be provided to areas that are deemed exempt. D3.4 states that the following areas are not required to be accessible:

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

This strategy will be subject to the agreement of all stakeholders and should apply to all proposed works.

Further discussion regarding the application of this strategy is required.

5. EXEMPTIONS AND PERFORMANCE BASED SOLUTIONS

5.1. Exemptions

Based on the use of some areas within a building, it is reasonable to not provide access to some spaces where it is deemed inappropriate because of the required duties to be carried out in the space or if the area poses as a health or safety risk for people with a disability. These areas include:

- An area where access would be inappropriate because of the particular purpose for which the area is used.
- An area that would pose a health or safety risk for people with a disability.
- Any path of travel providing access only to an area exempted by (a) or (b).
- Plant including plenums, service routes, equipment rooms for computers or data (including persons with ambulant aids).
- Pathways used to gain access exempted plant spaces only.
- Cleaner’s rooms used only by cleaners.
- Rooms used only by central staff associated with linen, waste and supply.
- Production parts of the kitchen and servery rooms used only by central kitchen staff.
- Store rooms where the door is left open while accessing them- only to have required door clearance on the outside.
- Rooms/spaces designated as level 4 under the Room Designation Strategy meet the above criteria and are exempt from providing access for a person with a disability.

5.2. Performance Based Solutions

Given the inherent nature of a hospital environment, performance based solutions are required to address technical departures and to address the rationalized approach of the Room Designation Strategy.

The assessment of the design documentation has revealed that the following areas may require assessment against the relevant performance requirements of the BCA.

Item	BCA Clause	Relevant Performance Requirements	Description
1.	D3.1	DP1	Clinical and operational areas of the hospital will not provide compliant accessible paths of travel ‘to and within all areas’ for a staff member with a disability.
2.	F2.4	FP2.1	Male and female ambulant cubicles will not be provided at every bank of toilets for staff and patient use

6. COMPLIANCE ASSESSMENT

The following compliance assessment is set out in tabular format. The item/comment identifies the issues followed by the accessibility requirement and/or specification and the action required.

6.1. General Building Access Requirements (BCA D3.1)

Buildings and parts of buildings must be accessible in accordance with Table 3.1 of the BCA.

A continuous accessible path of travel is to be provided as follows:

Part Of Building	Accessibility Requirements
Class 7b – storage; Class 9a – health care building;	<ul style="list-style-type: none"> To and within all areas normally used by the occupants

6.2. External approaches, walkways, ramps, kerbs and steps (BCA D3.1, D3.2, D3.3, D3.8 & AS1428.1)

Item/Comment	Accessibility Requirement	Action/Compliance
Access to the new works Ongoing review	Affected parts are defined as the principal pedestrian entrance and a continuous path of travel from the entrance to the new part.	Ongoing Review.
External Pathways Ensure external paths are of adequate width to accommodate passing and turning spaces	External pathways are to meet the provisions of AS1428.1-2009. The external path network is to be designed to comply: <ul style="list-style-type: none"> Provide a minimum of 1500mm width to allow a pram and wheelchair to pass Consider a path width of 1800mm to allow two wheelchairs to pass, particularly to the public realm Minimum width must be measured clear of bollards or fixtures 	Provide details for review
Tactile Ground Surface Indicators (TGSIs) Provide warning TGSIs and kerb ramps at Pedestrian Crossings in accordance with AS1428.4.1	<ul style="list-style-type: none"> Warning TGSIs are to be provided, located 300mm from the hazard of the roadway Where bollards are provided, ensure they are positioned either side of the dedicated walkway, maintain a clear width of 1200mm 	Provide details for review
Drop-off Zone/Pedestrian Crossing Pedestrian crossings and or drop-off areas should be designed inclusive of linemarking, kerb ramps and	<ul style="list-style-type: none"> Further review as the design progresses to assess compliance of pedestrian crossings or drop-off zones including gradient, finishes, tactile indicators, colour and 	Provide details for review

Item/Comment	Accessibility Requirement	Action/Compliance
TGSIs in accordance with AS1428.1 & AS1428.4.1.	textural contrast of surfaces and required kerb ramps.	
TGSIs - Hazards Where pedestrian walkways and vehicular routes are at grade, hazard warning required	<ul style="list-style-type: none"> Position hazard TGSIs in accordance with AS1428.4.1 	No hazards identified at this stage of design

Key External walkway criteria:

- Walkways to be provided with passing bays (1800 x 2000mm) every 20m.
- Walkway gradient to be 1:20 (max) with landings every 15m.
- Landings in direction of travel 1200mm long; landings at 90° directional change 1500mm x 1500mm. Landings at 180° directional change 1540mm length.
- If gradient of walkway is less than 1:33 no landings are required.
- TGSIs required to warn of hazard along pedestrian and vehicular routes on grade

Key kerb and pedestrian crossing criteria:

- Kerb ramp to have gradient no steeper than 1:8, length no greater than 1520mm.
- Pathways from accessible parking across roadways to have designated line marking.

Kerb ramps – max rise 190mm; max 1:8 gradient

Threshold ramps – max rise 35mm; 1:8 max gradient; within 20mm of door leaf

Step ramps – max rise 190mm; 1:10 max gradient

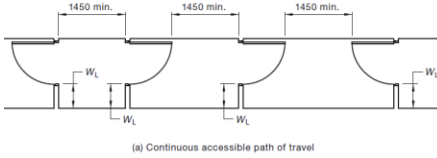
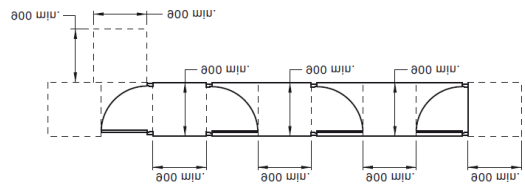
6.3. Car Parking (BCA D3.5, AS1428.1, AS/NZ 2890.6)

Item/Comment	Accessibility Requirement	Compliance/ Action
Number of Carparking Spaces No accessible carparking spaces have been detailed to the Ambulatory Care Drop off at this stage of the design	In accordance with Table D3.5 of the BCA, accessible carparking is required to be provided as follows. <ul style="list-style-type: none"> Class 5, 7, 8 or 9c part - 1 space per 100 Class 9a, Hospital – <ul style="list-style-type: none"> Non-outpatient - 1 space / 100 spaces Outpatient - 1 space / 50 spaces Clinic or day surgery - 1 space / 50 spaces Class 6 & 9b (not school) parts of the building require - 1 space per 50 <p>Note: no accessible bays are required where not more than 5 bays are provided.</p>	Provide accessible parking bays (minimum of 1) as per D3.5
Dimensions	Accessible car parking bays and shared zones shall be 2400mm wide x 5400mm long in accordance with Clause AS/NZS 2890.6-2009	To comply

Item/Comment	Accessibility Requirement	Compliance/ Action
Access to Building	The approach from the accessible carparking bays to the main entrance/s of the building to be accessible: <ul style="list-style-type: none"> ▪ Located as near as possible to the main entrances ▪ Must be step-free ▪ Include kerb ramps 	Please detail existing conditions to determine compliance
Design of Carparking Spaces	The design of the accessible carparking bays must be in accordance with AS/NZS 2890.6-2009. <ul style="list-style-type: none"> ▪ A bollard is required in the shared area in accordance with AS2890.6-2009 	To comply
Key Car parking and transport design criteria:		
<ul style="list-style-type: none"> ▪ Accessible spaces are to be designed in accordance with AS/NZS 2890.6-2009. ▪ Dimensions of angled accessible parking bays 2400 x 5400mm with adjacent 2400mm x 5400mm shared area and bollard in shared area. ▪ Dimensions of parallel parking bays 3200mm x 7800mm. ▪ Provide direct kerb ramp access from adjacent to the accessible parking space to pathway. ▪ Accessible bays to be located near entrances. ▪ Provide a designated area for accessible drop off from private vehicles, taxis and community vehicles with kerb ramp access to the pathway. ▪ Height of vehicular path of travel to accessible parking space to be 2200mm and height above accessible parking space to be 2500mm 		

6.4. Entrances/Doors (BCA D3.1, D3.2, AS1428.1)

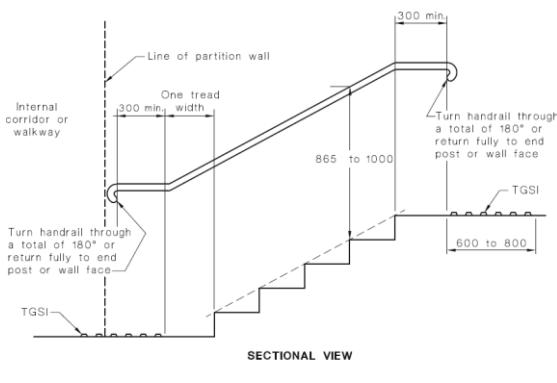
Item/Comment	Accessibility Requirement	Compliance/ Action
Access to the Building	Access must be provided via the main principal entrance and: <ul style="list-style-type: none"> ▪ Not less than 50% of all pedestrian entrances including the principal entrance, and ▪ In buildings with a floor area >500m², a non-accessible entrance must not be located more than 50m from an accessible entrance. 	Ongoing Review.
Door Clear Width All entry doors are to comply	All doors must achieve a minimum clear door opening width of 850mm (920mm leaf door required)	To comply – new and existing (along affected path of travel to new works from main entry)
Door circulation spaces Multiple doors do not provide adequate door circulation space – Refer	Circulation spaces at doorways are to comply with Clause 13.3 of AS1428.1-2009 <ul style="list-style-type: none"> ▪ Swing doors – Figure 31 ▪ Sliding doors – Figure 32 	Review doors as required – Refer Appendix B

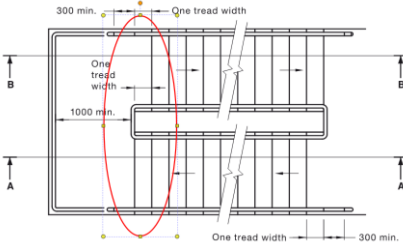
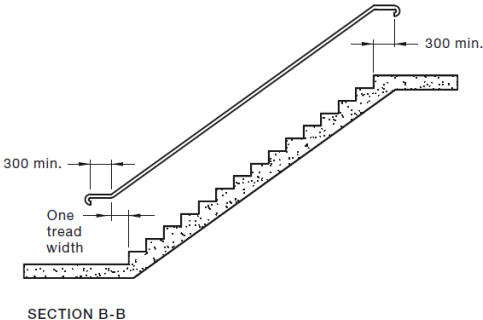
Item/Comment	Accessibility Requirement	Compliance/ Action
to marked-up plans in Appendix B		
<p>Distance between doors</p> <p>The distance between successive doors does not comply in some areas i.e. Ante room.</p>	<p>The distance between successive doorways should comply with Clause 13.4 of AS1428.1-2009:</p> <p><u>Accessible Path of Travel/Air locks:</u></p>  <p><u>Ambulant Cubicles:</u></p> 	<p>Review doors as required – Refer Appendix B</p>
<p>Door Operation</p> <p>All doors to have light operation forces</p>	<p>Ensure doors have light operational forces (less than 20 N). Consider use of bearing hinges or other enhanced hardware to achieve requirement.</p>	<p>Consider use of large/heavy doors early in design.</p>
<p>Step-Free Entry</p> <p>Provide a level transition to and within external / terrace areas</p>	<ul style="list-style-type: none"> Threshold ramps are to be installed in accordance with AS1428.1-2009. 	<p>Threshold ramps to new/existing doors to comply</p>
<p>Door Controls/Swipe Card</p> <p>Consider location of swipe cards to any secure areas of the hospital</p>	<p>To Comply with Clause 13.5 of AS1428.1-2009 and be located:</p> <ul style="list-style-type: none"> Grasped/turned – 900-1100mm Pushed – 900-1200mm Touched – 900-1250mm Sliding door handles >60mm from door jamb Manual controls to power-operated doors: <ul style="list-style-type: none"> >500mm from an internal corner, and Between 1m-2m from swinging door 	<p>To comply</p>

Key entrance/doorway criteria:

- Main entry must be accessible.
- All doors require 850mm clearance width (920mm doors) incl. active leaf of double doors.
- Latch side clearance of 510mm to inward opening doors; 530mm to outward opening doors.
- Circulation space of 1450mm required either side of doors that are approached from the front. Circulation space of 1240mm required in front of inward opening doors approached from latch side.
- All glazed doors must be marked with contrast marking no less than 75mm wide for full width of doors at 910-1000mm height.

6.5. Stairs (BCA D3.1, D3.3, D3.11 & AS1428.1)

Item/Comment	Accessibility Requirement	Compliance/ Action
<p>Stair Design New and existing stairs to comply</p>	<ul style="list-style-type: none"> • All new and existing general circulation stairs (along affected path of travel) are to be designed/upgraded to comply with AS1428.1-2009 i.e. clear width not less than 1m, handrails both sides, and nosings. • Note: A concession applies to all stairs within a Class 9a Hospital building permitting use of a raised dome button on handrails in lieu of TGSIs. Dome buttons shall be provided in accordance with AS1428.1 	<p>Provide stair details for compliance review</p>
<p>Setback of Stairs Stairs are to be setback from the internal corners</p>	<ul style="list-style-type: none"> ▪ Where located at an internal corridor, stairs shall be set back a minimum of 400mm (Fig 26(B))  <p style="text-align: center;">SECTIONAL VIEW DIMENSIONS IN MILLIMETRES</p> <p style="text-align: center;">FIGURE 26(B) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT END OF STAIRWAY OTHER THAN AT LINE OF BOUNDARY</p>	<p>Provide stair details for compliance review</p>
<p>Offset Stairs – All Stairs Ensure the stair design caters for compliant handrail extensions, particularly the inner handrail</p>	<ul style="list-style-type: none"> ▪ All stairs shall be designed and constructed in accordance with Clause 11(f), (g) and Clause 12. ▪ Offsetting the stair at the mid landing will allow a continuous single handrail which will not require vertical sections. 	<p>Note for review</p>

Item/Comment	Accessibility Requirement	Compliance/ Action
		
<p>Handrail Extensions/Termination</p> <p>Handrails must not protrude into transverse path of travel (Refer above 'Setback of stairs')</p>	<ul style="list-style-type: none"> ▪ Handrails must extend at the top and bottom of the stair in accordance with Clause 11.2 of AS1428.1-2009 i.e.: <ul style="list-style-type: none"> ○ One tread depth plus 300mm horizontally before returning/termination ○ 300mm horizontally before returning/termination ▪ Ensure handrails/extensions do not protrude into transverse path of travel <p>Refer Fig 28(b) of AS1428.1-2009</p>  <p>SECTION B-B</p>	<p>Provide stair details for compliance review</p>

Key stair design criteria:

- Stairs to be set back 900mm at property boundaries or sufficient space to accommodate required handrails internal corners.
- Circular or spiral stairs are generally unsafe due to their inconsistent tread width.
- Common use stairs require AS1428 series compliant handrails, tread features and TGSIs.
- Tactile ground surface indicators (TGSIs) shall be installed for the full width of the path of travel
- TGSIs shall be located at both the top and bottom of the stairs
- Fire-isolated stairs required a single handrail compliant to Clause 12 of AS1428.1 and stair nosings as a minimum.

6.6. Ramps (BCA D3.1, D3.3, D3.11 & AS1428.1)

Item/Comment	Accessibility Requirement	Compliance/ Action
<p>Ramp Design</p> <p>A ramp is located at lower ground level and at ground floor cancer centre drop off.</p>	<p>All new and existing (located along affected path) general circulation ramps are to be designed to comply with AS1428.1-2009 i.e. clear width not less than 1m, handrails both</p>	<p>Ongoing Review – provide ramp details for review</p>

Item/Comment	Accessibility Requirement	Compliance/ Action
	sides, TGSIs compliant landing sizes, gradient and kerb rails.	
Gradient/Length Note: step ramps and 1:20 ramps mitigate need for handrails and TGSIs	The maximum gradient for a ramp/walkway is: <ul style="list-style-type: none"> • 1:8 threshold ramp max. 280mm • 1:8 kerb ramp max. 1520mm • 1:10 step ramp max. 1900mm • 1:14 ramps max. 9m • 1:20 ramps max. 15m length • 1:33 walkways max. 25m length 	Annotate drawing to show ramp/walkway gradients
Handrail Extensions/Termination	<ul style="list-style-type: none"> ▪ Handrails must extend at the top and bottom of the ramp in accordance with Clause 10.3(h) and 12 of AS1428.1-2009 i.e.: <ul style="list-style-type: none"> ○ 300mm horizontally before returning/termination ▪ Ensure handrails/extensions do not protrude into transverse path of travel <p>Refer Fig 14 of AS1428.1-2009</p>	Ongoing Review – provide ramp details for review

Key ramp design criteria:

- Maximum gradient of a ramp exceeding 1900mm is 1:14. Gradient to be consistent throughout ramp.
- Ramp required to have unobstructed width of 1000mm
- Ramps to be provided with landings at bottom and top of ramp.
- Landings required every 9m where grade 1:14, Landings required every 15m where grade 1:20.
- Landings in direction of travel 1200mm long; landings at 90° directional change 1500mm x 1500mm. Landings at 180° directional change 1540mm x 2070mm length.
- Ramps require AS1428 series compliant handrails and TGSIs.
- Ramps to be set back 900mm at property boundaries or 400mm at internal corners.
- A series of connected ramps must not exceed 3.6m (D3.11)

6.7. TGSIs and hazard identification (BCA D3.8, D3.12, AS1428.1 & AS1428.4.1)

Item/Comment	Accessibility Requirement	Compliance/ Action
TGSI Location Tactile Ground Surface Indicators (TGSIs) are to comply	<ul style="list-style-type: none"> ▪ TGSIs are required to be installed in accordance with AS1428.4.1, to the top and bottom of every stair, ramp and escalator and to external areas such as where the pedestrian walkway is at grade with the roadway, kerb ramps. ▪ A concession applies to all stairs within a Class 9a Hospital building permitting use of a raised dome button on handrails in lieu of 	Annotate drawing to show TGSI locations or alternative dome buttons on handrails.

Item/Comment	Accessibility Requirement	Compliance/ Action
	TGSIs. Dome buttons shall be provided in accordance with AS1428.1	
Hazards Review as design progresses	<ul style="list-style-type: none"> Hazards with <2000mm head clearance will require to be identified 	Ongoing review
Glazing Decals All glazed doors, sidelights and glazing that could be mistaken for a door or opening must be marked with contrast marking	<ul style="list-style-type: none"> Provide contrast marking no less than 75mm wide for full width of glazing at 910-1000mm height. 	Annotate drawing to show any glazing decals

Key TGSI and hazard identification criteria:

- Standard warning TGSI size is 600-800mm for full width of path of travel
- TGSI's to be set back 300mm +/- 10mm from hazard
- TGSIs to have min 30% luminance contrast for integrated TGSI's and 45% for discrete TGSIs
- TGSIs not required in Aged Care building
- Contrast marking to achieve minimum 30% luminance contrast against floor or surfaces within 2m

6.8. Internal Walkways (BCA D3.1, D3.3, AS1428.1)

Item/Comment	Accessibility Requirement	Compliance/ Action
Width of corridor Public paths of travel and internal corridors throughout shall be designed to comply	<ul style="list-style-type: none"> Ensure a minimum unobstructed clear width of 1000 mm along all corridors to rooms or spaces. 1500mm will permit an able bodied person and wheelchair to pass 1800mm width will allow two wheelchairs to pass 	Ongoing review
Passing Bays/Turning Spaces Provide turning spaces to and within workstation areas and at ends of corridors to allow occupants to make directional turns	<ul style="list-style-type: none"> Provide turning spaces of 1500x1500 (corner may be truncated) where a user is required to make a directional turn. Provide turning space within 2000 mm at the ends of corridors, where it is not continuous to offer turning space: minimum width 1540 mm x 2070 mm length. Turning spaces (1500mm x 1500mm) are to be provided every 20m Passing bays (1800mm wide x 2000mm length) are required every 20m where no direct line of sight is provided 	<p>Review marked-up plans for locations.</p> <p>Confirm any areas that should be considered exempt under D3.4.</p>

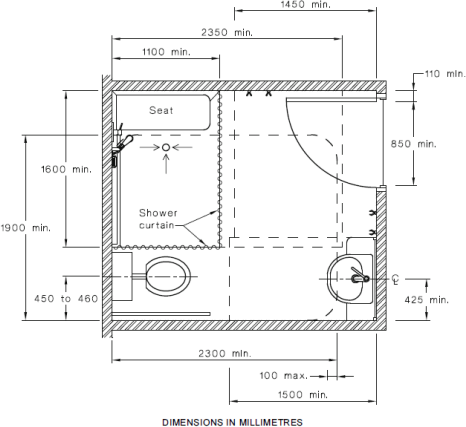
Item/Comment	Accessibility Requirement	Compliance/ Action
<p>Circulation Suitable circulation spaces are to be provided to enable circulation to and within accessible areas, rooms and workstation areas,</p>	<ul style="list-style-type: none"> ▪ Provide an internal circulation space of 1540mm x 2070mm to enable occupants to undertake a 180 degree turn ▪ Circulation space is to be clear of fixed/heavy furniture 	<p>Review marked-up plans for locations.</p>

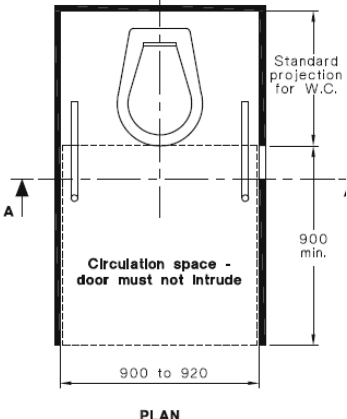
Key internal walkway and surface criteria:

- Walkways to be provided with passing bays (1800 x 2000mm) every 20m.
- Minimum width of internal walkway 1000mm.
- Path of travel in front of doorways or those accessed from a frontal approach required to be 1450mm width (minimum).
- Path of travel in front of doorways accessed from the latch side to be 1240mm minimum width.
- Landing spaces at directional changes of: at 90° - 1500mm x 1500mm (corner can be truncated); at 180°- 1540mm x 2070mm.
- Turning space at corridor terminations to be 1540mm width x 2070mm length.

6.9. Sanitary Facilities (BCA D3.1, F2.4, AS1428.1)

Item/Comment	Accessibility Requirement	Compliance/ Action
<p>Number/Design of Unisex Accessible Sanitary Facilities The provision of unisex accessible sanitary facilities is widespread and is provided for:</p> <ul style="list-style-type: none"> ▪ Staff ▪ Patient use ▪ public 	<p>Accessible sanitary facilities must be provided on each level where other sanitary facilities are also provided and if the storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks.</p>	<p>Ongoing review</p>
<p>Location of Unisex Accessible Sanitary Facilities Provide directional signage as required</p>	<ul style="list-style-type: none"> ▪ The accessible facilities should be located adjacent/opposite the gender facilities ▪ Where a unisex accessible sanitary facility is not provided, directional signage must be installed identifying the path of travel to the nearest accessible sanitary facility 	<p>Note</p>
<p>Design of Unisex Accessible Sanitary Facilities The fitout of the facilities are to comply.</p>	<p>The design of accessible sanitary facilities shall comply with Clause 15 of AS1428.1-2009.</p> <ul style="list-style-type: none"> ▪ The minimum compartment size of a WC is 1900x2630mm (Refer Fig 43) ▪ The minimum compartment size of a combined WC/shower facility is 2300mm x 2630mm (Refer Figure 50) 	<p>Ongoing review - Review the compartment size of the two UASF within Psychogeriatric Dept. on ground level.</p>

Item/Comment	Accessibility Requirement	Compliance/ Action
	 <p>DIMENSIONS IN MILLIMETRES</p> <p>FIGURE 50 SANITARY COMPARTMENT SHOWING OVERLAP OF WASHBASIN FIXTURE INTO SHOWER CIRCULATION SPACE</p>	
<p>LH & RH Transfer</p> <p>On each level/within departments, an equal mix of Left handed and right handed transfer sanitary facilities are to be provided for:</p> <ul style="list-style-type: none"> ▪ Staff ▪ Patient use ▪ public 	<ul style="list-style-type: none"> ▪ Where two or more unisex accessible sanitary facilities are installed there shall be an even distribution of mirror imaged layouts to provide left hand and right hand transfer. (BCA F2.4(g)) ▪ Where two or more accessible showers are provided, at least one shall be of the opposite hand (Clause 15.5.1(c) of AS1428.1-2009) 	<p>Note for future fitout</p>
<p>Ambulant Cubicles</p> <ul style="list-style-type: none"> ▪ Single unisex ambulant cubicles are proposed on each level for public and staff use in lieu of separate male and female cubicles ▪ No patient ambulant cubicles are proposed ▪ No staff ambulant cubicles provided within EOT and ward/dept. areas 	<p>Where one or more pans are provided, an ambulant toilet within each of the male and female facilities is to be provided.</p>	<p>Annotate/provide Male and Female ambulant cubicles for public and staff use</p> <p>A Performance Based Solution Report may be required to address the lack of ambulant cubicles for staff/patient use based on operational requirements of the hospital – to be confirmed.</p>
<p>Design of Ambulant Cubicles</p> <p>Male and Female ambulant cubicles are required to be provided in lieu of unisex compartments.</p>	<p>Ambulant male and female facilities shall be designed in accordance with Clause 16, AS1428.1-2009:</p> <ul style="list-style-type: none"> ▪ Minimum compartment width of 900-920mm ▪ 900mmx900mm circulation space in front of the pan (Fig 53(A)) 	<p>Note for future fitout</p>

Item/Comment	Accessibility Requirement	Compliance/ Action
	 <p style="text-align: center;">PLAN</p>	

Key sanitary facility criteria:

- Accessible sanitary facilities to be in same location as gender facilities and located on all levels of a multi-level building.
- Minimum room dimension with WC and basin: 1900mm x 2630mm or 2330mm x 2200mm.
- Provide AS1428 series compliant fixtures inclusive of shelf, clothes hooks, full length mirror
- A sanitary compartment suitable for a person with an ambulant disability must also be provided for use by males and females
- Baby change tables are not permitted to encroach on fixture circulation spaces and are to be installed in accordance with Clause 15.2.8.2

6.10. Signage (BCA D3.6, AS1428.1)

Item/Comment	Accessibility Requirement	Compliance/ Action
<p>General</p>	<p>BCA D3.6: Mandatory Braille and tactile signage must be provided to:</p> <ul style="list-style-type: none"> ▪ sanitary facilities (except SOUs), ▪ spaces with hearing augmentation, ▪ for required exit signage and ▪ directional signage to alternative accessible entrances, paths of travel or alternative sanitary facilities. 	<p>To comply</p>
<p>Wayfinding A successful wayfinding system in an external public realm should provide information for users to navigate the built environment</p>	<p>Accessible way finding should highlight the pathway from entrance to reception to lifts/stairs, amenities and to key components of the facility.</p>	<p>A wayfinding strategy should be developed for the precinct</p>

Key Signage design criteria:

- Braille and tactile signage complying with Specification D3.6 must identify each:
 - Accessible sanitary facility
 - areas with required hearing augmentation provided
 - door required by BCA E4.5 to be provided with an exit sign and state “Exit” and “Level” and either floor level number, level descriptor or a combination of both.

- Accessible way finding should highlight the pathway from entrance to reception to lifts/stairs, amenities and to key components of the facility.
- Ensure accessible way finding signage is:
 - Incorporates the international symbol of access or deafness
 - Located at appropriate viewing heights
 - Perpendicular to the path of travel or beside identifiable features (e.g. door faces)
 - Of suitable colour contrast (luminance contrast min 30%)
 - Of compliant notation inclusive of use of the international symbol of access.
- Signage to accessible sanitary facilities requires identification with the international symbol of access, raised tactile and Braille signage and letters RH or LH to indicate side of transfer to the WC pan.

6.11. Hearing Augmentation (BCA D3.7)

Item/Comment	Accessibility Requirement	Compliance/ Action
Hearing Augmentation Listening Systems are an essential assistive device for people who use hearing aids and are mandatory at screened reception counters, lifts and areas with public announcement systems	Hearing Augmentation will be required, if in-built amplification is available within the Buildings/rooms	As the design progresses confirm requirements for hearing augmentation.

Key Hearing augmentation criteria:

- Hearing Augmentation systems must be provided where inbuilt amplification is provided in rooms (e.g. auditoriums, conference rooms or meeting rooms)
- Hearing Augmentation systems must be provided where inbuilt amplification is provided to ticket offices, tellers booths, reception areas or the like where the public is screened from the service provider.
- Hearing augmentation systems can be permanent or portable. The nature of the built environment will dictate the desired outcome.
- Signage required to areas with required hearing augmentation provided

6.12. Additional Site Specific Components (BCA D2.17, D3.1, AS1428.1-2009)

Item/Comment	Accessibility Requirement	Compliance/ Action
Handrails – Corridor Handrails within the corridors in ward/patient areas are to comply.	Within a hospital, handrails must be provided along one side of every passageway or corridor used by patients in accordance with D2.17.	Note for future design

6.13. DDA – Enhanced Design Recommendations

The following overview provides enhanced recommendations relating to best practice design for accessible environments. These recommendations, in conjunction with the owner/occupier's policies, practices and procedures will maximize accessibility compliance within the development and meet the spirit and intent of the DDA.

Item/Comment	Accessibility Requirement	Compliance/ Action
<p>Emergency Evacuation Consider implementation of an emergency evacuation plan for people with disabilities.</p>	<p>The emergency evacuation strategy for the development should address the operational solution of evacuating occupants that cannot use fire stairs.</p>	<p>Note for consideration</p>
<p>Accessible Ward Room/Ensuite</p> <p>It is noted that each department/ward generally provides an accessible room/ensuite option.</p>	<p>As a minimum, provide one accessible ensuite/ward room within each department to cater for patients with a disability. Ensuite bathroom should be designed to meet AS1428.1-2009.</p>	<p>Ongoing review.</p> <p>Confirm if an accessible room/ensuite is proposed within Psychogeriatric ward (Ground floor)</p>
<p>Rest Seating Rest seating should be provided adjacent entrances, at taxi drop off points and along external pedestrian paths of travel</p>	<ul style="list-style-type: none"> ▪ Seating should be provided along external paths, located a minimum of every 60m, to provide a resting point for users ▪ A range of seating to accommodate all users should be provided i.e. some with backrest, some with armrests and at various seat heights etc. ▪ Seating should be designed in accordance with AS1428.2 and set back 500mm from the walkway. 	<p>Note for consideration</p>
<p>Internal Seating Recommend that any internal seating considers accessible needs and is provided with both backrest and armrests in accordance with AS1428.2.</p>	<ul style="list-style-type: none"> ▪ Provide a range of seating within waiting and kiosk areas to accommodate all users i.e. some with backrest, some with armrests and at various seat heights etc. ▪ Any seating to be set back 500mm from the walkway. 	<p>Note for consideration</p>
<p>Reception/Service Desk/counters Any reception/service desk/counter or the like should be at an accessible height to cater for all users</p>	<ul style="list-style-type: none"> ▪ Counters should be at a universally accessible height of 900mm or if higher provide an 850mm wide section of 850mm height with underbench clearance. ▪ Refer to AS1428.2 specifications 	<p>Note for consideration</p>

Item/Comment	Accessibility Requirement	Compliance/ Action
<p>Furniture & Fixtures Future design should consider accessible requirements teapoint, vending machines, drinking fountains, telephones, controls etc.</p>	<ul style="list-style-type: none"> ▪ Future fitout/design of fixtures, furniture and fittings should consider accessible requirements in accordance with AS1428.2 ▪ Items shall be a minimum of 500mm away from the path of travel. 	<p>Note for consideration</p>
<p>Locker Facilities Provide accessible locker facilities for staff/guest use</p>	<ul style="list-style-type: none"> ▪ Ensure lockers are positioned at an accessible height for staff: <ul style="list-style-type: none"> – Provide clear circulation in front of the fixtures of 800mm x 1300mm – Position lockers at an height of between 700-1200 above FFL 	<p>Note for consideration</p>
<p>Obstacles Ensure obstacles abutting a path are readily identifiable and do not obstruct a user on the path</p>	<ul style="list-style-type: none"> ▪ Ensure bollards, bike racks, rest seating and bins possess a 30% luminance contrast to the surroundings ▪ Ensure fixtures and furniture is recessed a minimum of 500mm from required minimum width of path 	<p>Note for consideration</p>
<p>Landscaping The public realm offers significant opportunities to enhance the existing scheme. There will be minimum BCA requirements in terms of access paths, gradient, stairs etc., however, many aspects of good design in external spaces, fall outside these minimum requirements.</p>	<p>The following are some design considerations for providing equitable access to the public realm;</p> <ul style="list-style-type: none"> ▪ Provision of rest seating opportunities along walkways, stair landings etc. ▪ Lighting designs that minimise glare. ▪ Luminance contrast of features such as; steps, seats, bollards, drinking fountains, bins etc. ▪ Landscape planting can offer tactile and olfactory clues to the environment to enhance different areas. 	<p>Note for consideration</p>
<p>Parent's Room Consider the provision of a parent's room or baby change tables within public accessible sanitary facilities.</p>	<p>Future fitout/design of fixtures, furniture and fittings should consider accessible requirements in accordance with AS1428.1-2009 and AS1428.2-1992:</p>	<p>Note for consideration</p>

7. COMPLIANCE SUMMARY

This report provides a compliance overview of the project with respect to achieving compliance with the Building Code of Australia (BCA) and the Disability Discrimination Act (and Disability Standards) (DDA), within the project scope. In the next phase of the design process it is anticipated that as additional detail is provided - particularly floor plans, dimensions and features- the accessibility of this development can be further detailed.

Subject to addressing the actions identified, McKenzie Group Consulting confirm that the project documentation provides appropriate accessibility capable of complying with the BCA & Disability (Access to Premises – Buildings) Standards 2010 and the spirit and intent of the DDA.

If you have any further queries in relation to the reports and recommendations contained please contact Angela Chambers on 07 3834 9827.

Report Prepared by:



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Membership No 406

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8. APPENDIX A – DOCUMENT LIST

Date of Issue		Title
14-03-18		GA Plans Combined – Basement
14-03-18		GA Plans Combined – Lower Ground
14-03-18		GA Plans Combined – Ground Floor
14-03-18		GA Plans Combined – Level 1
14-03-18		GA Plans Combined – Level 2
14-03-18		GA Plans Combined – Level 3
14-03-18		GA Plans Combined – Level 4
14-03-18		GA Plans Combined – Level 5
14-03-18		GA Plans Combined – Level 6
14-03-18		GA Plans Combined – Level 7

9. APPENDIX B – MARKED-UP PLANS