



# Access Review

Samuel Gilbert Public School  
Ridgecrop Drive Castle Hill  
Report Issue 1 (Revised) Final  
12/11/18



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Document Author: J Barling

Reviewed by: R Thompson

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## Introduction

## Background

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This review of the design documents for SSDA submission addresses the requirements for access by staff, students and visitors with a disability or who are older, to the proposed upgrades to Samuel Gilbert Public School, Ridgescrop Drive, Castle Hill. The numbers of students and staff are as follows:

Existing Student Numbers = 780 students

Proposed Student Numbers = 1000 students

Existing Staff Numbers = 45 staff

Proposed Staff Numbers = 58 staff

The review addresses compliance with the Disability (Access to Premises - Buildings) Standards 2010, Parts D3, E3.6 and F2.4 of the Building Code of Australia 2016 (BCA) and Australian Standards on Access and Mobility.

The key issue in the provision of appropriate access to and within the new buildings and refurbished buildings is the provision of a continuous accessible path of travel:

- (i) from the main points of a pedestrian entry at the allotment boundary;
- (ii) from another accessible building connected by a pedestrian link;
- (iii) from accessible visitor parking to principal building entrances; and
- (iv) to and within areas normally used by the occupants.

We have reviewed the drawings listed to assess the level of accessibility and compliance with the relevant codes, standards and legislation. The designs have been assessed to ensure that equitable and dignified access for people with disabilities can be provided.

In carrying out an accessibility assessment, the main objective is to ensure access is provided through the provision of accessible facilities and continuous paths of travel to and within all appropriate areas of the buildings.



## Introduction

### Accessibility Requirements

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The Building Code of Australia 2016 (BCA) in conjunction with the Disability (Access to Premises - Buildings) Standards 2010 (Premises Standards) apply to new buildings and existing buildings that undergo refurbishment.

The Premises Standards apply to any new part, and any affected part, of an existing building. A part of a building is a new part of the building if it is an extension to the building or a modified part of the building about which an application for approval for the building work is submitted to the competent authority in the State or Territory where the building is located. The definition of 'affected part' of a building is limited to the path of travel between (and including) the principal pedestrian entrance and the new work.

Under the Premises Standards, access must be provided, to the degree necessary, to enable people to approach the building from the road boundary and from any accessible carparking spaces associated with the building; approach the building from any accessible associated building; access work and public spaces, accommodation and facilities for personal hygiene; and to enable identification of access ways at appropriate locations which are easy to find.

Under the BCA 2016 and Premises Standards table D3.1 Requirements for access for people with a disability, access to the new and refurbished buildings (class 9b) is required to and within all areas normally used by staff, students and visitors.



## Introduction

## Proposed Work

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The proposed upgrades will consist of refurbishment of some existing buildings and construction of new Buildings N, P & Q, linked by a central north – south accessway and lift. The existing and proposed buildings include:

**Building A**

Existing admin building to be converted to home bases.

**Building B**

Existing multipurpose hall and canteen to be retained.

**Building C**

Existing home bases to be retained.

**Building D**

Partially demolished, existing toilets to remain.

**Building E**

Existing library to be converted to home bases and special programs.

**Building F**

Partially demolished, existing toilets to remain.

**Building G**

Existing home bases to be retained.

**Building H**

Existing home bases to be retained.

**Building I**

Existing home bases to be retained.

**Building J**

Existing OOSH to be retained.

**Building K**

Existing building to be retained.

**Building L**

Existing special programs building to be retained.

**Building M**

Existing home bases to be retained.

**Building N**

New building – administration, staff area & home bases.

**Building P**

New building – library & home bases.

**Building Q**

New hall and OOSH.



## Context for Planning & Design

### Legislation & Standards

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The new work is subject to access provisions in the following documents:

- Disability (Access to Premises - Buildings) Standards 2010
- The Building Code of Australia (BCA) 2016 parts D3, F2.4 and E3.6
- AS1428.1 (2009) (Incorporating Amendment No 1): Design for access and mobility Part 1: General requirements for access – New building work.
- AS1428.2 (1992) Design for access and mobility Part 2: Enhanced and Additional requirements - Buildings and facilities
- AS1428.4 (2009) (Incorporating Amendment No 1): Design for access and mobility Part 4.1: Means to assist the orientation of people with vision impairment -tactile ground surface indicators
- AS1735.12 (1999) Lifts, escalators and moving walks Part 12: Facilities for persons with disabilities AS1428.4 (1992) Design for access and mobility. Part 4: Tactile ground surface indicators for the orientation of people with vision impairment
- AS3745 (2009) Planning for Emergencies in Facilities (referenced)
- AS1428.5 (2010) Design for access and mobility Part 5: Communications for people who are deaf or hearing impaired (referenced)
- Australian Human Rights Commission Guideline on the Application of the Premises Standards (2013)
- The Disability Discrimination Act 1992 (DDA)
- Disability Standards for Education 2005



## Context for Planning & Design

### Legislation & Standards

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#### DDA

The objectives of the Disability Discrimination Act 1992 (DDA) – section 23, focus on the provision of equitable, independent and dignified access to services and facilities for people with mobility, sensory and cognitive disabilities. The DDA covers existing premises, including heritage buildings, those under construction and future premises. It extends beyond the building itself to include outdoor spaces and within, to address furniture, fittings and practices.

#### Premises Standards

Disability (Access to Premises - Buildings) Standards (Premises Standards) 2010 which commenced on 01 May 2011, has been incorporated into the BCA (2016) to ensure that access provisions for people with disabilities more fully meet the intent of the DDA.

The Premises Standards apply to any new part, and any affected part, of an existing building. A part of a building is a new part of the building if it is an extension to the building or a modified part of the building about which an application for approval for the building work is submitted, on or after 1 May 2011, to the competent authority in the State or Territory where the building is located.

#### BCA

The Building Code of Australia (BCA)(2016) applies to new buildings and existing buildings that undergo refurbishment. In this report the description of the level of accessibility throughout the new work is generally measured against the Deemed-to-Satisfy Provisions of the BCA, in particular Parts D3 and H2.

#### AS1428 – Standards for Access

The Australian Standards design for access and mobility are a suite of standards relating to the inclusion of features in the built environment that improve access and mobility for people with a disability.

AS1428.1 (2009) sets out minimum requirements for design of buildings and facilities, while AS1428.2 includes enhanced and additional requirements that are not covered in AS1428.1, such as street furniture and reach ranges.

AS1428.4.1 (2009) Design for access and mobility Part 4.1: Means to assist the orientation of people with vision impairment primarily details the requirements for the application of tactile ground surface indicators (TGSIs).

#### Disability Standards for Education 2005

The objects of these standards are:

- to eliminate, as far as possible, discrimination against persons on the ground of disability in the area of education and training; and
- to ensure, as far as practicable, that persons with disabilities have the same rights to equality before the law in the area of education and training as the rest of the community; and
- to promote recognition and acceptance within the community of the principle that persons with disabilities have the same fundamental rights as the rest of the community.

Reasonable adjustment is an adjustment, measure or action (or a group of measures or actions) taken by an education provider that has the effect of assisting a student with a disability.



## Context for Planning & Design

### Management Strategies

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In the existing facilities and proposed new building work it is important, within the limitations of the existing structures, to provide general paths of travel, circulation spaces and accessible facilities, within areas not exempt by the BCA part D3.4, to meet the intent of the Disability Discrimination Act.

In addition to accessible paths of travel, accessible parking and accessible sanitary facilities, it will be necessary to develop operational management strategies that meet the proposed intention to provide equipment and adapt areas within the school to meet the requirements of specific individuals with a disability.

Operational management strategies are required to meet the specific requirements of visitors, students and staff with a disability whose individual requirements cannot be addressed within the base buildings and existing building facilities. An operational management strategy acknowledges the need to meet full accessibility compliance through the provision of policy strategies. A design that has the potential to be modified as required to suit individuals with a disability is desirable.

Ongoing development of operational management strategies are recommended for the following:

- emergency egress for people with sensory and mobility impairment
- modification of individual work areas to meet individual staff and student requirements

### Documentation

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This assessment is based on discussion with the design team and review of the following architectural documentation prepared by Fulton Trotter Architects, issued to funktion on 05/10/18:

AEX1001 - EXISTING SITE PLAN\_P14  
AEX1002 - SITE DEMOLITION PLAN\_P11  
SD1001 - PROPOSED SITE PLAN\_P15  
AEX-A-2001-P6-DEMOLITION FLOOR PLAN  
SD1301 – TEMPORARY SITE PLAN\_P1  
SD-A-2001 - GROUND FLOOR PLAN\_P12  
SD-A-2101-P3-BUILDING A ROOF PLAN  
SD-A-2201-P2-GROUND FLOOR CEILING PLAN  
SD-A-9001-P1-BUILDING A FF&E LAYOUT 1  
SD-E-2001-P12-GROUND FLOOR PLAN  
SD-E-2201-P2-GROUND FLOOR CEILING PLAN  
SD-N-2002-P16-GROUND FLOOR PLAN  
SD-N-2003-P15-LEVEL 1 FLOOR PLAN  
SD-N-2004-P13-LEVEL 2 FLOOR PLAN  
SD-N-2101-P9-ROOF PLAN  
SD-N-2201-P4-GROUND FLOOR CEILING PLAN  
SD-N-2202-P4-LEVEL 1 CEILING PLAN  
SD-N-2203-P4-LEVEL 2 CEILING PLAN  
SD-N-3001-P12-NORTH AND SOUTH ELEVATIONS  
SD-N-3002-P12-EAST AND WEST ELEVATIONS  
SD-N-3101-P5-SECTION N1 & N2  
SD-N-4301-P1-DETAILS - SECTIONS 1  
SD-N-4302-P1-DETAILS - SECTIONS 2  
SD-N-4303-P1-DETAILS - SECTIONS 3  
SD-P-2002-P15-GROUND FLOOR PLAN  
SD-P-2003-P14-LEVEL 1 FLOOR PLAN





## Context for Planning & Design

### Documentation

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SD-P-2004-P13-LEVEL 2 FLOOR PLAN

SD-P-2101-P10-ROOF PLAN

SD-P-2201-P4-GROUND FLOOR  
CEILING PLAN

SD-P-2202-P4-LEVEL 1 CEILING PLAN

SD-P-2203-P4-LEVEL 2 CEILING PLAN

SD-P-3001-P12-NORTH AND SOUTH  
ELEVATIONS

SD-P-3002-P11-EAST AND WEST  
ELEVATIONS

SD-P-3101-P5-SECTION P1 & P2

SD-Q-2001-P16-GROUND FLOOR PLAN

SD-Q-2201-P4-GROUND FLOOR  
CEILING PLAN

SD-Q-3001-P12-NORTH AND EAST  
ELEVATIONS

SD-Q-3002-P11-SOUTH AND WEST  
ELEVATIONS

SD-Q-3101-P3-SECTION Q1 & Q2

SD1001-P12-PROPOSED SITE PLAN

SD1301-P3-TEMPORARY SCHOOL  
PLAN

SD1401-P3-STAGING SITE PLAN

SD1502-P7-AMMENITIES STRATEGY

SD1601-P3-SITE ANALYSIS

SD1602-P3-SHADOW DIAGRAMS

SD1603-P3-EXTERNAL MATERIALS 1

SD1604-P3-EXTERNAL MATERIALS 2

SD1605-P3-EXTERNAL MATERIALS 3

SD1608-P1-BLOCK N & P STREET  
ELEVATION

SD1609-P2-TREE PLAN



## Design Review

### Accessibility Assessment

## Accessible Paths of Travel

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### Overview

To meet the Access to Premises Standards Part 2.1 and BCA D3.2, accessible paths of travel are proposed to be provided from the allotment boundary to the principal pedestrian entrance of the school and linking to all areas of the school where new work is occurring. The following pathways provide accessible links through the school:

- a new accessible pedestrian entrance at the Ridgecrop Drive allotment boundary via a new pathway that has gradients and crossfalls that comply with AS1428.1
- existing secondary pedestrian entrance from Gilbert Road is proposed to be maintained
- new secondary entrance from Gilbert Road to the Hall Building Q
- a new lift linking the entrance level with the principal school entrance in the new admin building (Building N)
- the new lift links all levels of the new buildings (N & P) as well as linking to the new Hall entrance and the new central circulation spine
- the new central circulation spine links the new buildings to refurbished Building A (via existing ramps); refurbished Building E and existing toilet blocks D & F
- a new access way linking the new admin building with building A and the existing staff parking area

### Parking

Parking is not in the scope of the upgrades. The school currently provides accessible parking in the existing northwest carpark.

### Accessways Linking to Areas of New Work

To meet the requirements of the Premises Standards and BCA part D3.1, continuous accessible paths of travel meeting the functional requirements of AS1428.1 (2009) are proposed to and throughout the new and refurbished buildings via the provision of lift / ramp access linking all levels of the buildings and circulation space at corridors, lift lobbies and new doors, with the exception of the following:

- latch side circulation space at some sliding doors
- circulation space between door leaves at corridor QR0020 to accessible toilet in hall (1450mm required)

### Accessways Linking to Existing Buildings

The existing ramps in front of Buildings G & H provide functional paths of travel to these existing buildings, the multi-purpose hall (Building B), the canteen and refurbished Building A.

Existing functional paths of travel also connect to the existing Home Bases in Buildings I and M.



## Design Review

### Accessibility Assessment

## Vertical Links

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### Stairways

New external stairs are proposed to link the principal pedestrian entrance with the admin building. Building N and P are proposed to have stairs linking all levels. New stairs are also indicated outside the new hall, linking to the central circulation spine.

To meet the BCA (2016) part D3.3 (a) stairways, (except for stairways in exempted areas and fire isolated stairs) are required to comply with AS1428.1 clause 11 and BCA D3 to include double height handrails, highlighting on step nosing and tactile ground surface indicators.

To meet the requirements of the BCA (2016) part D3.8 tactile ground surface indicators (tgsi) complying with AS1428.4.1 (2009) are required to be provided at stairways.

Seating steps are proposed outside the hall.

### Lifts

One new lift is proposed, located between Building N and Building P. The lift is proposed to have dimensions and door clearance that complies with BCA D3.3 (b) and E3.6.

### Landscaping

Landscape plans have not been reviewed at this stage.

### Wheelchair Seating Spaces

A tiered seating area is proposed in the library. Wheelchair seating spaces are proposed to be provided on the ground floor and Level 1 (accessed via lift). The wheelchair seating spaces are indicated to have dimensions and manoeuvring space in accordance with AS1428.1 clause 18.



## Design Review

### Accessibility Assessment

## Sanitary Facilities

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### Sanitary Facilities

To meet the Premises Standards and BCA (2016) part F2.4 the buildings are proposed to include the following sanitary facilities:

#### Building N

Ground floor:

- Unisex accessible sanitary facility with shower.
- A unisex sanitary compartment suitable for a person with an ambulant disability.

Level 1:

- Unisex accessible sanitary facility
- A sanitary compartment suitable for a person with an ambulant disability in the male and female toilets.

Level 2:

- Unisex accessible sanitary facility
- A sanitary compartment suitable for a person with an ambulant disability in the male and female toilets.

#### Building P

Ground floor:

- Unisex accessible sanitary facility (staff)
- One male and one female sanitary compartment suitable for a person with an ambulant disability.

Level 1:

- A sanitary compartment suitable for a person with an ambulant disability in the male and female toilets.

Level 2:

- A sanitary compartment suitable for a person with an ambulant disability in the male and female toilets.

#### Building Q (Hall)

- Unisex accessible sanitary facility and shower
- 2 x unisex sanitary compartments suitable for a person with an ambulant disability.

#### Buildings D & F

- Existing toilets

Cubicles for people with ambulant disabilities are proposed to include dimensions and features complying with AS1428.1 clauses 13.4 and 16 and figures 34 and 53.



## Design Review

### Recommendations

#### Accessible Paths of Travel To the School

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In ongoing design, to comply with the BCA and AS1428.1 2009 clause 7.1 and 10.2, include the following for new walkways:

- i. A minimum 1000mm unobstructed path width and 2m vertical clearance (AS1428.1 clause 6.2 and 6.3) or provision of a suitable barrier.
- ii. Circulation space for a wheelchair to turn - 90° turn minimum 1500mm width x 1500mm length; 180° turn minimum 1540mm width x 2070mm length (clause 6.5 and figures 4 and 5).
- iii. A slip resistant surface that is traversable by people who use a wheelchair and those with an ambulant or sensory disability.
- iv. The ground surface abutting the sides of the walkway to provide 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 600mm unless one of the following is provided:
  - a kerb
  - a kerb rail and handrail
  - a wall not less than 450mm high
  - Landings at intervals not exceeding 15m (1:20 gradient); 25m (1:33 gradient)
  - A constant gradient between level landings.
  - A crossfall no steeper than 1:40; bitumen surfaces may include a camber or crossfall no steeper than 1:33.
- v. Kerb ramps to provide a maximum rise of 190mm, length no greater than 1520mm and gradient not steeper than 1:8, with a 1500mm landing at the top where there is a change of direction required.
- vi. To meet the intent of the DDA, provide an accessible height section of counter at the reception desk – 850mm AFFL, to meet AS1428.2 clause 24.1.1.



## Design Review

### Recommendations

#### Accessible Paths of Travel Through the School

- i. All doorways for public and staff areas (excluding any exempt areas meeting the BCA part D3.4) are to include a clear opening at the active leaf (minimum 850mm) and circulation spaces to meet the requirements of AS1428.1 (2009) clauses 13.2 and 13.3 and figures 31 - 34.
- ii. Provide circulation space at sliding doors that complies with the functional requirements of AS1428.1 clause 13.
- iii. To meet the BCA part D3.12 (2016), unframed glazed doors and walls are to be provided with visual indicators to fully comply with AS1428.1 clause 6.6 (2009)
- iv. Doorways are required to be provided with luminance contrast to meet the requirements of AS1428.1 (2009) clause 13.1.
- v. Luminance contrast (colour of whole column or a band of luminance contrast) is recommended to be applied to columns in access ways, such as the column in the middle of the ramp link to Level 1.
- vi. The force required to activate door closers, glazed or pivot action doors meet as closely as possible the requirements of AS1428.1 (2009) clause 13.5.2(e).
- vii. All door handles and related hardware shall allow the door to be unlocked and opened with one hand and be such that a hand of a person who cannot grip will not slip from the handle during the operation of the latch as per AS1428.1 (2009) clauses 13.5.1 - 3 and figures 35 – 37.
- viii. To meet the BCA part D3.3 (c), corridors include circulation space for a wheelchair to turn within 2m of the end of a passage way where it is not possible to continue traveling along the accessway (90° minimum 1500mm width x 1500mm length; 180° minimum 1540mm width x 2070mm length) to comply with AS1428.1 (2009) clause 6.5 and figures 4 and 5; in particular the corridor outside the general office in the admin building.
- ix. Ramps to stage to include gradients, handrails and tactile ground surface indicators to meet the requirements of AS1428.1 clause 10.3 and figures 13-19:
  - A maximum slope of 1:14
  - A constant gradient between level landings
  - An unobstructed/clear width minimum 1000mm
  - Minimum landing length of 1200mm where there is no change in direction; 1540mm x 2070mm at the change in direction
  - Handrails on both sides that include a 300mm horizontal extension at the top and bottom and set back by a minimum of 300mm so that the handrail does not protrude into the transverse path of travel



## Design Review

### Recommendations

#### Vertical Links

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- i. To meet BCA D3.3 and AS1428.1 clause 11, ensure in ongoing design new internal and external stairs include double height handrails on both sides that include a 300mm horizontal extension at the top and bottom set back by a minimum of 600mm so that the handrail does not protrude into the transverse path of travel as per AS1428.1 (2009) figure 26(A); nosing profiles which include 50-75mm wide solid slip resistant highlighting strips on the tread at the nosing that includes a minimum luminance contrast of 30% with the tread to comply with AS1428.1 figures 27(a) and (b); tactile ground surface indicators (tgsi) in a band 600mm deep set back 300mm from the top and bottom tread and opaque risers.
- ii. Ensure in ongoing design, to comply with BCA D3.3 (b) and E3.6 the new lift is one of the types identified in Table E3.6a, and includes the following features in accordance with AS1735.12:
  - a. A handrail complying with the provisions for a mandatory handrail in AS 1735.12 clause 5.3
  - b. Minimum clear door opening of 900mm as in AS 1735.12 section 2
  - c. Passenger protection system complying with AS 1735.12 clause 4.2
  - d. Lift car and landing control buttons complying with AS 1735.12 section 7 for Braille, tactile and luminance contrast
  - e. Lighting complying with AS 1735.12 section 10
  - f. 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



## Design Review

### Recommendations

#### Sanitary Facilities

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- i. Ensure in ongoing design that new unisex accessible sanitary facilities include a layout, circulation space (door, WC pan, basin) and fittings to meet the requirements of AS1428.1 clause 15.
- ii. Ensure in ongoing design that the proposed combined accessible shower and sanitary facilities include circulation space for an accessible shower to meet AS1428.1 clause 15.
- iii. Ensure that in ongoing design cubicles for people with ambulant disabilities includes features complying with AS1428.1 clause 13.4 and 16 and figures 34 and 53 (signage, entry airlock and cubicle door circulation, WC pan, grabrails, toilet paper dispenser, clothes hook).
- iv. Provide left and right-handed layout accessible sanitary facilities as evenly as possible.





## Design Review

### Recommendations

#### Wayfinding, Emergency Egress, Hearing Augmentation

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- i. Development of individual evacuation plans for staff or students with a disability is recommended as part of the school operational management strategy.
- ii. To meet AS3745 (2009) Planning for Emergencies in Facilities we recommend in ongoing design that consideration be given to the inclusion of suitable emergency evacuation devices for people to be carried down stairs.
- iii. In ongoing design, if an inbuilt amplification system is to be installed in the hall and library, BCA (2016) part D3.7 requires a hearing augmentation system to be provided where an inbuilt amplification system, other than one used for emergency warning is installed in an auditorium, conference room or meeting room in Class 9B Building. If required, an induction loop must be provided to not less than 80% of the floor area of the room.



## Conclusion

## Conclusion

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Having reviewed the listed drawings, it is our opinion that at this stage of the design, and with the inclusion of the recommendations in ongoing detailed design, the access provisions for people with physical and sensory disabilities in the proposed new work can comply with the functional accessibility requirements of BCA (2016) sections D3, E3.6 and F2.4; AS1428.1, AS1735.12 and the Disability (Access to Premises - Buildings) Standards 2010 for accessibility and equity.

With the development and implementation of the recommended operational management strategies, the provision of access for people with a disability in the proposed new and refurbished school facilities at Samuel Gilbert Public School, Castle Hill, can provide continuous accessible paths of travel and the equitable provision of accessible facilities to provide inclusive design to meet the anticipated requirements of staff, students and visitors.

I certify that I am an appropriately qualified and competent person practising in the relevant area of work. I have recognised relevant experience in the area of work being reviewed. My company is holding appropriate current insurance policies.

Jen Barling | Access + Inclusion Consultant

Qualifications: Bachelor of Applied Science (Occupational Therapy) (1999)

Affiliations: Accredited with Association of Consultants in Access, Australia (No.300)

Registered Occupational Therapist (no: OCC0001724072)