



A Bureau Veritas Group Company

Accessibility Design Review Report

**Proposed Data Centre Development
1 Sirius Lane Cove West NSW 2066**

Prepared for:	AW Edwards
Job No:	78788
Date:	26th August 2019
Revision:	2
Phase:	DA Submission

Table of Contents

Executive Summary	3
1. Introduction	7
2. Legislative Requirements	7
3. Documentation.....	8
4. Exemptions and Performance Based Solutions	8
5. Compliance Assessment – BCA (Mandatory)	10
6. Compliance Assessment - DDA (Advisory)	15
7. Compliance Summary	16
8. Appendix A – Document List	17

Date	Rev No	No. of Pages	Issue or Description of Amendment	Checked By	Approved By	Date Approved
17-12-18	-	17	DA Issue	AC	SM	17-12-18
16-08-19	1	17	DA Issue	KM	SM	16-08-19
26-08-19	2	17	Updated Drawing Revision Review	KM	SM	26-08-19

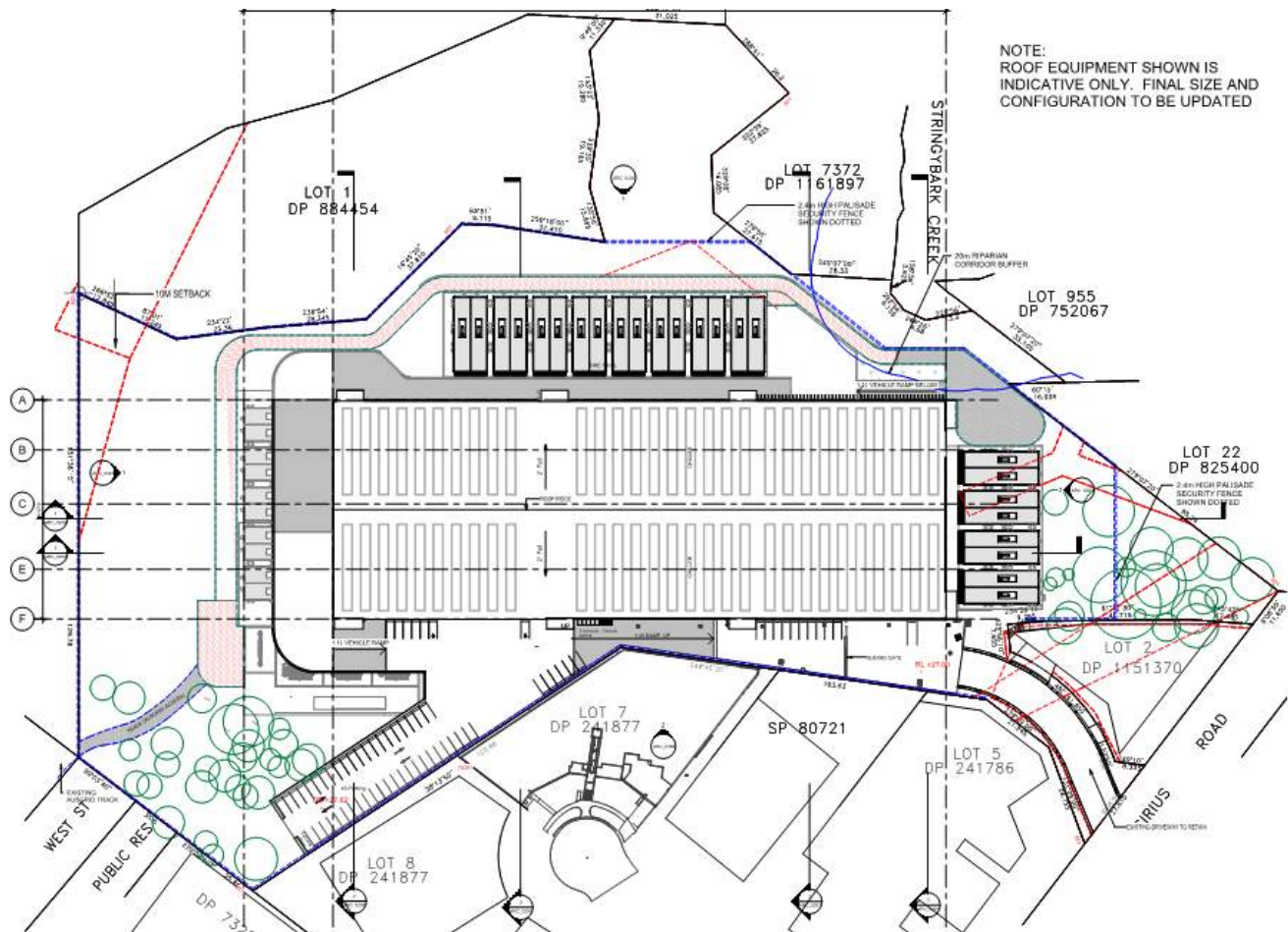
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Executive Summary

The following report is a review of the Concept Design 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.

The report is prepared in relation to the proposed formation of a new five storey data centre, with associated office administration space.



Compliance Summary

As members of the Access Consultants Association of Australia (ACAA), we have reviewed the Concept Design documents prepared by Greenbox Architecture (refer appendix A) for compliance with the current building assessment provisions, including (but not limited to) the following:

Disability Discrimination Act (DDA) 1992.

Building Code of Australia 2016 (Amendment 1) and referenced Australian Standards; and

The Disability Access to Premises (Buildings) Standard 2010

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.

In this regard the following areas in particular require further review as the project develops:

BCA Compliance - Mandatory			
1.	<u>General Access & Exemptions</u>	Access is required to and within all areas of the building normally used by occupants	By virtue of the proposed use of the building, it is understood that the proposal is to rationalise equitable access / circulation provisions to much of the data hall space under the auspices of BCA Clause D3.4. As design develops further clarification should be obtained from the operator of the facility to support this justification.
2.	<u>Pedestrian Access at Boundary</u>	A continuous accessible path is to be provided to the new building: - From the main points of a pedestrian entry at the allotment boundary, and - From any required accessible carparking space on the allotment	It is noted that pedestrian access provision outside of the boundary is reduced, comprising: - A small footpath to the far side of the road, with no pedestrian crossing provision; and - Footpath finishing approximately 20m short of the entrance roadway. Coupled with the above, the level change from the boundary to the pedestrian entrance is noted to exceed 3.6m permitted under Clause D3.11 of the BCA. Accordingly, consideration will be required to ensure operationally, staff / visitors are aware of the limitations and access is managed accordingly.
3.	<u>Carparking</u>	Provide accessible carparking spaces in accordance with D3.5 of the BCA. The number of accessible spaces to conform to Table D3.5.Design of space to AS/NZS 2890.6 2009.	Annotate shared zone locations with bollards, to the two annotated accessible carparking. Additional consideration as to provision of a clearly highlighted path of travel to the Administration building from the second space should be had as design develops.
4.	<u>Doors</u>	All doors within accessible spaces shall comply with AS1428.1-2009: - clear width (850mm) of active leaf; - Where double doors are provided, at least one leaf is to achieve clear width of 850mm; - compliant door circulations spaces; - operational force (<20N) - 30% Luminance contrast of opening.	As design develops allow to detail a supporting door schedule illustrating door leaf sizes / clear openings / hardware. It is initially anticipated with the current design that compliance can be achieved to much of the administration space. However, further assessment is required as design develops to determine ability to provide compliant sliding door latchside clearance internally to within the meeting rooms.
5.	<u>Lifts</u>	Any lift travelling >12m requires a minimum compartment size of 1400mm wide x 2000mm depth	Compartment sizes indicate compliance can be achieved.

BCA Compliance - Mandatory			
		(requires 2000mm depth where stretcher use indicated and travelling >12m). Any lift travelling <12m requires a minimum compartment size of 1100mm wide x 1400mm depth. Fitout must comply with AS1735.12.	Fit-out details to be reviewed in as the design develops as necessary for equitable circulation beyond the considerations in Section 1 above.
6.	<u>Stairs - General</u>	All general circulation stairs are to be designed to comply with Clause 11 of AS1428.1-2009: - clear width not less than 1m; - handrails both sides; - Handrail extensions; - Provision of TGSIs and nosings.	Further assessment will be required as the design develops. It is initially anticipated with the current design that compliance can be achieved.
7.	<u>Fire Isolated Stairs</u>	Any FIS stairs used for general circulation are to be designed to comply with AS1428.1-2009	Further assessment will be required as the design develops. It is initially anticipated with the current design that compliance can be achieved.
8.	<u>TGSIs</u>	TGSIs are required to be installed in accordance with D3.8 and AS1428.4.1, to the top and bottom of every: - General circulation stair; - General circulation ramp; - Pedestrian crossings / shared roadways / car park entrances; - Vertical hazards (<2m); - Kerb ramps	Further assessment will be required as the design develops.
9.	<u>Internal Walkways</u>	Internal walkways / corridors are to be design to comply with D3.3 and AS1428.1 2009: - minimum width of 1m; - a width of 1240mm allows for side approach door circulation (door swinging away from user); - corridor terminations within 2m of end (1540mm min width); - turning spaces every 20m (1540mm min width); - passing bays every 20m	Based on review of current documentation it is anticipated that compliance can be achieved. Further assessment will be had as the design develops. Ensure wider security gate provision is detailed at the entry check-in to allow for equitable wheelchair circulation.

BCA Compliance - Mandatory			
		where no direct line of sight (1800mm min width); - circulation spaces at directional turns.	
10.	<u>Unisex Accessible Sanitary facilities (UASF)</u>	UASF to be provided on each level where one or more toilets are provided. Provide an equal distribution of LH & RH toilets / showers within the design. Design to comply with Clause 15 AS1428.1-2009: - combined WC and basin minimum of 1900x2630mm; - combined WC and shower facility: 2300x2630mm; - Refer to Figure 50 of AS1428.1 for required compartment size and layout of fixtures and fittings.	All sanitary facility provisions are noted to Level 4, within the main administration space. Allow to alter the current provision of two right hand transfer accessible sanitary facilities with that of one left hand and one right hand transfer facility.
11.	<u>Ambulant Cubicles</u>	Male and Female Ambulant Cubicles are required on each level where gender facilities are provided in addition to UASF. Design to comply with Clause 16 of AS1428.1-2009	Annotate male and female ambulant cubicles as required. Based on review of current documentation it is anticipated that compliance can be achieved.
12.	<u>Braille & Tactile Signage</u>	BCA D3.6: Mandatory Braille and tactile signage must be provided	Details to be reviewed as design develops. Based on review of current documentation it is anticipated that compliance can be achieved.
13.	<u>Furniture & Fixtures</u>	Future fitout/design of fixtures, furniture and fittings should consider accessible requirements in accordance with AS1428.2: Reception / counters Common kitchens / teapoints Internal / external seating design	Note for future fit-out.

Performance Based Solutions

No performance based solution items have been identified at this stage of design.

Please advise if there are any additional proposed performance solutions with regard to the design of this project.

1. Introduction

A W Edwards 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.

1.1. Purpose of Report

This report forms part of the Concept Design review. The report is prepared in relation to the proposed works at 1 Sirius Road, in the inner Sydney suburb of Lane Cove West.

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 assessment is provided in two parts, the first relates to areas of compliance that are **mandatory** under the BCA with the second part relating to **Advisory recommendations/enhancements** that could be adopted to improve building functionality, accessibility and the safety of occupants.

1.2. Report Objective

A key objective of the access requirements of the Premises Standards and NCC is to provide, as far as is reasonable, all people with safe, equitable and dignified access to a building and the services and facilities within that building.

A key objective of this report is to provide assessment commentary to assist the design process to provide equivalent access to the degree necessary to facilities to suit visitors with a range of disabilities in an equitable and dignified manner.

2. Legislative Requirements

The legislative requirements for this project comprises 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 care 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. 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).

Disability Standards for Education 2005

Disability Standards for Accessible Public Transport 2002

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.

2.2. Council Development Approval / Development Control Plans (DCPs)

A Development Permit will be required from the Local Authority for the development. A copy of the Development Permit conditions and approved drawings will be required to complete Construction Documentation/ Building Approval milestones for that component of works.

The proposed development must not be inconsistent with the endorsed drawings and all relevant conditions will need to be satisfied and accurately reflect the construction issue drawings.

3. Documentation

The report has been prepared based on a review of the drawings listed in Appendix A, Consultants Drawings prepared by Greenbox dated 20th August 2019.

4. Exemptions and Performance Based Solutions

4.1. 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.

5. Compliance Assessment – BCA (Mandatory)

5.1. 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:

Class 5 – Office/Administration;

As noted in the preliminary section, it is understood that the proposal is to address the Data Halls as being exempt under the auspices of Clause D3.4 of the BCA, with the interpretation that from a Health and Safety perspective general equitable circulation is not required. Further input / supporting commentary will be required from the operator as design progresses.

5.2. External approaches, walkways and kerbs (D3.1, D3.2, D3.3, D3.8 & AS1428.1)

A continuous accessible path is to be provided to the new building:

- From the main points of a pedestrian entry at the allotment boundary, and
- From another accessible building connected by a pedestrian link;
- From any required accessible carparking space on the allotment.

By virtue of the recognised level change from the boundary and lack of pedestrian access (illustrated in the below Google image extracts) it is considered that external access to the building will need to be addressed through a managed provision, with visitors to be made aware of the pedestrian access both outside of the boundary as well as from the boundary.

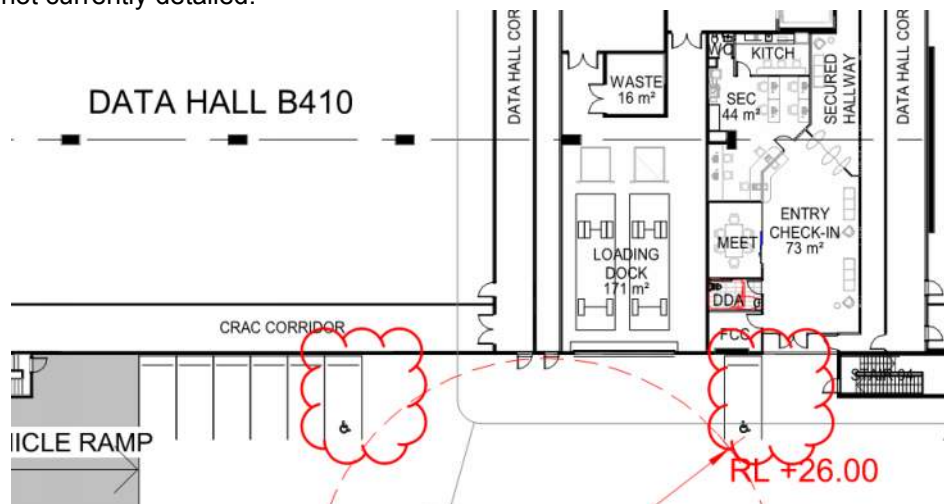




5.3. Accessible car parking

Accessible carparking spaces are to be provided as prescribed in Table D3.5 of the BCA which requires 1 space per 50.

The redevelopment includes a total of 63 detailed carparking spaces, of which two spaces are detailed as being accessible parking spaces. It is anticipated the current design allows for the ability to provide the requisite shared space, which are not currently detailed.



Ensure as the design develops that the accessible spaces be designed in accordance with AS2890.6-2009. The accessible car spaces and shared zones will have a minimum size of 2400m x 5400mm and a bollard located centrally within the shared zone approximately 800mm from roadway edge.

A continuous accessible path of travel shall be provided from the accessible spaces to the main entrances of the buildings and/or lift lobbies. The spaces shall be directly connected to a dedicated pedestrian walkway, inclusive of linemarking, which minimises travel via the roadway. This element is particularly pertinent to the second space, away from the main entrance.

Wheelstops shall be provided to any carparking space abutting a pedestrian walkway to minimise vehicle overhang and obstruction.

5.4. Internal Paths of Travel

An accessible path of travel is required to all accessible areas within accessible buildings, normally used by occupants. Internal walkways should be designed with the following features:

- Minimum width of 1000mm to be provided
- Suitable circulation spaces to enable turning into adjacent doorways / around fixtures and furniture (1240mm min width),
- Adequate passing spaces (1800mm width), and
- Turning spaces along corridor or terminations (1540mm min width).

A continuous path of travel will be provided to and within the centre comprising of a minimum width of 1800mm in high trafficable areas. Where a reduced width is provided (minimum 1200mm) passing bays will be provided every 20m in high trafficable areas to allow two wheelchairs to pass.

Finishes will be selected to ensure wall, floor and door finishes comply with AS1428.1-2009 requirements including changes in surfaces having abutment vertical rises of 3mm or less; or 5mm or less where rounded or bevelled edges and a minimum 30 % luminance contrast provided to all doorways in accordance with the requirements of Clause 13.1 of AS1428.1.

Any facade glazing or glazed doors shall be clearly marked with a contrasting band not less than 75mm wide for full width of the door with lowest edge at 900-1000mm FFL.

Internal accessible paths of travel will be further reviewed as the design progresses.

5.5. General Circulation Stairs/Ramps

An accessible path of travel is required to all accessible areas within accessible buildings, normally used by occupants.

All public circulations stairs and ramps (excluding fire-isolated stairs/ramps) must be provided with handrails/kerb rails to both sides, handrail extensions & turndowns, nosing strips (Stairs) and Tactile Ground Surface Indicators (TGSIs).

Circulation stairs and ramps will be required to be set-back from transverse paths of travel so that handrail extensions do not protrude into corridor paths of travel.

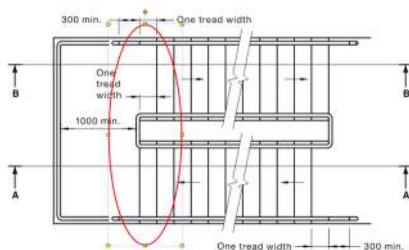
Offsetting the stair at the mid landing will allow a continuous single handrail which will not require vertical sections.

General circulation stairs/ramps will be further reviewed as the design progresses.

Fire-isolated Stairs (FIS)

All FIS 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, which is noted as being detailed in current plans.



5.6. Lifts / Escalators (D3.1, E3.6, AS1428.1 & AS1735.12)

Multiple passenger lifts are detailed, with a number anticipated to serve plant movement only into the data halls. Accordingly, the extent to serve as general circulation is to be confirmed as design develops in order to accurately define extent / design of lifts

Any lift travelling greater than 12m requires a minimum compartment size of 1400mm wide x 2000mm depth (requires 2000mm depth where stretcher use indicated and travelling >12m).

Any lift travelling less than 12m requires a minimum compartment size of 1100mm wide x 1400mm depth.

The fitout of Lift 1 and / or 2 shall comply with AS1735.12 to provide equitable circulation to the Level 5 office spaces, providing a minimum doorway clearance of 900mm.

Fitout of lifts to include: Handrail 600mm (min) length; at height between 850-950mm, Tactile and Braille symbols on control buttons and panels, Automatic auditory information detailing lift stops. Control buttons set back from corner.

5.7. Internal Doorways

An accessible path of travel is required to all accessible areas within accessible buildings normally used by occupants. Doors on accessible paths of travel require the following (in accordance with AS1428.1-2009):

- Unobstructed clear opening widths to be a minimum of 850mm (- a 920mm door leaf is required).
- Door control or "after-hours" swipe card access to be located on a level landing, in an accessible location, in accordance with Clause 13.5 of AS1428.1-2009.
- Door circulation clearances;
- All doors shall have light operational forces (less than 20 N) and shall have lever action door hardware selected and installed in accordance with AS1428.1 requirements.

Any shopfront glazing or glazed doors shall be clearly marked with a contrasting band not less than 75mm wide for full width of the door with lowest edge at 900-1000mm FFL.

Doors on accessible paths of travel will be further reviewed as the design progresses.

5.8. Sanitary Facilities

The new amenities blocks shall comprise of male and female toilets, male and female ambulant cubicles and unisex accessible sanitary facilities.

The male and female shall include an ambulant cubicle within each bank. The layout and fitout of the compartments shall be designed to comply with Clause 16 of AS1428.1-2009.

Where gender shower facilities are provided, the unisex accessible sanitary facility shall include an accessible shower within the compartment to cater for staff with a disability.

The internal dimensions and layout of the unisex accessible sanitary facility will be appropriate to ensure required circulations spaces to the pan, shower and basin as specified in Clause 15 of AS1428.1-2009. The minimum compartment size shall achieve 2630mm x 2300mm.

An equal distribution of right handed and left handed unisex accessible sanitary facilities will be provided within the building, with one of the current provision of two right hand transfer facilities to be altered accordingly.

5.9. Signage

A review of the door signage is to take place when the signage package becomes available.

Accessible way finding should highlight the pathway from entrance to lifts or amenities and to the key components of the facility.

Signage will be provided at exit doors on each level and at common use accessible toilets in accordance with AS 1428.1.

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.

5.10. Hearing Augmentation

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.

As the design progresses requirements for hearing augmentation will be clarified and confirmed.

5.11. Emergency Evacuation

The emergency evacuation strategy for the facility should address the operational solution of evacuating people with disabilities.

Fire evacuation plans should include provision of management plans to assist individuals with disabilities or access requirements. Individuals with accessible requirements should be provided with a "fire buddy" to escort them to pre-determined areas of refuge.

The current best practice is detailed in the 'AS 3745 - 2010 Planning for emergencies in facilities' and should be used as a guideline to assist in the implementation of the Emergency Plan.

6. Compliance Assessment - DDA (Advisory)

The following recommendations for design enhancement are provided for areas in which potential compliance risks have been identified with respect to the DDA or where improved outcomes with respect to accessibility, functionality and safety have been identified.

6.1. Emergency Evacuation

The emergency evacuation strategy for the facility should address the operational solution of evacuating people with disabilities and should detail the following:

- Stair refuges, or
- Fire-isolated lift lobbies and use of lifts in emergency

Fire evacuation plans should include provision of management plans to assist individuals with disabilities or access requirements. Individuals with accessible requirements should be provided with a "fire buddy" to escort them to pre-determined areas of refuge.

The current best practice is detailed in the 'AS 3745 - 2010 Planning for emergencies in facilities' and should be used as a guideline to assist in the implementation of the Emergency Plan.
Further discussion required.

6.2. Reception Counters, Other Furniture & Fixtures

The layout of Reception / Furniture Fit-out and joinery - in accessible / common use areas, is recommended to be designed with consideration to accessibility requirements.

Future design should consider accessible requirements teapoint, parent rooms, vending machines, drinking fountains, telephones, controls etc.

- 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.

Further review is to be undertaken in the next phase of design.

7. Compliance Summary

As members of the Access Consultants Association of Australia (ACAA), we have reviewed the concept design documents prepared by Greenbox for compliance with the current building assessment provisions, including (but not limited to) the following:

Disability Discrimination Act (DDA) 1992.

Building Code of Australia 2016 (Amendment 1) and referenced Australian Standards; and

The Disability Access to Premises (Buildings) Standard 2010

This report provides a compliance overview of the project with respect to achieving compliance with the above legislation. 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 in detailed design, 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.

Assessed by:	Approved by:
 Kellie Millar Senior Access Consultant Accredited Member - ACAA Membership No 209 McKenzie Group Consulting (Qld) Pty Ltd ACN 140 159 486	 Senan Mescall Senior Associate McKenzie Group Consulting (Qld) Pty Ltd ACN 140 159 486

8. Appendix A – Document List

Greenbox project number: 180095

Drawing No.	Rev	Title
ATSYD2_SSD_DRG_ARC_0050	8	Master Plan
ATSYD2_SSD_DRG_ARC_0100	8	Level 1 Basement Floor Plan
ATSYD2_SSD_DRG_ARC_0101	8	Level 2 Floor Plan
ATSYD2_SSD_DRG_ARC_0102	8	Level 3 Floor Plan
ATSYD2_SSD_DRG_ARC_0103	8	Level 4 Floor Plan
ATSYD2_SSD_DRG_ARC_0105	8	Level 5 Floor Plan
ATSYD2_SSD_DRG_ARC_0110	7	Office Plans