GROUPDLA

Accessibility Compliance

DDA (Access to Premises – Building) Standards 2010 & Building Code of Australia 2016 (Amendment 1)

PROJECT NAME: New Maitland Hospital – State Significant Infrastructure Stage 2 Access Report

DATE: 26 March 2019

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REVISION HISTORY

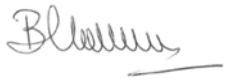
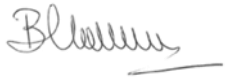
Revision	Date	Details	Authorised	
			Name/Position	Signature
A	10.12.2018	Schematic Design Review – Rev. 1	**Prepared:** Mauricio Vera Accessibility Regulations Consultant	
			Reviewed: Brett Clabburn Director (NSW BPB 0064)	
B	14.01.2019	Schematic Design Review – Rev. 2	**Prepared:** Mauricio Vera Accessibility Regulations Consultant	
			Reviewed: Brett Clabburn Director (NSW BPB 0064)	
C	28.02.2019	State Significant Infrastructure Stage 2 submission – Rev. 3	**Prepared:** Elisa Moechtar Manager – Access Consultancy	
			Reviewed: Brett Clabburn Director (NSW BPB 0064)	
D	14.03.2019	State Significant Infrastructure Stage 2 submission –Rev 4	**Prepared:** Elisa Moechtar Manager – Access Consultancy	
			Reviewed: Brett Clabburn Director (NSW BPB 0064)	
E	26.03.2019	State Significant Infrastructure Stage 2 submission –Rev 5	**Prepared:** Elisa Moechtar Manager – Access Consultancy	
			Reviewed: Brett Clabburn Director (NSW BPB 0064)	

Table 1 – Revision History

1.0 EXECUTIVE SUMMARY

The accessibility report is for the assessment of the new development known as New Maitland Hospital to assess accessibility compliance with the Disability (Access to Premises – Buildings) Standards 2010 ("DDA Premises Standards"), the access provisions of the Building Code of Australia 2016 ("BCA") – Amendment One and relevant referenced standards.

The information submitted and assessed at this stage of the design is to accompany the State Significant Infrastructure Stage 2 (SSI 2) planning application. The accessibility report provides a summary of access provisions, design requirements and parameters to be adopted as part of the compliance strategy to ensure reasonable access provisions for people with disability to and within the new development.

In our opinion, through design development and with ongoing review and inclusion of the access provisions and design requirements contained within this report, the proposed design can achieve compliance with the statutory accessibility legislation outlined above. This will be achieved through a combination of compliance with the deemed to satisfy (DTS) provisions and the Performance Requirements of the BCA.

This report advises where enhanced access provisions and additional guidelines are proposed to be implemented for the development to further the primary objectives of the Disability Discrimination Act (DDA) and promote equitable, dignified and independent access for people with disability as part of an inclusive and welcoming community facility.

Within Section 5.0 of the report, access design requirements and considerations have been included to ensure that non-compliances requiring further work during design development can achieve compliance with BCA/DDA Access Code. This section to be read in conjunction with the assessment summary of relevant access clauses of the BCA/DDA Access Code (Part D3, E3.6 and F2.4 - clause by clause analysis) under Appendix A. Additional summary tables are included in Appendix B to outline where additional information has been requested and where performance solutions can be provided in the future if required during Design Development Stage.

2.0 INTRODUCTION

The report is for the assessment of the New Maitland Hospital SSI Stage 2 architectural plans for compliance with the Disability (Access to Premises – Buildings) Standards 2010 ("DDA Premises Standards"), the access provisions of the Building Code of Australia 2016 ("BCA") – Amendment One and relevant referenced standards. A summary of all relevant clauses of the BCA/DDA Access Code is attached under Appendix A.

The report is prepared based on a review of the SSI Stage 2 documentation and the information provided by the client.

Reporting Team

The information contained within this report was prepared by Elisa Moechtar (ACAA No.198) and reviewed by Brett Clabburn, Accredited Certifier Grade A1 (BPB0064) from Group DLA.

Current Legislation

Disability Discrimination Act (DDA) 1992

All organisations have a responsibility, under the Federal DDA legislation, to not discriminate against people with disability with regards to providing equitable, independent and dignified access to facilities, goods, services and to premises that are used by the public.

Premises is broadly defined under the DDA and includes not only buildings, but also the streetscape and open space areas that surround them as well as areas inside buildings such as internal fittings, furniture and management practices. The DDA applies to existing premises, those currently under construction as well as future premises.

The DDA applies nationally and is a complaints-based legislation administered by the Australian Human Rights Commission (AHRC). The DDA will apply to all areas of the subject development of this report.

Disability Access to Premises - Buildings Standards 2010 (DDA Premises Standards)

The DDA Premises Standards were made pursuant to the DDA legislation to:

- Ensure that dignified, equitable, cost-effective and reasonably achievable access to buildings and facilities and services within buildings is provided for people with disability; and to
- Give certainty to the people responsible for compliance that if the Standards are complied with that they cannot be subject to a successful compliant under the DDA in relation to the matters covered by the Standards.

The DDA Premises Standards includes an Access Code for Buildings (DDA Access Code) that is mirrored in the access provisions of the BCA. New building work and the ''Affected Part'' of existing buildings must comply with the DDA Access Code in the same way it must comply with the BCA, by meeting deemed to satisfy (DtS) provisions or by adopting a performance-based solution to meet relevant BCA performance requirements.

Compliance with the DDA Premises Standards and the BCA/DDA Access Code will ensure that DDA obligations are met for all matters/areas covered by the Standards. However, for any matters/areas that are not covered by the Standards the DDA legislation will still apply and it cannot be guaranteed that a complaint cannot be lodged.

In accordance with the DDA Premises Standards the Affected Part is defined as (see Figure 1 below):

- The principal pedestrian entrance to an existing building that contains a new part; and
- Any part of an existing building, that contains a new part, that is necessary to provide a continuous accessible path of travel from the principal pedestrian entrance to the new part.

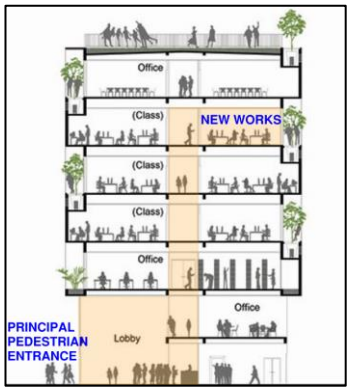


Figure 1 – Sample Schematic of the "Affected Part"

As the subject development of this report, includes a new Class 9a (hospital) & Class 3 (staff and other transient/temporary accommodation) building, the DDA Premises Standards including, DDA Access Code and access provisions of the BCA2016 will apply.

Compliance with the DDA Premises Standards is triggered when a building application for a Construction Certificate (CC) or Complying Development certificate (CDC) is lodged, or when new works are constructed for and on behalf of the Crown.

Building Code of Australia 2016 (BCA)

The applicable legislation governing the design of buildings is the Environmental Planning and Assessment Act 1979.

Whilst we await final confirmation at this stage (SSI Stage 2 Application) on the building approval mechanism, we believe it is likely to be a Crown project. The provisions of Section 6.28 – formerly known as S109R (Crown Building Work), of this Act require that the building work be carried out in accordance with the accessibility provisions of the Building Code of Australia (BCA). The application of compliance with the relevant version of the BCA is the date on which tenders are issued. In this case the application of the provisions of the BCA 2016 is the relevant code as tenders were issued during the period of 1 May 2016 to 1 May 2019.

The BCA is now updated every three years, the next updated will be BCA 2019 which will come into force on the 1st May 2019.

Purpose

The purpose of this report is to assess the design documentation of the proposed building development for compliance with the mandatory accessibility legislation outlined below. The report will review against the mandatory BCA/DDA Access Code Deemed to Satisfy provisions to outline areas where compliance is not currently achieved and provide design requirements, recommendations/strategies to address such areas in the ongoing design to achieve statutory compliance.

- Disability Discrimination Act 1992 (DDA);
- Disability Access to Premises Standards 2010 (DDA Premises Standards), including DDA Access Code;
- Building Code of Australia 2016 (BCA 2016) Amendment One – Part D3 and Clauses E3.6 and F2.4;
- Applicable Australian Standards AS1428.1:2009, AS1428.4.1:2009, AS2890.6:2009, AS1735.12-1999.

The report will also consider where enhanced access provisions that do not form part of a formal BCA/DDA Access Code assessment have been advised to be required eg. by Project Functional Brief as well as consideration of advisory accessibility guideline and policy documents relevant to the project including:

- Australasian Health Facility Guidelines – Part C
- Design for Access and Mobility, Part 2: Enhanced and Additional Requirements – Buildings and Facilities (AS1428.2-1992)
- Design Guidance (Note 42) Publicly Accessible Toilets in Health Care Facilities
- Wayfinding for Health Care Facilities
- NSW Health Disability and Inclusion Plan 2016-2019
- Better Placed – An integrated design policy for the built environment of NSW

Limitations

This report does not include nor imply any detailed assessment for design, compliance or upgrading for:

- The structural adequacy or design of the building;
- The inherent derived fire-resistance ratings of any existing or proposed structural elements of the building (unless specifically referred to);
- The design basis and/or operating capabilities of any existing or proposed electrical, mechanical or hydraulic fire protection services;
- This assessment is limited to the developed documentation at the date of this report and as referenced within the “Documentation Assessed” section of the Report;
- Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Local Council, ARTC, Department of Planning and the like;
- Demolition Standards not referred to by the BCA;
- BCA2016 Sections B, C, E, F, G, H, I, J, Parts D1 and D2;
- Work Healthy and Safety Act 2011;
- Construction Safety Act;
- The National Construction Code – Plumbing Code of Australia Volume 3;
- Conditions of Development Consent issued by the Local Consent Authority; and
- This report does not assess the safety of any particular aspects of the building outside of the min. access provisions of the Disability Access to Premises Standards 2010 (DDA Premises Standards), including DDA Access Code and access provisions of BCA2016.

3.0 BUILDING DESCRIPTION

Building Development

The development is a new eight (8) storey Hospital building located in Metford Road Metford. The building will be approximately 46,500 m2 when completed and will cost approximately $470 Million.

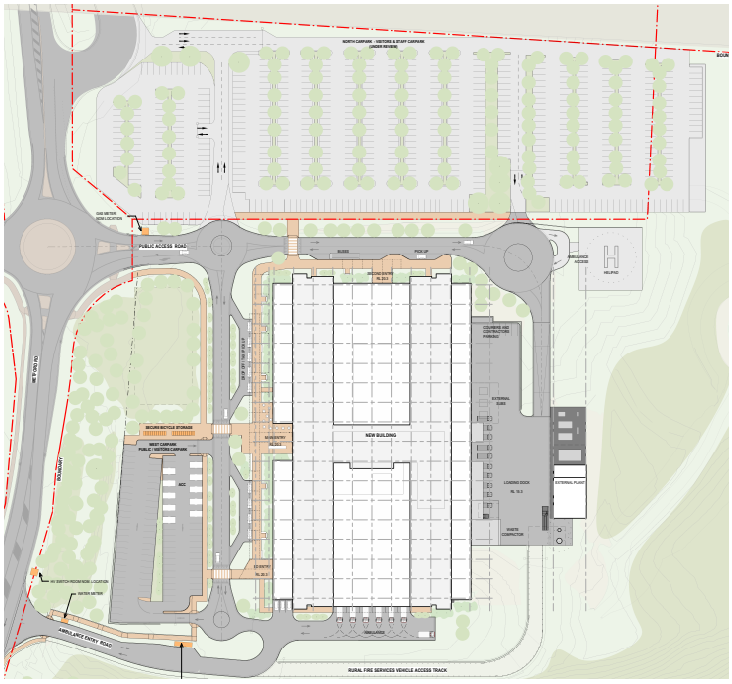


Figure 2 – Proposed development

Building Description

In accordance with the provisions of Clause A3.2 of BCA2016 the building is classified as follow:

Class	Level	Description
9a	Basement to L6 (Roof)	Hospital
3	L1 & L5	Temporary residential - Sole-Occupancy-Units (SOU's)

Table 1 – Building Class (or part)

Areas Required to be Accessible

In accordance with the provisions of Clause D3.1 of BCA2016 the following areas of the building are required to be accessible:

Level	Area	Description
L1 & L5	Temporary residential SOU's	Common areas of the temporary residential levels and 1 SOU to be accessible (as 6x total SOU's are proposed)
B1-L6 (except where Class 3 is proposed)	Hospital	To and within all areas normally used by the occupants

Table 2 – Areas Required to be Accessible

Documentation Assessed

This report is based on the following documentation prepared by BVN Architects:

Description	Drawing No.	Issue	Date
Department Plans - All Levels	10B-A00-001	2	26/11/18
Hospital General Arrangement Plan – Level B1	11B-L00-001	4	11/02/19
Hospital General Arrangement Plan – Level 00	11B-000-001	4	11/02/19
Hospital General Arrangement Plan – Level 01	11B-100-001	4	11/02/19
Hospital General Arrangement Plan – Level 02	11B-200-001	4	11/02/19
Hospital General Arrangement Plan – Level 03	11B-300-001	4	11/02/19
Hospital General Arrangement Plan – Level 04	11B-400-001	4	11/02/19
Hospital General Arrangement Plan – Level 05	11B-500-001	4	11/02/19
Hospital General Arrangement Plan – Level 06	11B-600-001	4	11/02/19
Amenities mark-up	All levels	2	06/12/18
Site Plan	BVN-ARH-01A-AX0-002	5	22/03/19
Overall Plan -prepared by TTW Engineers	TTW-CIV-DWG-GXD-C110	1	15/02/19
Landscape Design Report – prepared by Black-beetle	RPT-A0-SSI-SSI	2	17/02/19

Table 3 – Documentation Assessed

4.0 ACCESSIBILITY PROVISIONS

In addition to the access provisions required by the DDA Premises Standards, the BCA/DDA Access Code and referenced access standards, the proposed design will include some enhanced access provisions within the development for improved equity and inclusion of people with disability, as follows:

Project Functional Brief – Advised Enhanced Access Requirements

Based on the information provided from the design team the enhanced access provisions currently included in the design are in response to client and functional brief requirements, they include:

- Changing Places Toilet Facility, located in Main Entry Area on Level 0

  An accessible adult change facility is a large accessible toilet (or toilet + shower) specially fitted for people with severe disabilities that will require toileting assistance (i.e. hoist, changing table, peninsula style toilet, etc).

- 1 x Accessible En-suite within 1 x Patient Bedroom within each Ward Area (Class 9a) across levels 3 - 5

These enhanced access provisions are over and above the min. access requirements of current BCA/DDA Access Code and therefore they do not technically need to be designed in compliance with the currently referenced standards. However, as the design progresses, consideration should be made to utilising the current referenced standards of the BCA/DDA Access Code (ie. AS1428.1:2009) and/or the technical design guidance available (eg. Changing Places Technical Standard June 2017) as a min. benchmark for accessibility to improve equity, dignity and independence for users in line with the objectives of the DDA.

Australasian Health Facility Guidelines (AHFG) – Part C Design for Access, Mobility, Safety and Security

The design team is designing the development to meet the AHFG guidelines. In some instances, this guidance document includes references to access standards that are not-referenced by the current BCA/DDA Access Code eg. AS1428.1.2:1992, which includes design requirements for fixtures and furniture items.

Disability (Access to Premises – Buildings) Standards 2010 including DDA Access Code & Building Code of Australia 2016 (BCA)

Please refer to the clause by clause BCA/DDA Access Code accessibility provisions assessment in Appendix A at the end of this report, summary tables in Appendix B and in conjunction with a brief of the most relevant access requirements/matters for consideration in the section 5.0 immediately below.

5.0 ACCESS REQUIREMENTS & FURTHER CONSIDERATIONS

The assessment below provides an overview of key access planning requirements and considerations for accessibility compliance with the BCA/DDA Access Code and identifies non-compliances that require attention and further work during Design Development Stage. Please read these design requirements outlined below in conjunction with the clause-by-clause assessment of this report in Appendix A and the summary tables included in Appendix B that outline where performance solutions can be provided if required and where additional information has been requested for future review.

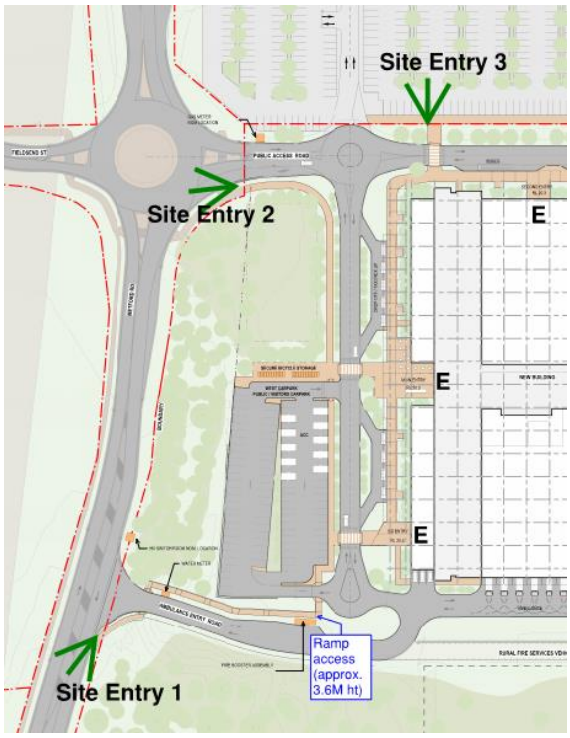
Site Boundary and External Linkages

Ensure the accessways from the three (3) pedestrian entrances at the site boundary to the three (3) accessible entrances of building (north – Secondary entry, central-west – Main entry, and south-west – Emergency Department) are developed in compliance with AS1428.1.

Note: this will in turn, ensure that compliant accessways are provided between the external transport linkages (ie. vehicle drop off, taxi-stand, bus stops etc.) that are located adjacent and in close proximity to the building development.

While hardstand paths are indicated, design requirements to note include:

- Southern ramp access must comply with AS1428.1 and not exceed a vertical rise of 3.6M to be accessible and not cause undue fatigue for people with disability. Due to extensive length, at least 1800mm min. clear width (between handrails) is required for wheelchair passing bays. Including hardstand level landing areas (with seating) is recommended adjacent ramp at top and base areas to provide rest areas (DDA/Advisory);
- On-going design of public bus-stop and taxi-stand at north and north-east of building needs to be developed in accordance with Disability Standards Accessible Public Transport (DSAPT), AS1428.2 and AS1428.4.1, with kerb -ramp connections to roadway. Note: generally, a 150mm kerb-height is required for deployment of ramps from accessible buses.
- Internal roadway drop-off areas indicated have same grade/flush transitions to pedestrian accessways that will assist people with limited mobility but may cause issues for people with vision impairment if not suitably delineated. While not directly adjacent to building entrances, that would necessitate use of TGSIs to meet BCA Part D3.8 (e), TGSIs should be installed in addition to bollards as per. AHFG Part C Section 4.6 recommendations and to minimise potential DDA risk (DDA/Advisory).



Accessible Toilets

The number and location of the proposed accessible toilets are at this stage generally consistent with the BCA/DDA Access Code, however is noted that the BCA Assessment of Occupant Numbers vs. Sanitary Facilities has not yet been completed (Refer Table 2 Item H from BCA Report Rec C) and this may influence overall toilet provisions.

Refer to the work in progress (WIP) discussion documents between BVN and Group DLA (GDLA / BVN discussion comments dated 10.01.2019 and BVN SK174_190221_DDA Meeting Mark-up).

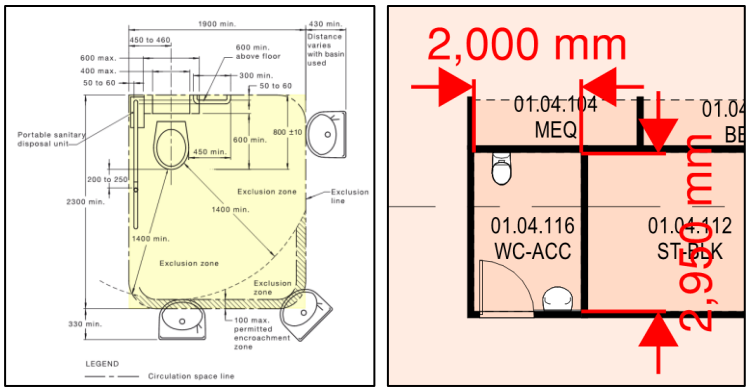
Nomination and grouping of banks of common toilets have been assessed by department, location and availability of use i.e. public/restricted areas, etc. in lieu of the entire storey. A Performance Solution can be provided to support the operation of these facilities in relation to the intent of the BCA/DDA Access Code which requires that not less than 50% of toilet banks on the storey are to include a unisex accessible sanitary facility. It is understood that all accessible sanitary facilities will be unlocked and available to all occupants at this stage.

The main principles for the Performance Solution are:

- Accessible sanitary facilities will be unlocked and available to all occupants;
- Most of the departments will have free circulation of occupants between areas. Where restricted areas are identified, compliance (ie. unisex accessible toilets at 50% of toilet banks) will be achieved in isolation.
- Additional unisex accessible toilets (x 2) are required within Emergency Department at Level 0.

A “bank of toilet/s” is not defined by the BCA and/or the DDA Premises Standards. While co-location of toilets is preferred for ease of way-finding, the hospital function/use requirements may not always permit this occurring. If male, female toilets and unisex accessible toilet cannot be located immediately adjacent to each other but nearby, the performance solution approach can generally be justified up to 50m maximum distance apart with directional signage to assist users.

The accessible bathrooms are to have a balance between transfer side (ie. left / right handed) with internal dimensions to cater for min. AS1428.1 circulation spaces for and between all fixtures. Generally, an accessible bathroom with 2350mm W x 2750mm min. L will allow fixtures installation in compliance with AS1428.1 Fig 43 and 50 as shown below:



During design development stage, the detailed design and fit-out of the unisex accessible toilets, including circulation areas between fixtures and fixtures/fittings will be developed and documented to confirm required access features for people with disability in compliance with AS1428.1 to satisfy BCA/DDA Access code Part F2.4.

Ambulant Cubicles

Ensure an ambulant toilet for use by males and females is provided at each bank of toilets (including additional single toilets) adjacent to the unisex accessible toilet. Cubicles to have 900x900mm clear circulation space inside and outside the door, 700mm clear door width, a centered WC pan and 2 set of grabrails, compliant with AS1428.1.

Some proposed ambulant cubicle layouts will require review for compliance with AS1428.1 and this is generally achievable and will be addressed through design development. Within some department areas, a Performance Solution can be provided for use of a drop-down grabrail within the accessible sanitary facility (pursuant to grab-rail specification and additional signage provision), to enable a combined ambulant and accessible facility should a separate ambulant cubicle, compliant with AS1428.1 not be achievable and a performance solution be required.

During design development stage, the detailed design and fit-out of the ambulant toilets including circulation areas between fixtures and fixtures/fittings will be documented to confirm required access features for people with disability in compliance with AS1428.1 to satisfy BCA/DDA Access code Part F2.4

Note: It has been confirmed that a unisex ambulant cubicle cannot be counted as both a male and female pan for the purposes of BCA Assessment of Occupant Numbers vs. Sanitary Facilities.

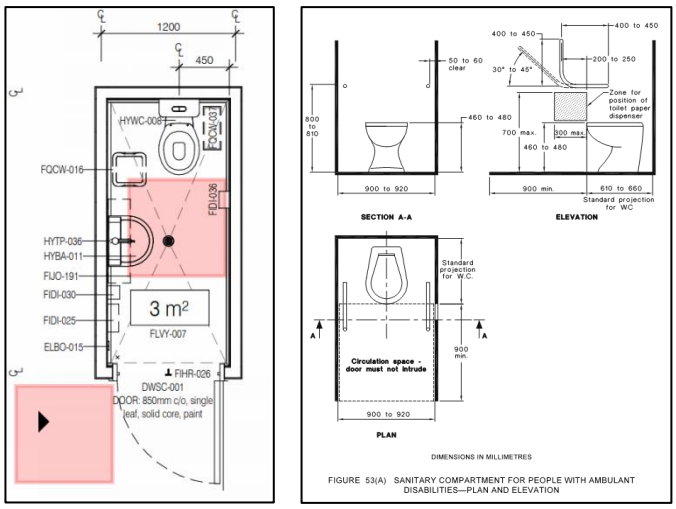


FIGURE 53(A) SANITARY COMPARTMENT FOR PEOPLE WITH AMBULANT DISABILITIES—PLAN AND ELEVATION

Accessways

An accessway (continuous accessible path of travel, compliant with AS1428.1) is required to and within all areas normally used by the occupants under BCA/DDA Access Code Table D3.1 (unless areas are deemed exempt under Part D3.4). In general, compliant accessways are achievable throughout the development via the passenger lifts that serve all building levels and through the wide corridors that connect all common-use rooms/areas.

In some areas the design proposes both accessible and non-accessible rooms (i.e. some change rooms in Imaging, Hold suites in Renal & Chemo, etc provide compliant internal circulation areas, whereas others do not achieve compliance). In these specific instances, access compliance can be achieved through use of allocated accessible facilities, that will be used as alternatives to non-accessible facilities ie. the areas will have same function/use and level of amenity, and be managed by an operational management strategy to suit different user needs.

A Performance Solution can be provided, (subject to further information details) based on access being provided to the degree necessary, and managed use of allocated accessible facilities, in lieu of access “to and within” all areas at DD Stage.

Doorways

Provide all common-use doors with 850mm min. clear width opening (generally 920mm door leaf) and appropriate latch-side clearances (530mm when door opens towards the user; 510mm when door opens away from user), compliant with AS1428.1. Currently, some doors to rooms on the drawings show insufficient latch side clearances.

Ensure luminance contrast, door controls and circulation space at doorways to be in compliance with AS428.1 and doors are lightweight (20N max). Care is to be taken with some doorways that may not currently achieve compliance with AS1428.1.

Also, ensure all doorways forming airlocks are provided with a suitable clearance between door leaves. Generally, this is 1450mm min. length between door swings for wheelchairs users and 900mm x 900mm min. for ambulant users.

During design development stage, the detailed design for all doors leading to areas required to be accessible will be developed and documented to confirm required access features for people with disability including: 850mm min. clear width opening for active leaf, level threshold, circulation space, luminance contrast, glazing/visual indicators where required and door hardware in compliance with AS1428.1 to satisfy BCA/DDA Access code Part D3.2.

Landscape areas: Landscaping areas designed for the common use of all occupants (whether public, staff, visitors, patients etc.) eg. main entry garden, rehabilitation and other building courtyards etc. are required to be accessible, compliant with AS1428.1. Therefore, a level, continuous and clear accessway will be required to and within these areas, compliant with AS1428.1.

During design development stage, all accessways will be developed and documented to confirm required access features for people with disability including: continuous accessible paths of travel with suitable gradients and lengths between landings, suitable cross-fall and level transitions between internal and external areas, slip resistant traversable surfaces, and circulation areas in compliance with AS1428.1 to satisfy BCA/DDA Access code Part D3.

Appendix A:
BCA/DDA Access Code Accessibility Provisions

- Clause by clause analysis

BCA PROVISIONS

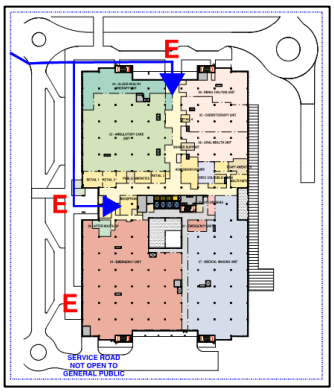
The following is a clause-by-clause assessment of the architectural drawings against the deemed-to-satisfy provisions of the DDA Access Code/BCA 2016.

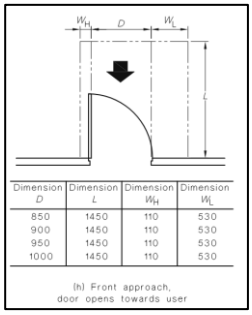
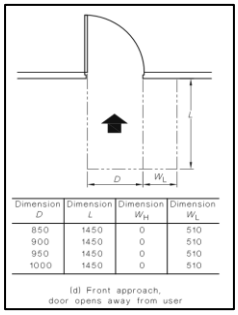
Key of Figures:

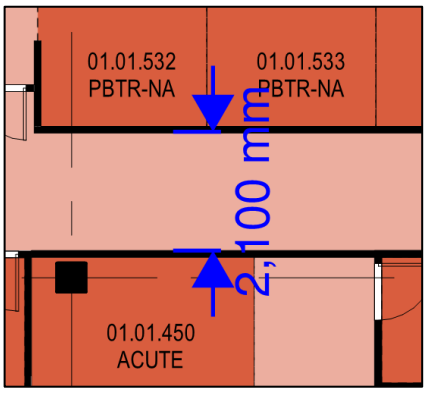
✓	The building as designed / indicated complies with this clause.
X	The building does not comply with this clause.
?	Further information or documentation required to clarify compliance.
CR	Design statement (or other means) required from appropriate qualified designer/person that the building will comply with this clause at the design stage & installation certification will be required on completion of the project from the relevant installer or engaged consultant.
N/A	This clause is not applicable to this project.
PS	Performance Solution using Performance Requirements has been utilised/proposed to address this item – see separate report for details of requirements.
Noted	This clause is for information.

Section D: Access and Egress		
Part D3 – Access for People with Disabilities		
Clause	**Reference**	**Comment**
D3.1	General building access requirements	
?	An accessway in compliance with AS1428.1 is required to the following: <u>Class 9a (Hospital):</u> To and within all areas normally used by the occupants. To and within not less than 1 of each type of room or space for use in common by the residents (e.g. cooking, facility, gymnasium, swimming pool, laundry, etc. <u>Class 3 (Staff accommodation and Ronald Mc Donald House):</u> From a pedestrian entrance to at least 1 floor containing SOU's, to the entrance doorway of each SOU located on that level, and any other level served by a passenger lift or an accessible ramp. To and within not less than 1 of each type of room or space for use in common by the residents (e.g. cooking facility, gymnasium, swimming pool, laundry, etc.) If the building contains between 1 – 10 SOUs, to and within at least 1 accessible SOU.	An <u>accessway</u> in compliance with AS1428.1 is required to and within all common-use areas of the building. From the information provided it is understood that all flooring will be level (step free) throughout the common areas of the building thus compliance is readily achievable. The vertical accessway is provided by passenger lifts connecting all storeys of the building. Ongoing review will be required through DD Stage to ensure accessway circulation areas meet AS1428.1. The accessway must continue up to the entry door of all SOU's in the Class 3 part of building. Currently there are 6 x SOUS provided for: • Staff: 1 x SOU in ICU on L1; 4 x SOUs in Shared Support on L2; • Patient Family/Support: 1 x SOU in Ronald McDonald House (RMC – House) on L5.

		Based on the total number of 6 x SOU's, at least 1 accessible SOU is required according to Table D3.1. Based on the nature of the proposed SOU facilities the 1 x required accessible SOU is to be RMC-House on L5 (public/patient use). Currently this open-plan room/area indicates that compliance is achievable. As the design progresses into DD Stage, the internal layout/fit-out of the 1 x required accessible SOU, is necessary for assessment. Note: An accessway is to be provided to and within the SOU, including to and within at least 1 x combined accessible WC/shower to meet AS1428.1:2009. Details to be provided at DD Stage.

D3.2	Access to buildings	
?	(a) An accessway must be provided to a building required to accessible – • from the main points of a pedestrian entry at the allotment boundary; and • from another accessible building connected by a pedestrian link; and • from any required accessible carparking space on the allotment. (b) In a building required to be accessible, an accessway must be provided through the principal pedestrian entrance, and – • through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and • in a building with a total floor area more than 500 m2, a pedestrian entrance which is not accessible must not be located more than 50 m from an accessible pedestrian entrance, except for pedestrian entrances serving only areas exempted by D3.4. (c) Where a pedestrian entrance required to be accessible has multiple doorways— • if the pedestrian entrance consists of not more than 3 doorways — not less than 1 of those doorways must be accessible; and • if a pedestrian entrance consists of more than 3 doorways — not less than 50% of those doorways must be accessible. (d) For the purposes of (c)— • an accessible pedestrian entrance with multiple doorways is considered to be one pedestrian entrance where— – all doorways serve the same part or parts of the building; and – the distance between each doorway is not more than the width of the widest doorway at that pedestrian entrance (see Figure D3.2); and • a doorway is considered to be the clear, unobstructed opening created by the opening of one or more door leaves (see Figure D3.2). (e) Where a doorway on an accessway has multiple leaves, (except an automatic opening door) one of those leaves must have a clear opening width of not less than 850 mm in accordance with AS 1428.1.	Hardstand accessways have been identified on the overall and site plan drawings from three (3) main pedestrian entry points at the site boundaries. These are shown to connect the site boundary to the three (3) building entrances and to provide step-free paths of travel between external transport linkages (ie. vehicle drop off, taxi-stand, bus stops etc.) and the building. Further details are required to assess at DD Stage to ensure the ongoing design of the external accessways is compliant with AS1428.1. In particular for: • southern ramp access must comply with AS1428.1 and not exceed a vertical rise of 3.6M. Due to ramp design (more than 20M length), 1800mm min. clear width between handrails is required for wheelchair passing bays (see also Clause D3.11) • all kerb-ramps will need to comply with AS1428.1 • all walkways to include level landing areas at intervals that comply with AS1428.1 Note: It has been advised that the southern road will exclusively use for staff (Emergency / Ambulance). Three (3) entrances are identified in the building (north – Secondary entry, central-west – Main entry, and south-west – Emergency Department). All 3 x entrances will be accessible in compliance with the 50% rule of this clause. 

		Note: The doorway at the southern side of the building has been advised as purely for emergency staff use (ambulance). Note: If any additional non-accessible entrance doorway is included in the development this will require to be located no more than 50m away from an accessible entrance, otherwise a non-compliance will be triggered. It is suggested to target all doorways around the building to be level and provided with 850mm min. clear width opening. All doorways within the accessway are required to be in compliance with doorways AS1428.1. Further details to be reviewed at DD Stage. Generally, a 1500mmx1500mm box in front of the doorway (both sides) should suffice, plus an at least 920mm door leaf to provide at least 850mm min. clear width opening.  (h) Front approach, door opens towards user Dimension D: 850, 900, 950, 1000 Dimension L: 1450, 1450, 1450, 1450 Dimension W_H: 110, 110, 110, 110 Dimension W_L: 530, 530, 530, 530  (d) Front approach, door opens away from user Dimension D: 850, 900, 950, 1000 Dimension L: 1450, 1450, 1450, 1450 Dimension W_H: 0, 0, 0, 0 Dimension W_L: 510, 510, 510, 510
D3.3	Parts of a building to be accessible	
?	• Walkways and ramps must comply with clause 10 of AS1428.1-2009. • Non-fire-isolated stairways must comply with Clause 11 of AS1428.1-2009. • Fire-isolated stairways must comply with clause 11 (f) & (g) of AS1428.1-2009. The accessways must be provided with: • Passing spaces (1800x2000mm) complying with AS1428.1 at 20m max. intervals where direct line of sight is not available. • Turning spaces (1540x2070mm) complying with AS1428.1 within 2m of the end of accessways (including corridors or the like); and at 20m max. intervals along an accessway.	• There is currently one external ramp system identified in this development at south-western side that connects on accessway from site boundary to the main building entrance. Previous comment has been made in Section D3.2 regarding max. 3.6 M height variation. Further details are required at DD stage for review. • Walkways are provided along the three (3) accessways to the boundaries and linkages to other areas outside the building. To be reviewed at DD Stage. Note: Please note that walkways shallower than 1:20 do not required accessible features. Only periodical landings and edge protection if sides are exposed.

	• An intersection of accessways satisfies the spatial requirements for a passing and turning space. Note: The Access to Premises Standards to not provide the concessions provided in sub-cluses (g) and (h) in this clause, hence compliance with the Access to Premises Standards will require the floor covering in the accessible areas to strictly comply with Clause 7.4.1(a) of AS1428.1-2009.	• The fire isolated stairs within the building are required to be provided with 1 continuous accessible inner handrail, luminance contrasting and slip resistant nosing. Note: No TGSI's are required. Note: In the event that the fire-isolated stairs are to be used as communication (every day) stairs, these will require to be provided with 2 accessible handrails, luminance contrast and slip resistant nosing strips and TGSI's. • Turning bays (1540x2070mm) and passing bays (1800x2000mm) are considered readily achievable in the main corridors currently showing 2100mm width. However care is to be taken with other clauses of the BCA (D2.17) which requires all corridors used by patients to have continuous handrails (where practicable). Handrails are not protrude over these bays. 
D3.4	Exemptions	
?	Certain areas can be exempted under this clause if they pose a health and safety risk for people with disability and /or access would be inappropriate because the particular purpose for which this area is used (e.g. plant rooms, service areas, heavy / toxic item storage, etc.)	The following service areas of the building have been identified as being potential exemption areas from the access provisions of the BCA, subject to PCA review/approval: • Loading dock • Waste management areas • Cleaners rooms • Plant rooms (Chillers, AHU, Comms, etc) • Food preparation areas (Basement) • Storage rooms (heavy items / equipment / machinery) only. Please confirm as the project progresses of any other potential areas that the client

		believes may pose a health and/or safety risk for people with disability (eg. rooms containing toxic elements, etc) Note: Some areas of the building may not require certain access provisions due to their nature and may be subject to a Performance Solution. These are not exemptions according to this clause.
D3.5	Accessible Car parking	
?	Accessible carparking spaces to be in compliance with this Clause, AS2890.6 and AS1428.1 in the proportion required by BCA2016 and Council DCP. Generally, accessible carparking spaces compliant with AS2890.6 will require 2400x5400mm plus an adjacent shared area of 2400x5400mm. Bollard, demarcation and accessible signage to comply with AS2890.6. Vertical clearance to be 2500mm min over the carparking and 2200mm over the accessway, compliant with AS2890.6.	Accessible carparking bays are indicated on the site plan, located within on-site carparks at northern and western portion of allotment at ground level (outside the building). The northern carpark nominated for visitors & staff (under review) currently has 2 x accessible carparking spaces. The western carpark nominated for public/visitors currently has 10 x accessible carparking spaces. Confirmation and ongoing review of the total number of carparking spaces and any particular function/use allocation (eg. if designated non-outpatient area, outpatient area, staff, area etc.) is needed to ensure the min. number of accessible carparking spaces is in accordance with ratios required in Table D3.5 (1% min. for non-outpatient area; 2% min. for outpatient areas) and designed in accordance to AS2890.6. Further details are required at DD stage for review. Generally, the accessible carparking spaces indicated can achieve the required layout and min. dimensions. The current locations of accessible carparking spaces are in close and reasonable proximity to the 3 x building entrances and accessways are achievable. The accessways have designated pedestrian crossings across internal roadways for improved safety. To be reviewed further at DD Stage.

D3.6	Signage	
CR	• Braille and tactile signage complying with Specification D3.6 and incorporating the international symbol of access, or deafness as appropriate, must identify each: – sanitary facility; and – any space with a hearing augmentation system; and – identify each door required by E4.5 to be provided with an exit sign and state "Exit" and "Level" and either: (aa) the floor level number; or (bb) a floor level descriptor; or (cc) a combination of (aa) and (bb) • Signage including the international symbol for deafness in accordance with AS1428.1 must be provided within a room containing a hearing augmentation system identifying – – the type of hearing augmentation; and – the area covered within the room; and – if receivers are being used and where the receivers can be obtained. • Signage to accessible sanitary facilities must identify if the facility is suitable for left or right-handed use; and • Signage to identify an ambulant accessible facility in accordance with AS1428.1 must be located on the door of the facility. • Where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access, in accordance with AS1428.1 must be provided to direct a person to the location of the nearest accessible pedestrian entrance; • Where a bank of facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must be places at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex facility.	Compliance required. Accessible signage package to be reviewed at later stage. These must be provided with Braille, international accessible symbol, raised lettering, colour contrast, etc.
D3.7	Hearing augmentation	
CR	(a) A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed—	If any inbuilt amplification system is proposed, a hearing augmentation system would be required.

	• in a room in a Class 9b building; or • in an auditorium, conference room, meeting room or room for judicatory purposes; or • at any ticket office, teller's booth, reception area or the like, where the public is screened from the service provider. (b) If a hearing augmentation system required by (a) is— • an induction loop, it must be provided to not less than 80% of the floor area of the room or space served by the inbuilt amplification system; or • a system requiring the use of receivers or the like, it must be available to not less than 95% of the floor area of the room or space served by the inbuilt amplification system, and the number of receivers provided must not be less than— – if the room or space accommodates up to 500 persons, 1 receiver for every 25 persons or part thereof, or 2 receivers, whichever is the greater; and – if the room or space accommodates more than 500 persons but not more than 1000 persons, 20 receivers plus 1 receiver for every 33 persons or part thereof in excess of 500 persons; and – if the room or space accommodates more than 1000 persons but not more than 2000 persons, 35 receivers plus 1 receiver for every 50 persons or part thereof in excess of 1000 persons; and – if the room or space accommodates more than 2000 persons, 55 receivers plus 1 receiver for every 100 persons or part thereof in excess of 2000 persons. (c) The number of persons accommodated in the room or space served by an inbuilt amplification system must be calculated according to D1.13. (d) Any screen or scoreboard associated with a Class 9b building and capable of displaying public announcements must be capable of supplementing any public address system, other than a public address system used for emergency warning purposes only.	Please inform at later stage if inbuilt amplification system is proposed to any reception desks, meeting rooms, notice/information is screened or the like.
D3.8	Tactile indicators	

CR	a) For a building required to be accessible, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching— • a stairway, other than a fire-isolated stairway; and • an escalator; and • a passenger conveyor or moving walk; and • a ramp other than a fire-isolated ramp, step ramp, kerb ramp or swimming pool ramp; and • in the absence of a suitable barrier— – an overhead obstruction less than 2 m above floor level, other than a doorway; and – an accessway meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D3.4, if there is no kerb or kerb ramp at that point, except for areas exempted by D3.4. (b) b) Tactile ground surface indicators required by (a) must comply with sections 1 and 2 of AS/NZS 1428.4.1. TGSI's to be provided in compliance with this Clause, AS1428.1, AS1428.4.1 and AS4586/HB198 at bottom and top of stairs / ramps (except fire-isolated). Ensure installed full tread width, colour contrasting with adjacent surface, slip resistance and 300mm from the ramp edge of stair riser.	TGSI's in non-fire isolated stairs and ramps are not required in a health care building (Class 9a). These can be replaced by domed buttons on the handrails instead to meet AS1428.1 and AS1428.4.1. However particular consideration on the use of TGSI's needs to be made for any ramps and/or stairs that are external to the building (may not technically be Class 9a area) and for any stairs within public areas to improve access/safety and minimise potential DDA risk (DDA/advisory) Currently there is an external ramp system shown at south-west of building near site boundary entry point, which includes an adjacent external stair. Ongoing review required of stair and handrail detail drawings to be provided for review when available to ensure this will meet AS1428.1. However, no ramps or stairs (aside from fire-isolated stairs) are currently shown at this stage within the building.
D3.11	Ramps	
?	• Series of connected ramps must not have a combined vertical rise of more than 3.6 m • A landing for a step ramp must not overlap a landing for another step ramp or ramp	There is an external ramp system with approx. 3.6M height variation on south-western side of building that is a required accessway connecting from site boundary to building entry. Ongoing review required and ramp and handrail detail drawings to be provided for review when available to ensure this will meet AS1428.1. There are various kerb-ramps that connect the carpark and landscaping areas to the accessways to the building entrances that need to meet AS1428.1. There is potential that other ramps may be necessary during design development thus these are the ramp options from AS1428.1 for information:

		• Step ramps (190mm vertical rise) • Threshold ramps (35mm vertical rise) • 1:14 max ramps (accessible fixtures required) Note: Gradients under 1:20 are considered walkways with no accessible fixtures required. Only landings and edge protection is there are exposed edges.
D3.12	Glazing on accessway	
CR	• On an accessway where this is no transom, all fully glazed doors sidelights and glazing capable of being mistaken for a doorway or opening must be clearly marked in accordance with AS1428.1 (75 mm solid line located at a height between 900 mm and 1100 mm above the FFL) • Doorways are also required to be highlighted via a luminance contrast of no less than 30%, which can be by painting the door a different colour than the wall or architrave. In the case of fully glazed openings, it must be an obscuration strip or solid line of not less than 50 mm at the above noted height and must also run around the door opening.	Compliance required. To be reviewed at later stage.

Section E: Services and Equipment		
Part E3 – Lift Installations		
Clause	**Reference**	**Comment**
E3.5	Landings	
CR	Access and egress to and from lift well landings must comply with the Deemed-to-Satisfy Provisions of Section D.	It is recommended to provide at least a level 90° turning bay (1500x1500mm) in all passenger lift lobbies (front of lifts). Currently achieved.
E3.6	Passenger lifts	
CR	Every passenger lift must comply with Table E3.6a and include accessible features for people with disability as per Table E3.6b. The lift must not rely on a constant pressure device for its operation if the lift car is fully enclosed	All lifts show at least 1400x1600mm internal dimensions in compliance with this clause and AS1735.12. AS1735.12 includes design requirements for facilities in passenger lifts that are specifically designed to assist people with disability. It also includes spatial requirements for the min. location of external lift landing call button/controls from internal corners or obstructions (ie. 500mm min. length distance in line with AS1428.1 requirements). Further review of lift design and lift car specification required during DD Stage. Design statement (or other means) required from appropriate qualified designer/person that the building will comply with this clause at the design stage & installation certification will be required on completion of the project from the relevant installer or engaged consultant.

Section F: Health and Amenity		
Part F2 – Sanitary and Other Facilities		
Clause	**Reference**	**Comment**
F2.4	Facilities for persons with disabilities	
?	In a building required to be accessible— (a) accessible unisex sanitary compartments must be provided in accessible parts of the building in accordance with Table F2.4(a); and (b) accessible unisex showers must be provided in accordance with Table F2.4(b); and (c) at each bank of toilets where there is one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females; and (d) an accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary towels; and (e) the circulation spaces, fixtures and fittings of all accessible sanitary facilities provided in accordance with Table F2.4(a) and Table F2.4(b) must comply with the requirements of AS 1428.1-2009; and (f) an accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and (g) where two or more of each type of accessible unisex sanitary facility are provided, the number of left and right handed mirror image facilities must be provided as evenly as possible; and (h) where male sanitary facilities are provided at a separate location to female sanitary facilities, accessible unisex sanitary facilities are only required at one of those locations; and (i) an accessible unisex sanitary compartment or an accessible unisex shower need not be provided on a storey or level that is not required by D3.3(f) to be provided with a passenger lift or ramp complying with AS 1428.1.	Further review in detail of this clause will be necessary. The following items must be identified and clarified during design development stage. • Number and location of the bank of toilets per storey. This is necessary as the BCA requires 50% of the bank of toilets to be accessible. It is suggested to define these in isolation per department where free circulation is not intended (i.e. surgery areas or the like). On the other hand, the bank of toilets can be reviewed per the entire storeys if free circulation is possible. Proposed accessible sanitary facilities are generally consistent with the BCA. A Performance Solution is available to justify/document this assessment. • The use of the sanitary facilities must be nominated according to the intended occupants (i.e. staff, visitors, patients, combined, etc.) to enable an accurate access review. Also, some areas may have restricted access (i.e. staff amenities) and/or special areas for patient (i.e., mental health, intensive care, etc.) thus need to be clarified and noted to enable an accurate access review. • A unisex ambulant toilet is required at each accessible bank of toilets. Current layout is not compliant with AS1428.1 Clause 16. A Performance Solution is available to enable variations such as double swing doors, recessed washbasins if necessary. Due to the nature of the building multiple performance solutions may be necessary to enable a suitable access performance of the building, please see below the following envisaged variations: • Reduction/calculation of the banks of toilets (i.e. toilets far apart)

		• Use of standalone toilets as ambulant toilets. • Deletions of accessible WC's in multiple areas of the building (i.e. staff amenities, theatres, etc.). • Shared accessible WC's between different departments (i.e. Renal & Chemotherapy) • Deletion of access provision on some areas due to the nature of use (i.e. mental health, theatres, etc.) • Non fully accessible rooms (i.e. Mental Health, Hold suites in Chemo & Renal, Change rooms in Imaging)

Appendix B:
Access Summary Tables

- DtS Non-compliances & Potential Performance Solutions
- Additional information request for analysis at DD stage
- Stair/Ramp Analysis – information purposes only

The following items in Table 4 have been identified at this stage of the design as requiring further attention through design amendments at Design Development Stage or requiring a Performance Solution:

Item	Query or DTS Non-Compliance	Suggested Resolution	BCA Clause	BCA Performance Requirements
1.	Proposed accessible sanitary facilities are generally consistent with the BCA, however in some areas (as toilet banks are assessed by department, function/use, public/restricted areas) the number of banks of toilets that include a unisex accessible toilet is less than 50%.	Can be addressed by a Performance Solution based on the following, with support of a future client operational management strategy for: - Accessible sanitary facilities to be unlocked and available for shared use between public, patients and staff; - Circulation between departments (i.e. Renal, Chemotherapy, Oral Health, etc.) to be available; - Inclusion of 2 x additional accessible toilet/s within L0 Emergency Department	F2.4	FP2.1
2.	Non-provision of accessible toilets (i.e. visitors, staff, patients) in some areas (departments) of the hospital	Can be addressed by a Performance Solution based on the particular nature of the department and/or specific area restrictions (eg. Mental Health).	F2.4	FP2.1
3.	Accessible toilet layout variation	A combined Unisex Accessible/Ambulant toilet layout (with extra drop-down grabrail) is proposed in lieu of the accessible toilet layout required in AS1428.1, Clause 15, Figure 43 in some department areas where a separate ambulant cubicle cannot be achieved within current design. Detail drawings to be reviewed at DD Stage. Can be addressed by a Performance Solution.	F2.4	FP2.1
4.	Ambulant toilets layout variation	Unisex standalone ambulant toilet layout is proposed in lieu of ambulant cubicle required by AS1428.1 Clause 16 in some areas. Detail drawings to be reviewed at DD Stage. Can be addressed by a Performance Solution.	F2.4	FP2.1
5.	Multiple areas not fully accessible: • Mental Health • Operating Theatres • Various rooms associated with nursing work.	Can be addressed by a Performance Solution based on exemption of specific access provisions in some areas of the hospital due to their nature of use (i.e. where areas assumed to require high levels of mobility/able-bodied staff, equipment restrictions, patient's conditions, etc).	D3.1	DP1

Item	Query or DTS Non-Compliance	Suggested Resolution	BCA Clause	BCA Performance Requirements
6.	Multiple rooms not accessible in Treatment (non-ward) areas: • Chemotherapy, • Mental Health • Medical Imaging	Can be addressed by a Performance Solution based on: - allocated accessible room/spaces that that will be used as alternatives to non-accessible rooms/spaces ie. they have same function/use and level of amenity, with choice and flexibility to suit diverse user needs - documented operational management strategy to support the above managed access solution	D3.1	DP1

Table 4 – DtS Non-compliances that can be addressed by Performance Solutions

As the design progresses into design development, the following items listed in Table 5 below are required to be clarified, submitted, illustrated, etc. as the case may be, for assessment against the DDA Premises Standards and the BCA/DDA Access Code:

Item No.	Item	Comment	BCA Clause
A	Sanitary facilities breakdown schedule and detail drawings (including plans, elevations, FF & E schedule)	To review against AS1428.1 and BCA Clause F2.4, at DD Stage provide: • Sanitary breakdown schedule confirming common toilets for public, patient, staff use (ie. not en-suites solely for patient use) • Consolidated plan mark-up of accessible and ambulant toilets (Refer to agreed strategy in BVN SK174_190221_DDA Meeting Mark-up and latest GDLA / BVN discussion comments on mark-up dated 10.01.2019 and this report) • Detail drawings for accessible and ambulant sanitary facilities in 1:20 scale	F2.4
B	Confirmation on restricted use areas within hospital	At DD Stage to determine the extent that security levels will/may impact on accessways available to general public/visitors, patients and staff. Please provide: • Confirmation on any areas that will be restricted for certain user groups (i.e. through card readers, locked areas, exclusive use or controlled areas, etc)	D3.1
C	Clarification of Work Health & Safety (WH & S) Policy in relation to staff roles and/or potential health or safety risks for people with disability per area (department)	At DD Stage to: • Assist determine potential exempt areas that can be supported under Clause D3.4 (PCA to confirm).	D3.1 & D3.4

Item No.	Item	Comment	BCA Clause
D	Landscape and surrounding, including all ramp/stair detail drawings of developed design	At DD Stage, in particular for: • External ramp system from site boundary (3.6M max. height) and any future communication stairs – detailed drawings, plans, sections etc. • Vehicular access set-down areas, kerb ramp detail design (including kerb and/or flush transition section details)	D3.2, D3.3, D3.11
E	Onsite Carparking number and breakdown schedule	To review compliance against AS1428.1, AS2890.6 and BCA Clause D3.5 at DD Stage we will need: • Car-parking schedule to confirm total accessible and standard car-spaces • Clarification of designated out-patient and/or non-outpatient areas; proposed short term vs. long term parking, any staff only designated car-parking etc.	D3.5
F	Accessible En-suites (in Class 9a Patient Ward areas) and Changing Places Facility at L0	Clarification is required on the accessibility compliance level and sign-off required for any enhanced access provisions (non-required under BCA/DDA Access Code) but required by project functional brief to enable appropriate level of access review to occur during DD Stage.	DDA
G	Ronald McDonald House – required accessible SOU (Class 3)	At DD Stage provide the internal layout/fit-out of the 1 x required accessible SOU for assessment. Note: An accessway is to be provided to and within the internal areas/rooms of the SOU, including to and within at least 1 x combined accessible WC/shower to meet AS1428.1:2009.	D3.1

Table 5 – Request for Further Information

Stair/Ramp Analysis

Note: This is an informational generic analysis to use as guidance

Stairs	Access requirement	Handrails	Balustrade	Slip Resistance	Treads, Risers, Widths, Other	TGSI's	Common Issues
Fire Isolated Stairs (FIS)	**NO** Only minor provisions made for egress.	**YES:** 1 handrail required which must resemble that required by the accessibility provisions, i.e.: • 180 degrees handrail turndown or return to wall, 300 mm past last riser. • 30 to 50 mm diameter with a 270 degrees clearance around the top of the handrail, • 50 mm clearance to back of handrail, and to a height of 600 mm above the handrail. • Located between 865 mm and 1 m above nosing line. And must be at consistent height through the stairs and landings. • Continuous rail, no handhold breaks. • Clear area for 270 degrees to the top of the handrail. **Ref:** BCA D2.17, D3.3(a)(iii) & Cl 12 of AS 1428.1-2009.	**YES:** No less than 865 mm above stair nosing lines, no less than 1 m above landings. No openings greater than 300 mm OR in the case of rails, top rail, mid rail and bottom rail required. No gaps greater than 150 mm above nosing line and 460 mm between rails. **Ref:** BCA D2.16(g)(h)(i)	**YES:** P3 rated slip resistance and highlighted nosing's to no less than 30% luminance contrast to the background. Nosing widths to be between 50 & 75 mm. Strip may be set back 15 mm from the front edge of the nosing but where it is not set back the luminance contrast must not extend down the riser by more than 10 mm. The lip between the tread and strip must not exceed 3 mm, or 5 mm where the edges are chamfered. **Ref:** BCA D2.13, D2.14, D3.3(a)(iii) & Cl 11, 7.2, 7.3 of AS 1428.1-2009.	**Tread:** 250 to 355 mm. **Riser:** 115 to 190 mm **Quantity:** Must be between 550 to 700 when applying (2 x Riser + Tread.) **Open Riser:** Permitted to 125 mm. **Stair Width:** Minimum unobstructed width of 1000 mm, measured clear of handrails. Note: 1000 mm clear width will only allow for 100 persons, occupancy quantity review may be required. **Stair Height Clearance:** No less than 2 m. **Ref:** BCA D2.13, D1.6	**NO**	• Lip of the nosing strip excessive in height. • No site allowance for balustrade tolerances. • If separate handrail and balustrade is not used, this usually causes a conflict with the requirement to have the same heights throughout the landings and stairs. • Tread and riser dimensions not constructed uniform in dimension.
FIS & Communication Stairs	**YES**	**YES:** Fully accessible handrails required to both sides as follows • 180 degrees handrail turndown or return to wall, • 30 to 50 mm diameter with a 270 degrees clearance around the top of the handrail, • 50 mm clearance to back of handrail, and to a height of 600 mm above the handrail. • Located between 865 mm and 1 m above nosing line. And must be at consistent height through the stairs and landings. • Continuous rail, no handhold breaks • Clear area for 270 degrees to the top of the handrail.	**YES:** No Less than 865 mm above stair nosing line, no less tanh 1 m above landings. No openings greater than 125 mm. No climbable members between 150 and 760 mm where the floor level is 4 m or more above the surface beneath. **Ref:** BCA D2.16(g)(h)(ii)	**YES:** P3 rated slip resistance and highlighted nosing's to no less than 30% luminance contrast to the background. Nosing widths to be between 50 & 75 mm. Strip may be set back 15 mm from the front edge of the nosing but where it is not set back the luminance contrast must not extend down the riser by more than 10 mm. The lip between the tread and strip must not exceed 3 mm, or 5 mm where the edges are chamfered. **Ref:** BCA D2.13, D2.14, D3.3(a)(iii) & Cl 11, 7.2, 7.3 of AS 1428.1-2009.	**Tread:** 250 to 355 mm. (Public) **Tread:** 240 to 355 mm. (Private) **Riser:** 115 to 190 mm. **Quantity:** Must be between 550 to 700 when applying (2 x Riser + Tread.) **Open Riser:** Not permitted, must be opaque. **Riser Splay Back:** Be vertical or max 25 mm. **Stair Width:** Minimum unobstructed width of 1000 mm, measured clear of handrails. Note: 1000 mm clear width will only allow for 100 persons, occupancy quantity review may be required. **Stair Height:** No less than 2 m. **Ref:** BCA D2.13, D1.6	**YES:** Required to the top and bottom of landings. No requirement for the mid landing. **Ref:** BCA D3.8, AS/NZS 1428.4.1-2009	• Lip of the nosing strip excessive in height. • Outer handrail not continuous due to allowing for fire hydrant equipment. • No site allowance for balustrade tolerances. • If separate handrail and balustrade is not used, this usually causes a conflict with the requirement to have the same heights throughout the landings and stairs. • Tread and riser dimensions not constructed uniform in dimension.

Stairs	Access requirement	Handrails	Balustrade	Slip Resistance	Treads, Risers, Widths, Other	TGSI's	Common Issues
		Ref: BCA D2.17, D3.3(a)(ii) & Cl 11 & 12 of AS 1428.1-2009.					
Interconnecting Communication Stairs (between tenancy levels not required as fire egress/exit)	**YES**	**YES:** Fully accessible handrails required to both sides as follows: • 180 degrees handrail turndown or return to wall, • 30 to 50 mm diameter with a 270 degrees clearance around the top of the handrail, • 50 mm clearance to back of handrail, and to a height of 600 mm above the handrail. • Located between 865 mm and 1 m above nosing line. And must be at consistent height through the stairs and landings. • Continuous rail, no handhold breaks. • Clear area for 270o to the top of the handrail. **Ref:** BCA D2.17, D3.3(a)(ii) & Cl 11 & 12 of AS 1428.1-2009.	**YES:** No Less than 865 mm above stair nosing line, no less tanh 1 m above landings. No openings greater than 125 mm. No climbable members between 150 and 760 mm where the floor level is 4 m or more above the surface beneath. **Ref:** BCA D2.16(g)(h)(ii)	**YES:** P3 (wet) and P4 (wet) rated slip resistance and highlighted nosing's to no less than 30% luminance contrast to the background. Nosing widths to be between 50 & 75 mm. Strip may be set back 15 mm from the front edge of the nosing but where it is not set back the luminance contrast must not extend down the riser by more than 10 mm. The lip between the tread and strip must not exceed 3 mm, or 5 mm where the edges are chamfered. **Ref:** BCA D2.13, D2.14, D3.3(a)(iii) & Cl 11, 7.2, 7.3 of AS 1428.1-2009.	**Tread:** 250 to 355 mm. (Public) **Tread:** 240 to 355 mm. (Private) **Riser:** 115 to 190 mm. **Quantity:** Must be between 550 to 700 when applying (2 x Riser + Tread.) **Open Riser:** Not permitted, must be opaque. **Riser Splay Back:** Be vertical or max 25 mm. **Stair Width:** Minimum unobstructed width of 1000 mm, measured clear of handrails. Note: 1000 mm clear width will only allow for 100 persons, occupancy quantity review may be required. **Stair Height:** No less than 2 m. **Ref:** BCA D2.13, D1.6	**YES:** Required to the top and bottom of landings. No requirement for the mid landing. And around base of stair stringer or stair when it can be considered as an overhead obstruction within 2 m from floor level. **Ref:** BCA D3.8, AS/NZS 1428.4.1-2009	• Lip of the nosing strip excessive in height. • No site allowance for balustrade tolerances. • If separate handrail and balustrade is not used, this usually causes a conflict with the requirement to have the same heights throughout the landings and stairs.
Accessible Ramp (1:14 max. gradient)	**YES**	**YES:** Fully accessible handrails required to both sides as follows: • 180 degrees handrail turndown or return to wall, • 30 to 50 mm diameter with a 270 degrees clearance around the top of the handrail, • 50 mm clearance to back of handrail, and to a height of 600 mm above the handrail. • Located between 865 mm and 1 m above the surface. And must be at consistent height through the ramp and mid-landings. • Continuous rail, no handhold breaks. • Continuous kerbing on both sides in compliance with AS1428.1 Figures (18 & 19). • Handrails not to protrude into over the traverse path.	**YES:** No Less than 865 mm above stair nosing line, no less tanh 1 m above landings. No openings greater than 125 mm. No climbable members between 150 and 760 mm where the floor level is 4 m or more above the surface beneath. **Ref:** BCA D2.16(g)(h)(ii)	**YES:** P3 (dry) and P4 (wet) rated slip resistance and highlighted nosing's to no less than 30% luminance contrast to the background. Nosing widths to be between 50 & 75 mm. Strip may be set back 15 mm from the front edge of the nosing but where it is not set back the luminance contrast must not extend down the riser by more than 10 mm. The lip between the tread and strip must not exceed 3 mm, or 5 mm where the edges are chamfered. **Ref:** BCA D2.14, D3.3(a)(iii) & Cl 11, 7.2, 7.3 of AS 1428.1-2009.	**Ramp Width:** Minimum unobstructed width of 1000 mm, measured clear of handrails. Note: 1000 mm clear width will only allow for 100 persons, occupancy quantity review may be required. **Ref:** BCA D2.13, D1.6	**YES:** Required to the top and bottom of landings. No requirement for the mid landing. **Ref:** BCA D3.8, AS/NZS 1428.4.1-2009	• Handrails extension protruding over traverse path or side boundary. Note: TGSI are not required for residential aged care and nursing homes buildings.

Stairs	Access requirement	Handrails	Balustrade	Slip Resistance	Treads, Risers, Widths, Other	TGSI's	Common Issues
		• Clear area for 270 degrees to the top of the handrail. **Ref:** BCA D2.17, D3.3(a)(i) & Cl 1.3 & 12 of AS 1428.1-2009.					
Non-Accessible ramp (Steeper than 1:14)	**NO** Only minor provisions made for egress.	**YES:** 1 non-accessible handrail with no accessible features required for egress purposes only. **Ref:** BCA D2.17	**YES:** No Less than 865 mm above stair nosing line, no less tanh 1 m above landings. No openings greater than 125 mm. No climbable members between 150 and 760 mm where the floor level is 4 m or more above the surface beneath. **Ref:** BCA D2.16(g)(h)(ii)	**YES:** P3 (dry) and P4 (wet) rated slip resistance and highlighted nosing's to no less than 30% luminance contrast to the background. Nosing widths to be between 50 & 75 mm. Strip may be set back 15 mm from the front edge of the nosing but where it is not set back the luminance contrast must not extend down the riser by more than 10 mm. The lip between the tread and strip must not exceed 3 mm, or 5 mm where the edges are chamfered. **Ref:** BCA D2.14, D3.3(a)(iii)	**Ramp Width:** Minimum unobstructed width of 1000 mm, measured clear of handrails. Note: 1000 mm clear width will only allow for 100 persons, occupancy quantity review may be required. **Ref:** BCA D2.13, D1.6	**NO**	• Lack of non-accessible handrail in shallow non-accessible ramps may be found
Step Ramps	**YES**	**YES:** Accessible handrails/barriers required to both sides as follows: • Handrails as per Figure 22 of AS1428.1-2009 • Side barriers (45 degrees splay, 450mm minimum walls, handrails or kerb/kerb-rails) **Ref:** BCA D3.3(a)(i) & Cl 10.6 of AS 1428.1-2009.	**N/A**	**YES:** P3 (dry) and P4 (wet) rated slip resistance and highlighted nosing's to no less than 30% luminance contrast to the background. Nosing widths to be between 50 & 75 mm. Strip may be set back 15 mm from the front edge of the nosing but where it is not set back the luminance contrast must not extend down the riser by more than 10 mm. The lip between the tread and strip must not exceed 3 mm, or 5 mm where the edges are chamfered. **Ref:** BCA D2.14, D3.3(a)(iii)	**Ramp Width:** Minimum unobstructed width of 1000 mm, measured clear of handrails. Note: 1000 mm clear width will only allow for 100 persons, occupancy quantity review may be required. **Ref:** BCA D2.13, D1.6	**NO**	• Excessive length • Excessive rise • Non-compliant side barriers • Insufficient landings
Threshold Ramps	**YES**	**N/A**	**N/A**	**YES:** P3 (dry) and P4 (wet) rated slip resistance and highlighted nosing's to no less than 30% luminance contrast to the background. Nosing widths to be between 50 & 75 mm. Strip may be set back 15 mm from the front edge of the nosing but where it is not set back the luminance contrast must not extend down the riser by more than 10 mm. The lip between the tread and strip must not exceed 3 mm, or 5 mm where the edges are chamfered. **Ref:** BCA D2.14, D3.3(a)(iii)	**Ramp Width:** Doorway width. **Ref:** BCA D1.6	**NO**	• Excessive rise

Relevant Figures

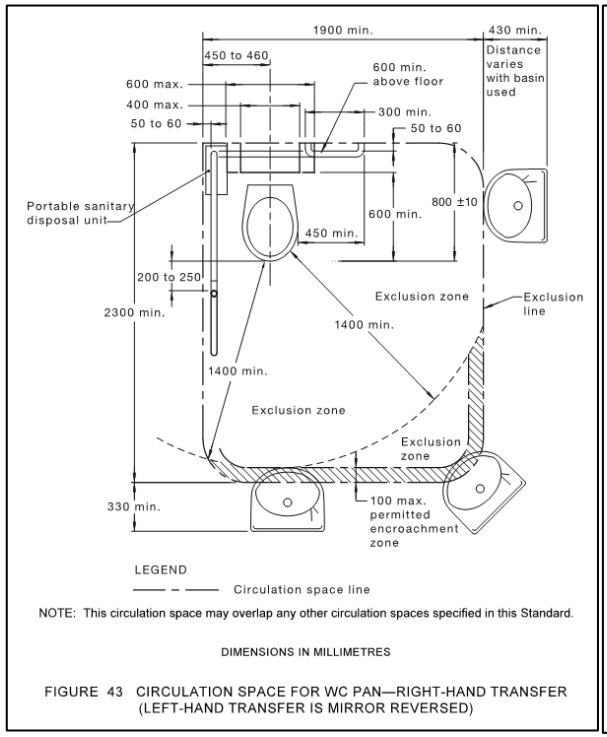
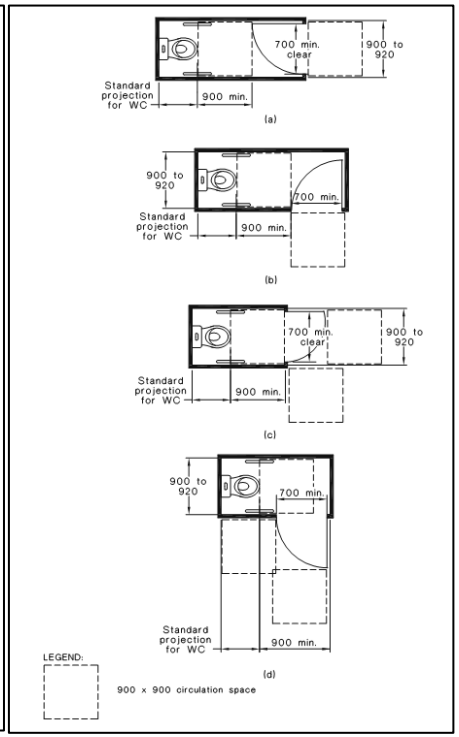


FIGURE 43 CIRCULATION SPACE FOR WC PAN—RIGHT-HAND TRANSFER (LEFT-HAND TRANSFER IS MIRROR REVERSED)



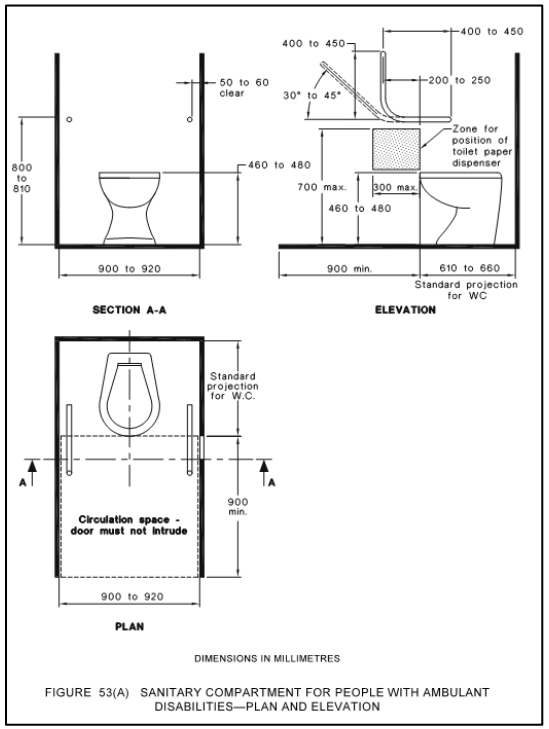
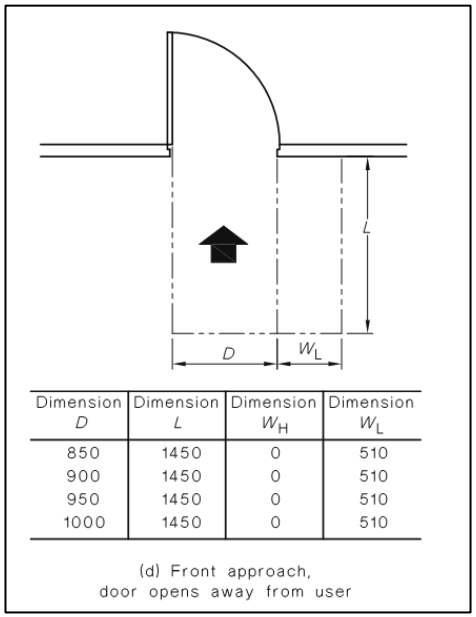
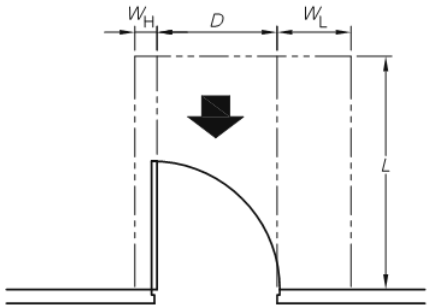


FIGURE 53(A) SANITARY COMPARTMENT FOR PEOPLE WITH AMBULANT DISABILITIES—PLAN AND ELEVATION



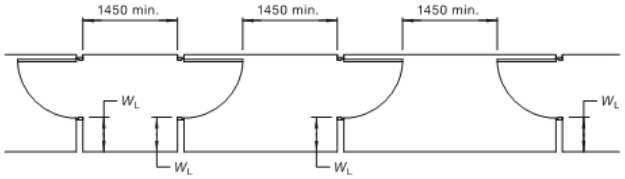
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1450	0	510
900	1450	0	510
950	1450	0	510
1000	1450	0	510

(d) Front approach, door opens away from user



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

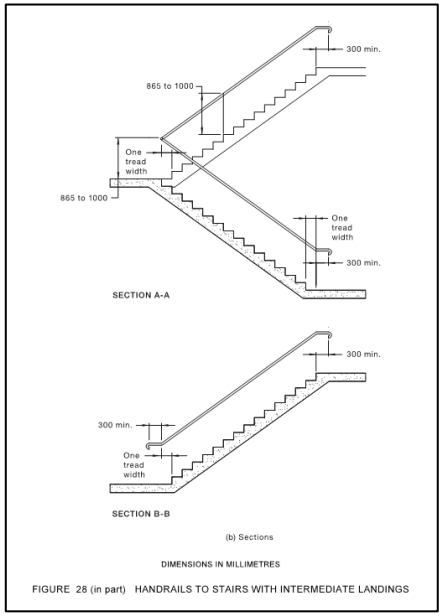
(h) Front approach, door opens towards user



(a) Continuous accessible path of travel

DIMENSIONS IN MILLIMETRES

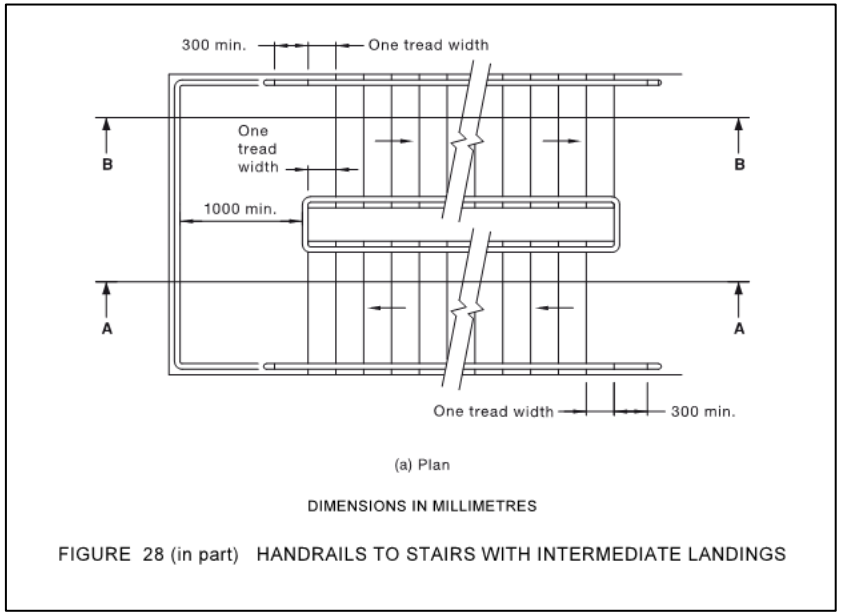
FIGURE 34 (in part) DISTANCE BETWEEN SUCCESSIVE DOORWAYS IN VESTIBULES AND AIR LOCKS



(b) Sections

DIMENSIONS IN MILLIMETRES

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



(a) Plan

DIMENSIONS IN MILLIMETRES

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

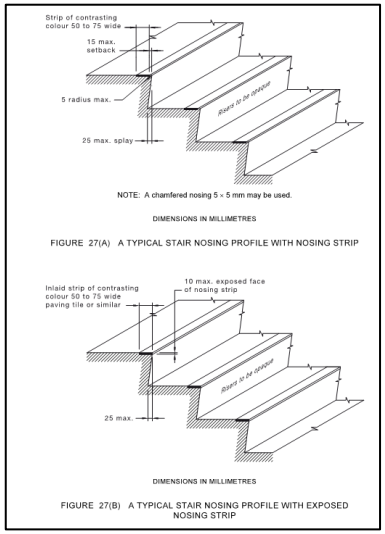
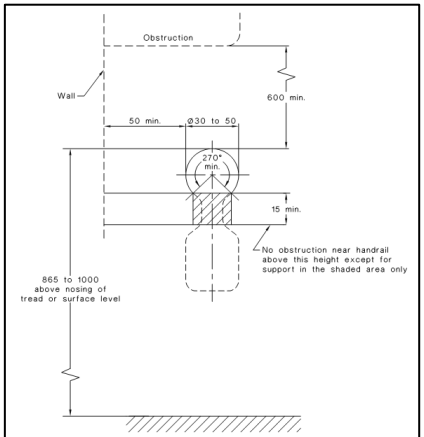


FIGURE 27(A) A TYPICAL STAIR NOSING PROFILE WITH NOSING STRIP

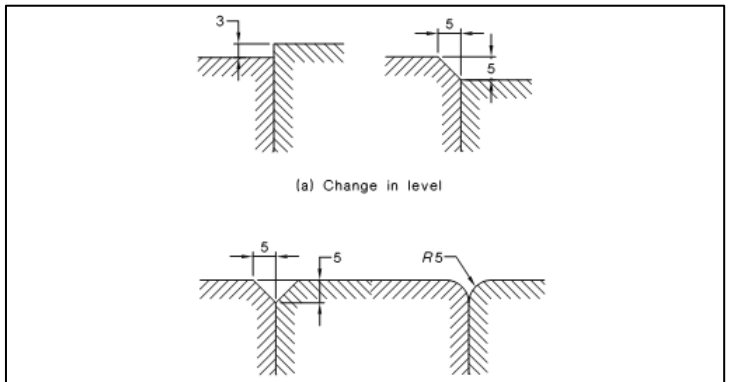
FIGURE 27(B) A TYPICAL STAIR NOSING PROFILE WITH EXPOSED NOSING STRIP



(a) Circular

DIMENSIONS IN MILLIMETRES

FIGURE 29 (in part) HANDRAILS



DIMENSIONS IN MILLIMETRES AND ARE MAXIMUM

FIGURE 6 ACCEPTABLE CONSTRUCTION TOLERANCES FOR ABUTMENT OF SURFACES