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Ref: 17165-Kellyville-AccessReport-290817

**NORTH KELLYVILLE NEW PRIMARY SCHOOL**

**DISABILITY DISCRIMINATION ACT (DDA) COMPLIANCE REPORT  
SCHEMATIC DESIGN / DA STAGE REVIEW**

**AUGUST 2017**

Report prepared for      GHD Woodhead  
Level 15,133 Castlereagh Street  
Sydney NSW 2000

Attention: Mark Sloane

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Report reference      17165R04-Kellyville Access

Job number      17165


Date      29<sup>th</sup> August 2017



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## DOCUMENT ACCEPTANCE

Company	Name	Signed	Date
Metro Building Consultancy	Sean Moore		29/08/17

## REVISION HISTORY

Description	Prepared by	Revision No.	Date
DDA Report	Sean Moore	R04	29/08/17
DDA Report	Sean Moore	R03	04/08/17
DDA Report	Sean Moore	R02	31/05/17
DDA Report	Sean Moore	R01	30/03/17

## 1.0 Introduction and Documentation

### Introduction

Metro Building Consultancy have been engaged to carry out a review of the schematic design documentation and prepare a Disability Discrimination Act (DDA) Compliance Report commenting on the compliance of the design for the proposed new works to North Kellyville New Primary School located at 120 and 122-126 Hezlett Road, Kellyville NSW.

The information submitted to date has been reviewed for compliance with the deemed to satisfy requirements of Part D3 and F2 of the Building Code of Australia 2016, the Disability Access to Premises Standards 2010, the Disability Discrimination Act (DDA) 1992 and the relevant parts of AS1428.1 2009 and AS1428.4.1 2009.

This report is for the exclusive use of GHD Woodhead and cannot be used for any other purpose without the prior permission of Metro Building Consultancy. The report is only valid in its entire form.

### Documentation available and assessed

The drawings provided by GHD Woodhead to Metro Building Consultancy on 24/08/17 have been assessed for compliance. The list of drawings reviewed is as per the table in Appendix A of this report.

### Application of Building Code of Australia 2016

Clause 109R (2) of the Environmental Planning and Assessment Act states that the BCA that is applicable to the project is the one in force at the time of the date of invitation to tender. As the tender date is due to be prior to 01/05/17 the BCA that is applicable to the project is BCA 2016.

109R Building, demolition and incidental work

(2) Crown building work cannot be commenced unless the Crown building work is certified by or on behalf of the Crown to comply with the technical provisions of the State's building laws in force as at:

- (a) the date of the invitation for tenders to carry out the Crown building work, or
- (b) in the absence of tenders, the date on which the Crown building work commences, except as provided by this section.

## 2.0 Use and class of building

The following table lists the uses and classifications of the proposed new building.

Level	Use	Class	Approx. floor area
Ground Floor	Administration Offices, Library, Hall, Canteen, Classrooms & amenities	Class 5 & 9b	7,948m <sup>2</sup>
Level 1	Classrooms & amenities	Class 9b	

The building has a rise of storey of 2.

(The lower ground floor Garden Store no longer appears on the drawings.)

The building has an effective height of 6m.

Provide further details of the demountables and the bulk and sports store buildings for review.

### 3.0 Mandatory Requirements

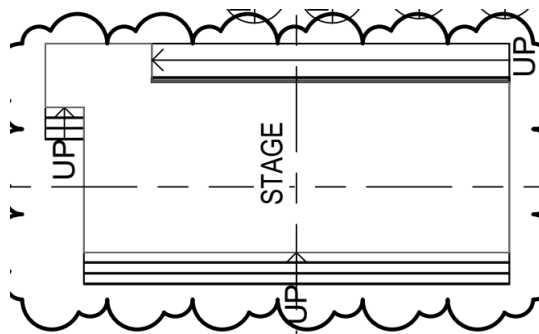
#### General building access requirements

Disabled access is required to be provided to and within all areas normally used by the occupants.

#### Stage

This includes a required for disabled access to be provided to the stage in the hall including that:

- All stairs to the stage are required to comply with the requirements of As1428.1 2009 and be provided with handrails to both sides of the stair that extend past the top and bottom landings.
- The stair treads are required to be provided with a nosing strip that provides a minimum contrast of 30% to the stair tread.
- The stair treads are not permitted to overhang the stair risers. (This is a common problem for timber stairs.)
- A ramp or walkway to the stage is required to comply with the requirements of As1428.1 2009 and the ramp must be provided with kerbrails and handrails to both sides of the ramp and the handrails must extend past the top and bottom landings.
- The stairs and ramp are required to be provided with tactile indicators to the top and bottom landings in accordance with the requirements of AS1428.4.1 2009.

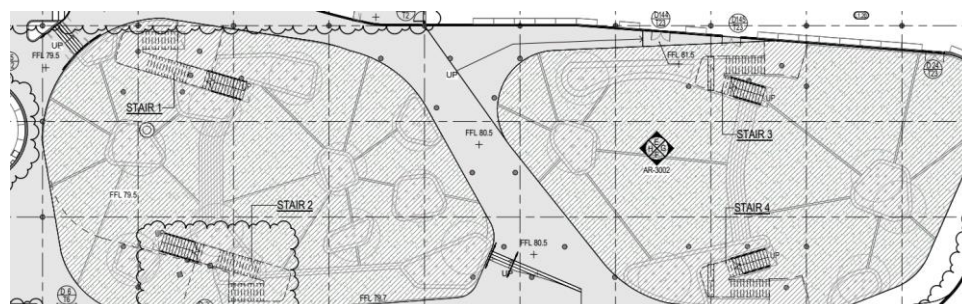


#### Storerooms etc

As stated above disabled access is required to be provided to and within all areas normally used by the occupants. This includes the storerooms, bag stores, maker spaces, teacher spaces etc.

#### Raised Areas

Any raised areas in the ground floor courtyard are considered to be areas that are normally used by the occupants and are required to be accessible.



## Access to buildings

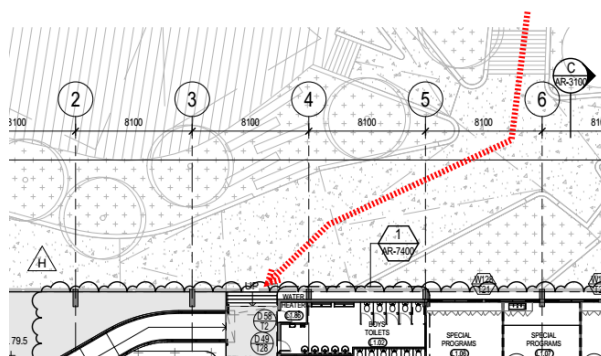
Disabled access is required to be provided to the proposed building from:

- the existing and proposed 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.

### From the allotment boundary

The BCA states that disabled access must be provided to a building from the main points of a pedestrian entry at the allotment boundary.

Please confirm if there is a pedestrian entry point from Thorgood Boulevard and if so if there is an accessible path of travel to the building.



### Pedestrian entry points

The BCA requires that the principal pedestrian entrance is accessible and also that not less than 50% of all pedestrian entrances including the principal pedestrian entrance are accessible.

The following are taken to be the accessible entries into the building, please confirm if any of these are not accessible. The stair at grid A 3 must not be more than 50m from an accessible entry.



### Accessible carspaces

Disabled access is required to be provided from any accessible carspace to the proposed building.

## Access within buildings

### Continuous accessible paths of travel

The minimum unobstructed height of a continuous accessible path of travel is required to be 2m or 1.98m at doorways and the minimum width is required to be 1m and 850mm at doorways.

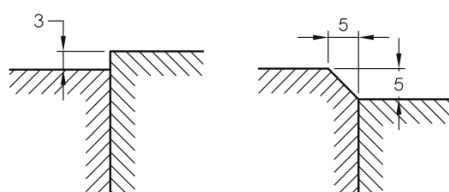
Fixtures and fittings such as lights, awnings, operable parts of windows, telephones, skirtings, essential fixtures and fittings such as fire hose reels, fire extinguishers and switchboards are not permitted to intrude into the minimum unobstructed width.

1.8m wide x 2m long passing spaces are required to be provided within 20m intervals on those parts of an accessway where a direct line of sight is not available.

Turning spaces complying are required to be provided within 2m of the end of accessways where it is not possible to continue travelling along the accessway and at maximum 20m intervals along the accessway.

### Floor or ground surfaces on continuous accessible paths of travel and circulation spaces

The access requirements include a requirement that the abutment of surfaces shall have a smooth transition. Design transition shall be 0 mm. Construction tolerances shall be  $0 \pm 3$  mm for vertical changes in level and  $0 \pm 5$  mm provided the edges have a bevelled or rounded edge to reduce the likelihood of tripping.



(a) Change in level

The pile height or pile thickness of carpet is required to not exceed 11mm and the carpet backing thickness shall not exceed 4 mm.

Grates provided along a continuous accessible path of travel and in circulation spaces are required to comply with the following:

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

### Slip Resistance

A continuous accessible path of travel and any circulation spaces shall have a slip-resistant surface. The texture of the surface shall be traversable by people who use a wheelchair and those with an ambulant or sensory disability. The following table lists the minimum slip resistance classifications for common locations.

Location	Wet pendulum test	Oil-wet inclining platform test
External ramps steeper than 1:14	P5	R12
External ramps and walkways not steeper than 1:14	P4	R11
Wet areas within schools eg toilets	P3	R10
Transitional areas within schools	P2	R9
Dry areas within schools	P1	R9
Stair tread or landing surface - Dry	P3	R10
Stair tread or landing surface - Wet	P4	R11
Stair nosing or landing edge strip - Dry	P3	-
Stair nosing or landing edge strip - Wet	P4	-



## Parts of buildings to be accessible

### Walkways

Walkways are required to be provided with landings at all changes in direction and at every doorway, gate, or similar opening.

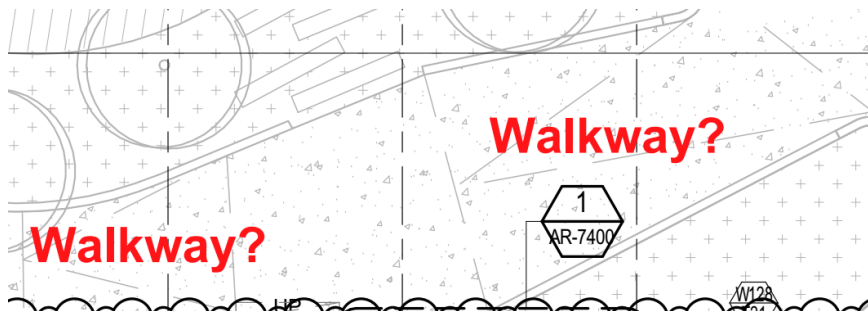
Landings are required to have a minimum length of 1200mm where there is no change in direction and a minimum length of 1500mm where there is a change of direction not exceeding 90°. In addition, the internal corner shall be truncated for a minimum of 500mm in both directions for landings provided where there is a change in direction.

Landings provided for walkways with a change in direction of 180° are required to have a minimum length of 1540mm.

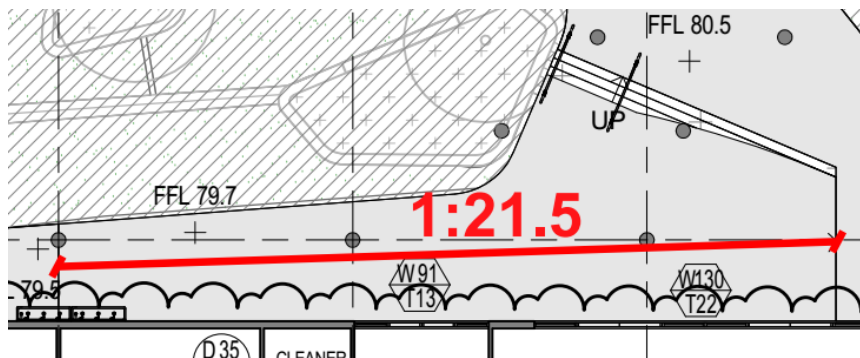
The floor or ground surface abutting the sides of the walkway are required to be provided with a firm and level surface of a different material to that of the walkway at the same level of the walkway, follow the grade of the walkway and extend horizontally for a minimum of 600 mm unless one of the following is provided to both sides of the walkway:

- A kerb with a minimum height of 65mm; or
- A kerb rail and handrail; or
- A wall not less than 450 mm in height.

The gradient of all inclined surfaces should be stated on the drawings and all walkways are required to comply with the requirements of As1428.1 2009.



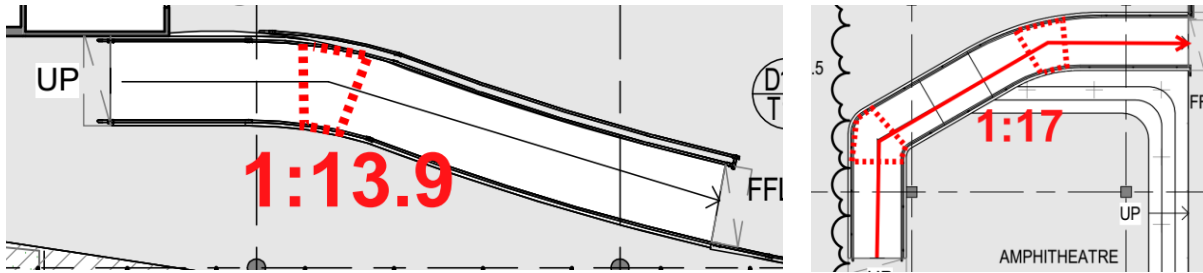
The walkway outside the library should not be designed so that it integrates with the base of the stairs, they should be separate as walkways need to be provided with edge protection (see requirements above) and stairs are required to have a landing with a maximum gradient of 1:50. This area needs to be redesigned.



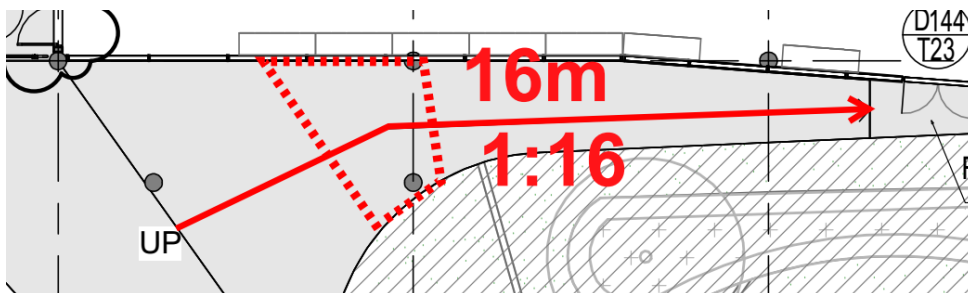
### Ramps

Ramps are required to be provided with landings at all changes in direction and at every doorway, gate, or similar opening.

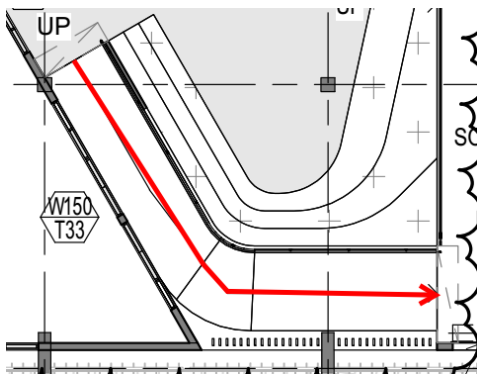
Several of the ramps are not provided with landings at all change in directions, see examples below.



The 1:16 ramp below is required to be provided with a landing at the change in direction and handrails and kerbrails to both sides and tactiles to the top and bottom.



The ramp at the south entry is required to have a maximum gradient of 1:14 (it measures off at 1:13.8) and handrails and kerbrails to both sides, a set back so that the handrail extension does not protrude into the south entry and tactiles at the top and bottom.



Ramps are required to be provided with landings at intervals of not greater than 9m for ramp gradients of 1:14 and at intervals of not greater than 15m for ramp gradients steeper than 1:20.

For ramp gradients between 1:14 and steeper than 1:20, landings are required to be provided at intervals that shall be obtained by linear interpolation.

Landings are required to have a minimum length of 1200mm where there is no change in direction and a minimum length of 1500mm where there is a change of direction not exceeding 90°. In addition, the internal corner shall be truncated for a minimum of 500mm in both directions for landings provided where there is a change in direction.

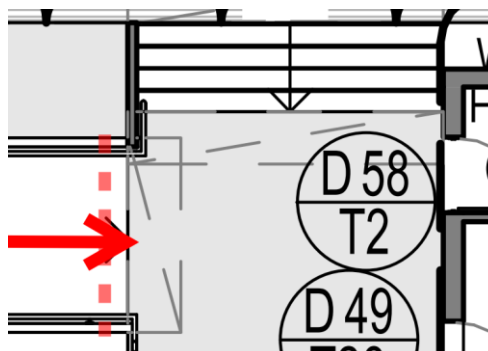
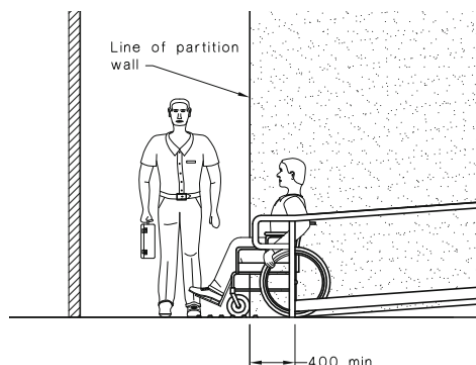
Landings provided for ramps with a change in direction of 180° are required to have a minimum length of 1540mm.

The widths of landings are required to be measured clear of handrails and kerbrails.

Ramps shall have a handrail on each side of the ramp. The handrails are required to extend at least 300mm past the top and bottom of the ramp and have a turndown of 180° or be returned to the ground and are required to be continuous around landings.



Where the intersection of the base or top of a ramp is at an internal corridor, the ramp shall be set back by a minimum of 400mm so that the handrail extension does not protrude into the transverse path of travel.



This applies to all ramps that intersect with an internal corner eg the ground level ramp by the northern entry.

Ramps and intermediate landings are required to be provided with kerbs or kerb rails on both sides that:

- Have a minimum height above the finished floor of 65mm.
- Have a height of the top of the kerb or kerb rail that is not within the range 75mm to 150mm above the finished floor.
- The kerb or kerb rail is not permitted to have longitudinal gaps or slots greater than 20mm within the range 75mm to 150mm above the finished floor.

Ramp handrails with a height of 865-1000mm (900mm recommended) are required to be installed on both sides of the ramp, are to be continuous throughout the ramp flight and, where practicable, around landings.

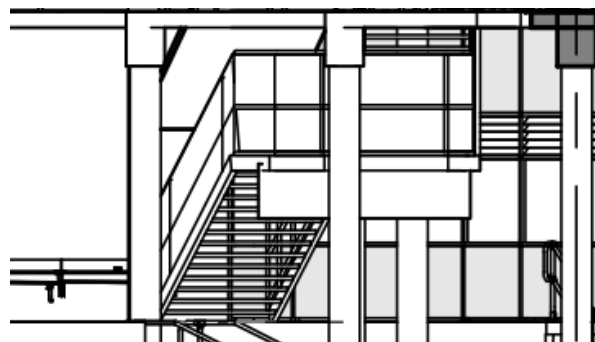
The cross-section of handrails is required to be circular or elliptical, not less than 30mm or greater than 50mm in height or width for not less than 270° around the uppermost surface.

The clearance between a handrail and an adjacent wall surface or other obstruction is required to be not less than 50mm. This clearance shall extend above the top of the handrail by not less than 600mm.

### Stairs

Stairs are required to have opaque risers and the stair nosings are not permitted to project beyond the face of the riser. (Note that it is very common for timber stairs to have nosings projecting beyond the face of the riser, this is not permitted and has to be avoided eg stairs to stages etc.)

The open toe risers to the stairs are required to be closed in order to comply with the requirements of As1428.1 2009.



Each stair tread nosing is required to be provided with a strip not less than 50mm and not more than 75mm deep across the full width of the path of travel. This applies to general communication stairs and also to fire stairs only used for egress.

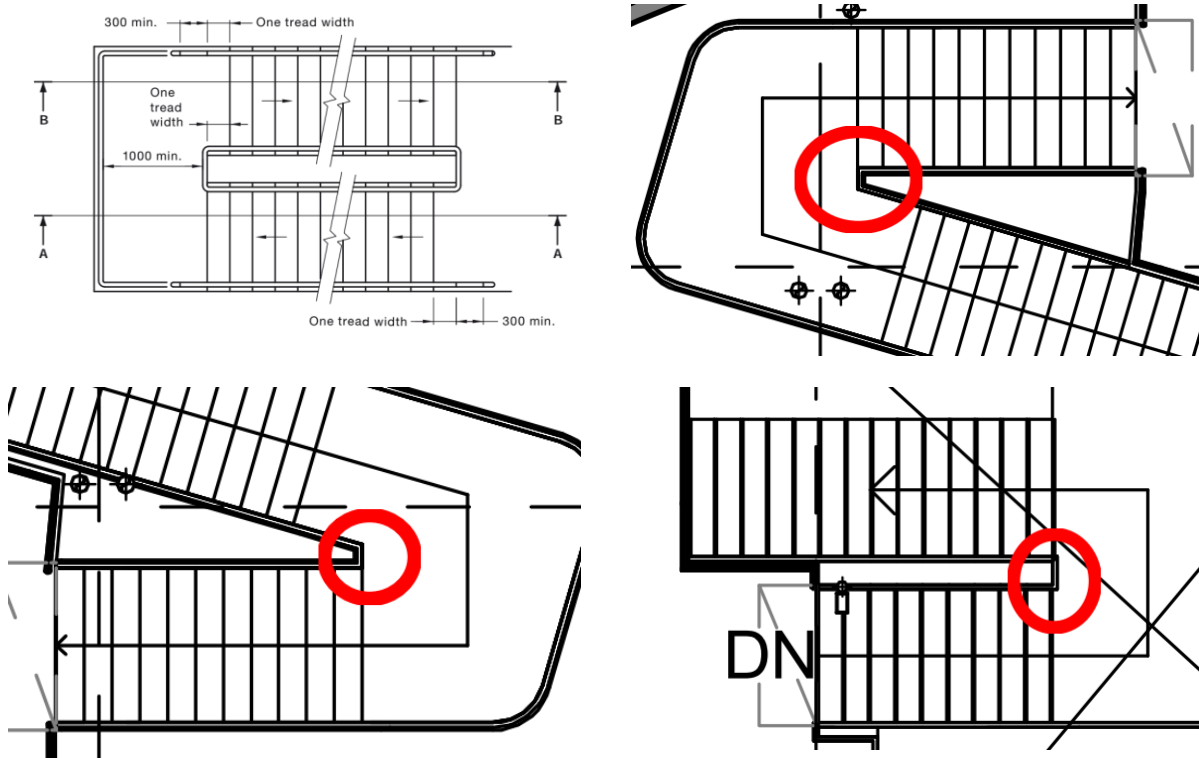
The strip may be set back a maximum of 15mm from the front of the nosing and is required to have a minimum luminance contrast of 30% to the background. (Note that black nosing strips should be specified to un coloured concrete stairs.)

Stair handrails with a height of 865-1000mm (900mm recommended) are required to be installed on both sides of the stairs, are to be continuous throughout the stair flight and, where practicable, around landings.

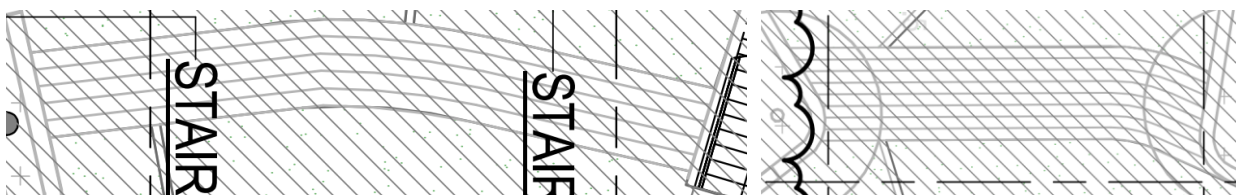
The cross-section of handrails is required to be circular or elliptical, not less than 30mm or greater than 50mm in height or width for not less than 270° around the uppermost surface.

Where a handrail terminates at the bottom of a flight of stairs, the handrail is required to extend at least one tread depth parallel to the line of nosings plus minimum of 300mm horizontally from the last riser. The handrail is required to extend a minimum of 300mm horizontally past the nosing on the top riser

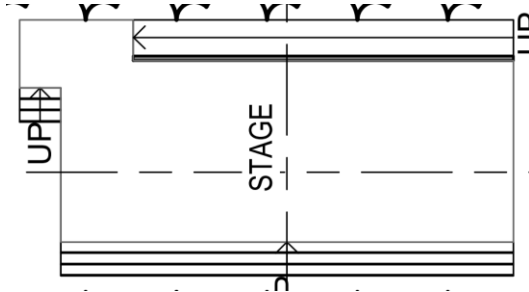
In order to achieve compliance with the requirement for the stair handrail to extend at least one tread width at the base of the flight it is necessary for adjacent flights to be offset from each other as shown in the diagram below. Stairs 1, 2 and stairs 5 are required to be revised to reflect these requirements.



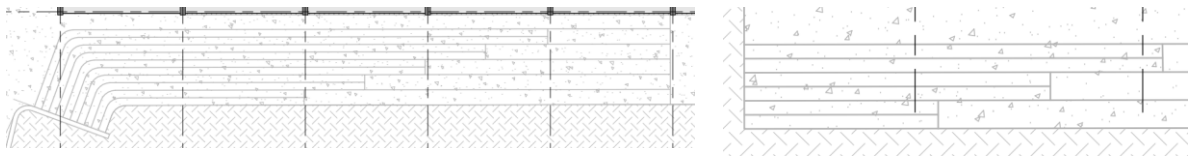
The stairs in the ground floor courtyard are required to comply with the requirements of AS1428.1 2009 and AS1428.4.1 2009.



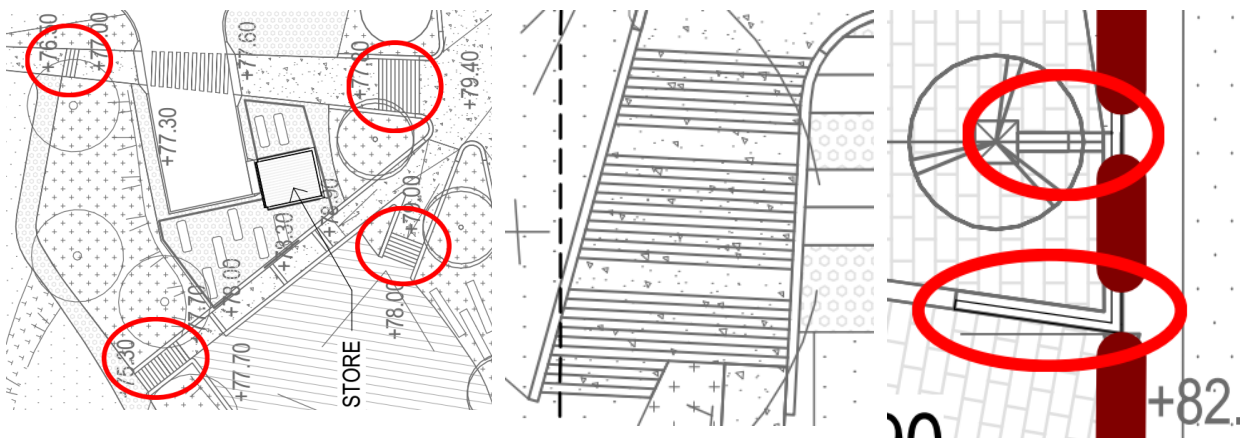
The two sets of stairs to the stage are required to comply with the requirements of AS1428.1 2009 and AS1428.4.1 2009.



The stairs at the western elevation of the level 1 courtyard are required to comply with the requirements of AS1428.1 2009 and AS1428.4.1 2009.

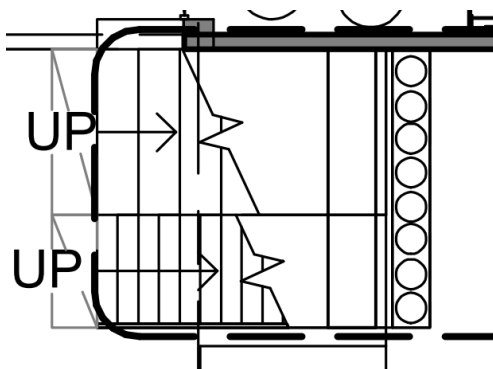


The stairs in the landscaped areas are required to comply with the requirements of AS1428.1 2009 and AS1428.4.1 2009.

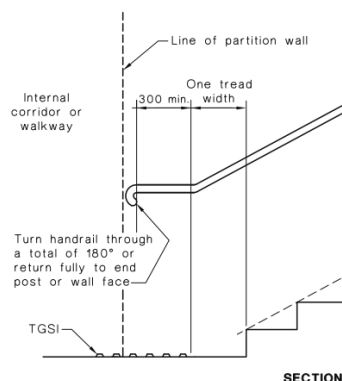


Note that the requirement for handrails to be provided to both sides of stairs also applies to the tiered seating adjacent to the base of stair 5.

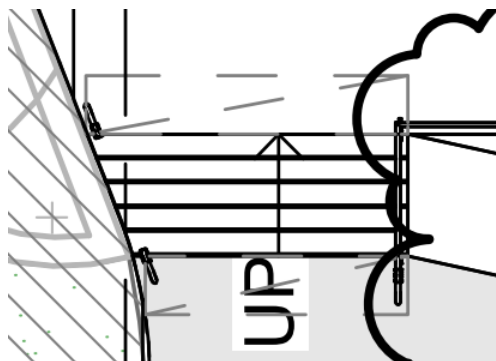
Generally the handrail on the side of the terraced seating is omitted to allow people to walk from the stairs to the seating. If the omission of this second handrail is proposed it is a non compliance to the BCA DTS requirements and should be addressed in an alternative solution report or can be noted as a non compliance on the Section 109R Crown Works Certificate and the BCA Completion Certificate.



Where the intersection of the base or top of a stair is at an internal corridor, the stair shall be set back so that the handrail complying does not protrude into the transverse path of travel.



SECTION



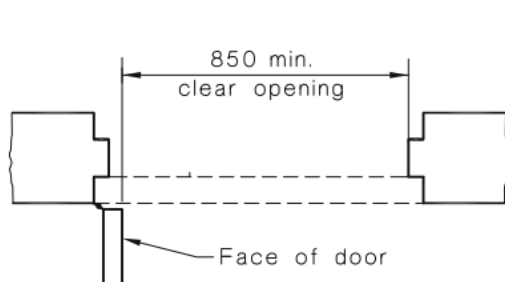
## Doorways

Doorways are required to be provided with a minimum luminance contrast of 30% between:

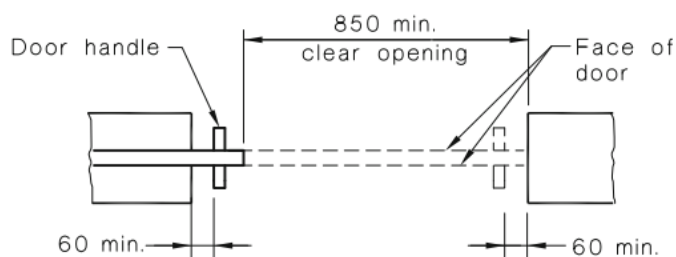
- door leaf and door jamb;
- door leaf and adjacent wall;
- architrave and wall;
- door leaf and architrave; or
- door jamb and adjacent wall.

The minimum width of the area of luminance is required to be 50mm. Note that frameless glazed doors will not comply with this requirement and should not be specified.

Doorways are required to be provided with a minimum clear opening width of 850mm and where sliding doors are provided the clear opening width must allow for a minimum 60mm gap between the door handle and the door frame when the door is open and closed.



(a) Swing door



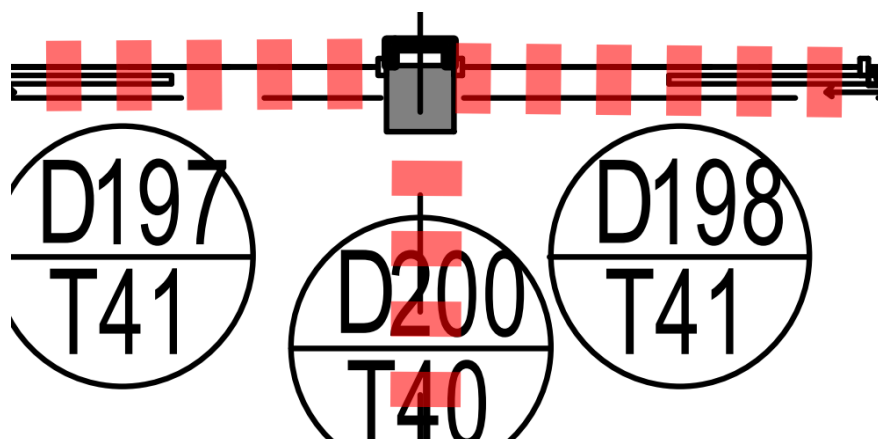
(b) Cavity sliding door

At least one leaf of all double doors is required to have a minimum clear width of 850mm.

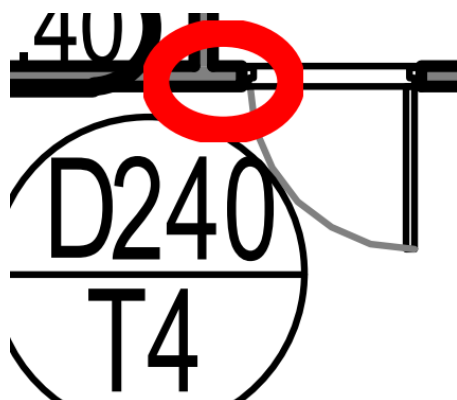
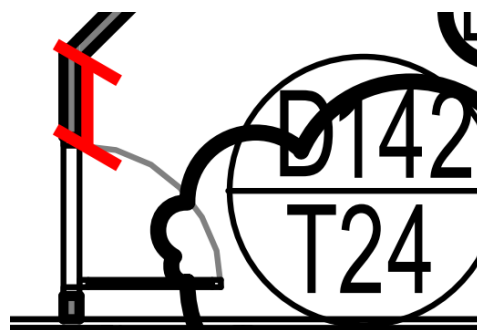
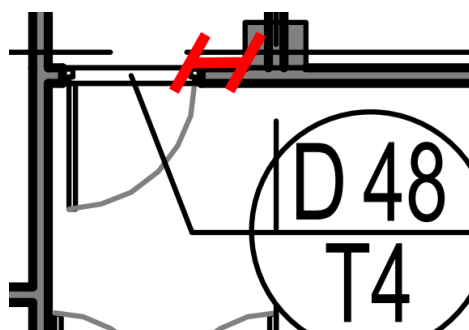
Circulation spaces are required to be provided at every doorway, gate, or similar entry way, on a continuous accessible path of travel. The circulation space required will depend on the type of door ie swing or sliding and the angle of approach ie side or front on etc.

Where possible the required circulation space should be provided with a construction tolerance and the required dimension of any latch side wall should be stated on the drawings.

The door handles to the sliding doors to the classrooms are required to be set back a minimum distance of 400mm from internal corner formed by the folding walls and nibs so as to provide a latch side circulation space.



The following doorways are not provided with compliant circulation spaces and are required to be redesigned in the design development stage.



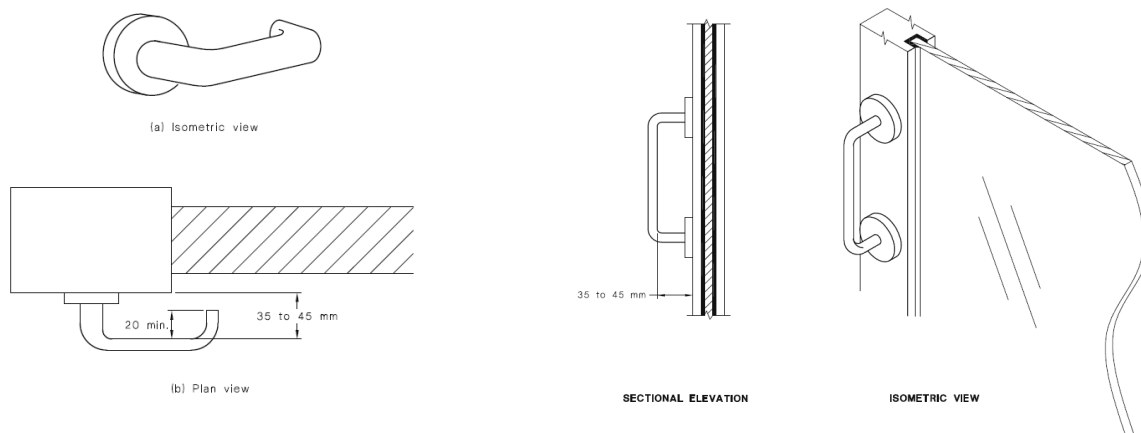
Door handles and related hardware are required to be of the type that allows the door to be unlocked and opened with one hand. The handle is required to be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch. 'D' type handles shall be provided on sliding doors.

The clearance between the handle and the back plate or door face at the centre grip section of the handle is required to be not less than 35mm and not more than 45mm.

Where snibs are installed, they shall have a lever handle of a minimum length of 45mm from the centre of the spindle.

For doors other than fire doors where a door closer is fitted, the force required at the door handle to operate the door shall not exceed 20N.

Where an outward opening door is not self-closing, a horizontal handrail or pull bar is required to be fixed on the closing face of a side-hung door.



### Switches & Controls

All switches and controls on an accessible path of travel, other than general purpose outlets, are required to be located not less than 900 mm nor more than 1100mm above the plane of the finished floor and not less than 500mm from internal corners.

This applies to light switches, intercoms, card readers etc and this requirement should be stated on the architectural and services drawings.

### **Exemptions**

The following areas are not required to be accessible:

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

This generally applies to plant rooms and other areas used occasionally by maintenance personnel. It should not be used for exempting disabled access into store rooms or other areas used occasionally by staff.

### **Accessible carparking**

One accessible carspace is required to be provided for every 100 carparking spaces or part thereof provided on site.

The accessible carspace is required to comply with the requirements of AS/NZS 2890.6 2009 which includes the following requirements:

- A minimum width of 2.4m and minimum length of 5.4m to the carspace;
- A minimum width of 2.4m and minimum length of 5.4m to the shared space;
- The dedicated space and the shared area are required to be at the same level;
- A bollard is required to be provided in the shared space 750-850mm from the front of the shared space and along the centre line;
- The accessible carspace and related walking and wheelchair unloading areas are required to comprise a firm plane surface with a fall not exceeding 1:40 in any direction (1:33 if the surface is a bituminous seal and the parking space is out of doors). These areas shall have a slip-resistant surface.
- Where kerb ramps are to be provided they are required to be placed at a front or rear corner of the parking space;
- Each dedicated space shall be identified by means of a white symbol of access between 800mm and 1000mm high placed on a blue rectangle with no side more than 1200mm, placed as a pavement marking in the centre of the space between 500mm and 600mm from its entry point.



- Dedicated parking spaces shall be outlined with unbroken non slip yellow lines 80-100mm wide on all sides excepting any side delineated by a kerb, barrier or wall;
- Shared areas shall be outlined with unbroken non slip yellow lines 80-100 mm wide on all sides excepting any side delineated by a kerb, barrier or wall, and marked with diagonal stripes 150-200 mm wide with spaces 200-300mm between stripes. The stripes shall be at an angle of  $45 \pm 10$  degrees to the side of the space.

## Signage

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

- The doorway to the male and female staff toilets;
- The doorway to the male and female student toilets;
- The doors to the male and female staff ambulant cubicles;
- The doors to the male and female student ambulant cubicles;
- The doorway to the staff accessible toilets;
- The doorway to the student accessible toilets.

The sign to the doorway of the accessible toilet must identify if the facility is suitable for left or right handed use.

Braille and tactile signage complying with the requirements of BCA Specification D3.6 is required to be provided to any doorway provided in front of the enclosed exit stairs and to the doorway from the enclosed stairs to the outside. The sign is required to state 'Exit Ground Level' or 'Exit Level 1' as required.

Braille and tactile signage complying with the requirements of BCA Specification D3.6 is required to be provided to a room provided with hearing augmentation.

The signage is required to include the international symbol for deafness and must identify:

- 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.

Where a pedestrian entrance is not accessible directional signage incorporating the international symbol of access must be provided to direct a person to the location of the nearest accessible pedestrian entrance.

Where a bank of toilets is not provided with an accessible toilet, directional signage incorporating the international symbol of access must be provided to direct a person to the location of the nearest accessible toilet.

## Hearing augmentation

A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed in a room in a Class 9b building.

This applies to AV systems such as period bells if they are also capable of operating as an inbuilt amplification system ie making announcements etc.

If a hearing augmentation system is an induction loop, it must be provided to not less than 80% of the floor area of the room or space served by the inbuilt amplification system.

If a hearing augmentation system is 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.

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.

### Tactile indicators

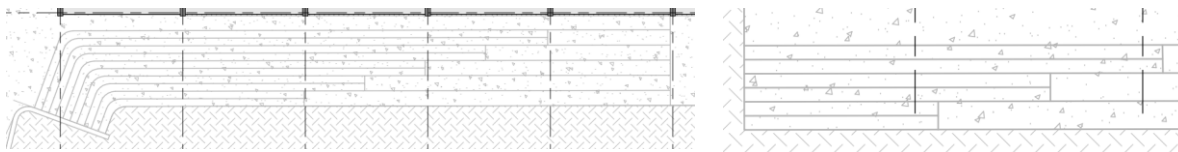
Tactile indicators comply with AS1428.4.1 2009 must be provided to:

- a non fire rated stairway used for general communication;
- a ramp;
- the underside of an overhead obstruction (eg stair soffit) unless a suitable barrier (eg handrail) is provided.

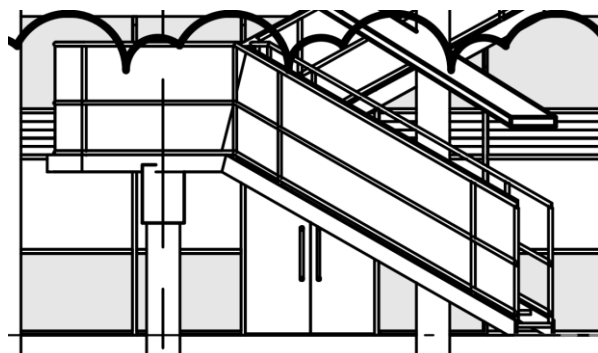
Tactile indicators are required to have a luminance-contrast to the base surface as follows:

- Where the integrated TGSIs are of the same colour as the underlying surface—not less than 30% across its entire area.
- Where discrete TGSIs—not less than 45%.
- Where discrete TGSIs are constructed using two colours or materials, the raised surface shall have a section that has 60% luminance contrast for a diameter of  $25 \pm 1$  mm tested as required below.

The stepped or tiered structure in the western elevation of the ground floor courtyard is considered to be a stair and is required to be provided with tactile indicators to the top and bottom as per AS1428.4.1 2009.



Where the underside of the five stairs to level 2 has a height of less than 2m and are not enclosed or provided with rails as per figure 2.6(A) of AS1428.4.1 2009 they are required to be provided with tactile indicators complying with AS1428.4.1 2009.

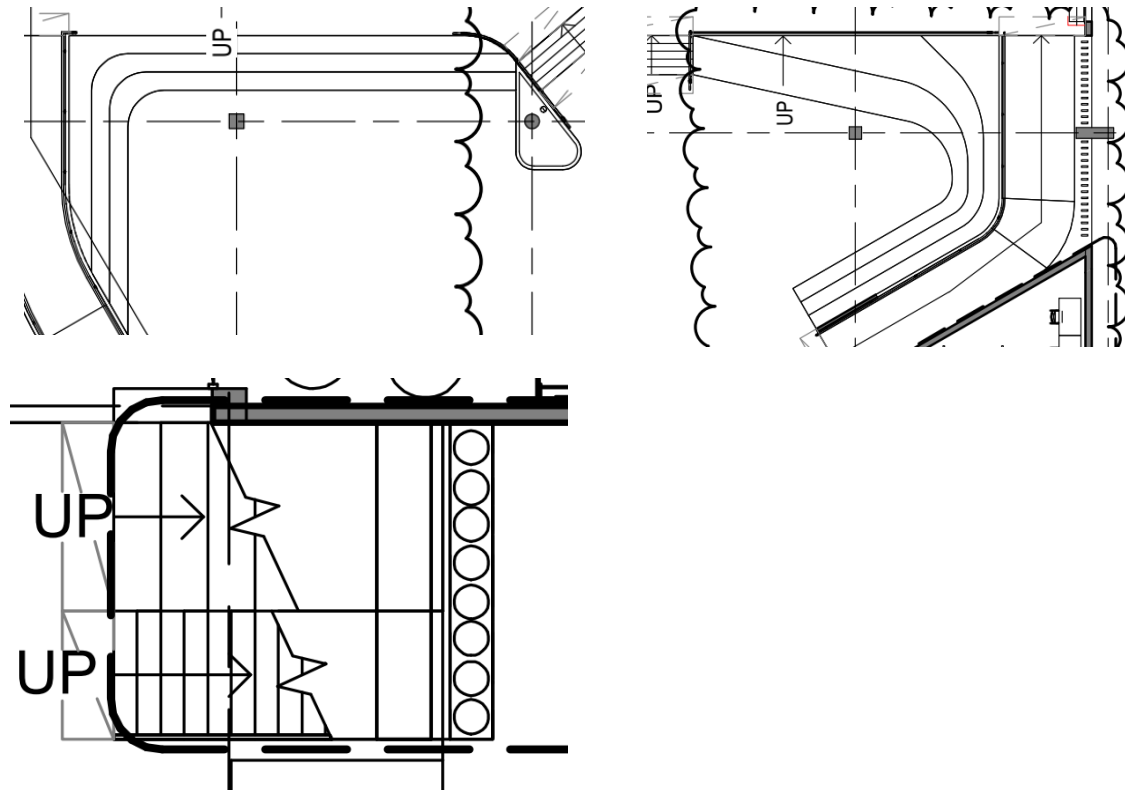


### Wheelchair seating spaces in Class 9b assembly buildings

Where fixed seating is provided in a Class 9b assembly building (ie school), wheelchair seating spaces complying with AS 1428.1 2009 must be provided in the following ratios:

Number of fixed seats	Number of wheelchair spaces	Grouping & location
Up to 150	3 spaces	1 single space & 1 group of 2 spaces

Note that the amphitheatre seating on the ground level and the tiered seating beside stair 5 is deemed to be fixed seating in a Class 9b building and is required to be provided with wheelchair seating spaces as per the BCA and AS1428.1 2009 or they can be addressed in an alternative solution prepared by an access consultant or the lack of wheelchair seating can be noted as a non compliance on the Section 109R Crown Works Certificate and on the BCA Completion Certificate.

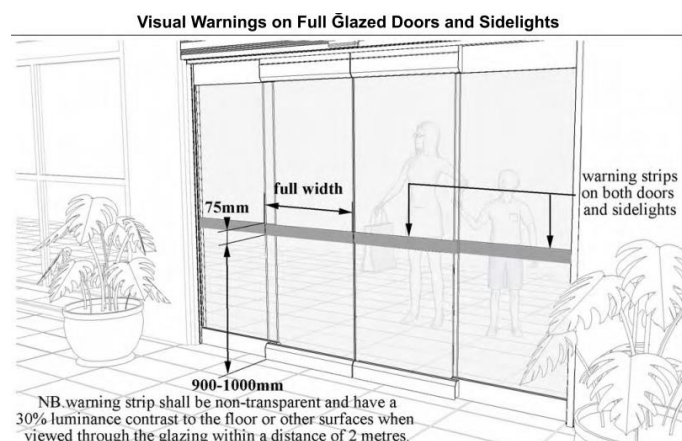


### Glazing on an accessway

All frameless or fully glazed doors, sidelights, including any glazing capable of being mistaken for a doorway or opening, shall be clearly marked for their full width with a solid and non-transparent contrasting line.

The contrasting line shall be not less than 75 mm wide and shall extend across the full width of the glazing panel. The lower edge of the contrasting line shall be located between 900 mm and 1000 mm above the plane of the finished floor level.

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



## **Lifts**

All lifts which travel not more than 12m must have a lift floor dimensions of not less than 1100mm wide x 1400mm deep.

Handrails complying with AS1735.12 1999 must be provided to all lifts.

All lift doors must have a clear opening width of not less than 900mm.

Any passenger lift must not rely on a constant pressure device for its operation if the lift car is fully enclosed.

All lifts must have a passenger protection system, lighting and lift car and landing control buttons that comply with AS1735.12 1999.

Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received must be provided to all lifts.

## **Accessible sanitary facilities**

### Accessible toilets

The accessible toilets are required to be provided with the minimum circulation spaces and requirement stated in AS1428.1 2009 which includes:

- A minimum width of 1900mm and minimum length of 2300mm for toilet pans;
- The basin is not to encroach by more than 100mm into the required circulation space;
- A toilet pan with a seat height of 460-480mm, set out 450-460mm from the side wall to the centre line and located 790-810mm from the back wall to the front of the pan;
- A toilet seat with a minimum 30% luminous contrast to the floor finish;
- Grabrails at a height of 790-810mm and able to withstand a force of 1100 N applied at any position and in any direction without deformation or loosening or rotation of the fastenings or fittings;
- Backrests that have a height, at the lower edge of backrest to the top of the seat, of 120mm to 150mm, that have a vertical height of 150–200mm and a width of 350–400mm and that are capable of withstanding a force in any direction of 1100N;
- Washbasins that have a height of 800-830mm to the front edge;
- Ancillary fixtures and fittings eg toilet paper holder, shelves, mirrors, hooks etc and any accessible shower set out as per the requirement of AS1428.1 2009.
- Where an outward opening door is not self-closing, a horizontal handrail or pull bar shall be fixed on the closing face of a side-hung door, as shown in Figure 36 of AS1428.1 2009.
- Outward-opening doors shall have a mechanism that holds the door in a closed position without the use of a latch.

The BCA states that at least 1 accessible toilet must be provided on every storey containing toilets and where a storey has more than 1 bank of toilets containing male and female toilets an accessible toilet must be provided at not less than 50% of those banks.

As there are 3 banks of toilets on level 1 that level requires at least 2 accessible toilets. As there are 4 banks of toilets on the ground floor that level requires at least 2 accessible toilets.

### Ambulant cubicles

The ambulant cubicles are required to be provided with the minimum circulation spaces and requirement stated in AS1428.1 2009 which includes:

- A width of 900-920mm and a clear width of not less than 900mm from the front of the pan to the cubicle door;
- A toilet pan with a seat height of 460-480mm and set out along the centre line of the cubicle;
- Grabrails at a height of 790-810mm and able to withstand a force of 1100 N applied at any position and in any direction without deformation or loosening or rotation of the fastenings or fittings;

- Doorways with a minimum clear width of 700mm;
- A 900x900mm circulation space to both sides of the cubicle doors and entry doors;
- Toilet paper holder and hooks set out as per the requirement of As1428.1 2009.

## 4.0 DDA Optional Requirements

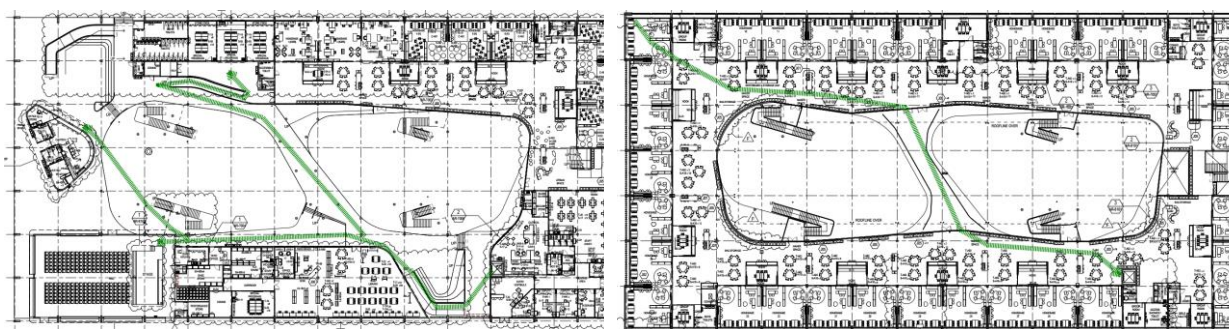
The following comments are the additional advisory requirements of the Disability Discrimination Act 1992 and AS1428.2 1992. These items do not have to be documented in order to obtain the Section 109R Crown Works Certificate which confirms BCA (and AS1428.1 2009) compliance.

### Continuous Accessible Path Of Travel

The minimum clear width of a path of travel shall be 1200mm except at doors.

The accessible elements of buildings and facilities shall be arranged so as to minimize distances to be travelled between them.

The location of the lift on the eastern side of the building means that the occupants of the western side of level 2 will have to travel a longer distance to access the unique services located on the western side of level 1 such as the Special Programs rooms, the Canteen and the Hall.



### Ramps

Ramps shall be provided with landings at the top and bottom of the ramp and at intervals not exceeding:

- for ramp gradients of 1 in 14: 6 m;
- for ramp gradients of 1 in 19: 14 m; and
- for ramp gradients between 1 in 19 and 1 in 14, at intervals which shall be obtained by linear interpolation.

### Ground and floor surfaces

Paving bricks with bevelled edges or chamfered arises and heavily textured and figured surfaces such as raked joint pavers shall not be used.

Where carpet is used on a ground or floor surface, the following requirements apply:

- The carpet shall be securely attached.
- Any pad, backing or cushioning shall provide a firm surface.
- The carpet shall have a level loop, a textured loop, a level cut pile or a level cut or uncut pile texture.
- The pile height shall be not more than 6 mm.

- Exposed edges of carpet shall be fastened to the floor surface and shall have a trim along the entire length of any exposed edge.
- Carpet edge trim shall create no ridge on the floor surface higher than 3 mm.

### Handrails

Where a handrail is not continued, a tactile indicator in the form of a domed button shall be provided.

Where there is a background wall, handrails shall have a luminance contrast factor with the wall of not less than 30%.

### Doorways

The minimum clear opening of a doorway shall be 850mm.

The circulation spaces at doorways shall comply with AS 1428.1 2009 except that 100mm shall be added to all length (L) values and 50mm shall be added to all width (W) values.

Glazing in joinery doors or flush doors shall be as follows:

- The lower edge of the glazing shall be not less than 300mm and not more than 1000mm above the bottom edge of the door.
- The upper edge of the glazing shall be not less than 1600mm above the bottom edge of the door.
- In width, the glazing shall extend not more than 200mm from the latch edge of the door and shall be not less than 150mm wide.

### Lifts

The lift floor area shall increase 300mm in each direction from the minimum size specified earlier in this report.

### Stairs

Stair risers are required to be provided with a strip of contrasting colour with a width of 25-50mm located just below the stair nosing.

### Accessible toilets & showers

At least one emergency call button which complies with AS 2999 shall be installed in each accessible toilet.

Toilet seats of moulded plastics shall comply with AS 1371. The design of the seat shall provide lateral stability.

Accessible showers shall have the additional requirements set out in AS1428.2 1992.

### Tactile Indicators

Tactile indicators are required to be provided to the following locations:

- kerb ramps and step ramps
- pedestrian crossing at roadways
- pedestrian crossing in high use vehicle areas eg carparks
- vehicle pick up and drop off areas

### Emergency warning systems

Emergency warning systems shall include both audible alarms and visual alarms. This applies to emergency evacuation signals, traffic signals and audible alarms for safety.



Audible emergency alarms shall produce audible signals in accordance with the requirements for output of loudspeakers in AS 2200.2, except that levels shall exceed by 15 dB(A) the noisiest background sound pressure level averaged over a period of 60 s, and the level shall not be less than 75 dB(A).

Visual alarms in accordance with AS 2220.1 shall be arranged to flash in conjunction with the audible emergency alarms. The flashing frequency of visual alarms shall be approximately 1 Hz.

Auxiliary alarms provided for people with hearing impairments shall be connected to the building emergency system or there shall be a standard electrical socket into which an alarm unit can be connected to be activated by the building alarm system. Instructions for use of the auxiliary alarm or connections shall be provided.

### Lighting

Illumination levels shall be uniform and comply with the requirements for maintenance illumination set out in AS1680.2.3 2008.

- Doorway entrances - 150 lx
- Passageways and walkways - 150 lx
- Stairs - 150 lx
- Ramps - 150 lx
- Lifts See AS 1735.12
- Toilet and locker rooms - 200 lx
- Counter tops - 250 lx
- General displays - 200-300 lx
- Illumination of signs - 200-300 lx

Lighting shall be placed so that unwanted reflections shall not occur on the sign. The luminance factor of the surface of numbers, letters or symbols shall be not less than 30% different from their background.

### Tables, counters and worktops

Any reception desks or counters are required to have a minimum width of 800mm, have foot and knee clearances and have a section with a height of 830-870mm.

A bench with easily adjustable height within the range of 700mm to 850mm from the finished floor is preferred.

For vision-impaired users, horizontal surfaces should be a lighter colour than that of the vertical surfaces. The luminance factor of the vertical surface should be not less than 30% different from surrounding horizontal surface.

Street furniture, which includes objects such as seats, tables, drinking fountains, planter boxes, rubbish bins and the like, shall be of a colour which provides a contrast with their background and have a luminance factor of not less than 30%.

Where possible, a range of street seat heights should be provided and note that children and small people may prefer seats as low as 350 mm high.

The front of the seat shall have a clear space between any legs at ground level to within 150 mm of the front edge of the seat, and to within 100 mm of the seat height to allow for rearward adjustment of feet when rising. The seat shall drain free of water.

Where armrests are provided, the top surface of the armrests shall be at a height of 260 ±40 mm above the seat.

At each location where drinking fountains or water coolers are provided, at least one of these shall be in accordance with the requirements of AS1428.2 1992.

## **5.0 Conclusion**

The design documentation provided to date has been assessed in respect to the deemed to satisfy requirements of Part D3 and F2 of the Building Code of Australia 2016, the Disability Access to Premises Standards 2010, the Disability Discrimination Act (DDA) 1992 and the relevant parts of AS1428.1 2009 and AS1428.4.1 2009. The design is at a point where the detailed design can commence, further reviews will be carried out during the next stages and prior to the completion of the design.

## **APPENDIX A – DRAWINGS REVIEWED**

### **Architectural drawings prepared by GHD WOODHEAD**

<b>Drawing number, title and revision</b>	<b>Drawing number, title and revision</b>
Ar1000 site plan / setout plan rev g	Ar2400 ff&e plan – level 1 rev g
Ar2000 floor plan – level 1 rev h	Ar2401 ff&e plan – level 2 rev f
Ar2001 floor plan – level 2 rev h	Ar3100 building sections rev h
Ar2003 roof plan rev h	