



Morris Goding  
Access Consulting

Hutchinson Builders

4-6 Bigge Street, Liverpool,  
NSW 2170

**Access Review –  
Final**

20 May 2019



| REPORT REVISIONS |         |   |
|------------------|---------|---|
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This report prepared by:

A handwritten signature in black ink, appearing to be 'Ed Daniel', with a long horizontal stroke extending to the right.

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## 8.0. Executive Summary

The Access Review Report is a key element in the design development 4-6 Bigge Street, Liverpool, NSW 2170, and an appropriate response to the AS1428 series, Building Code of Australia (BCA), DDA Access to Premises Standards (including DDA Access Code) and ultimately the Commonwealth Disability Discrimination Act (DDA).

Morris-Goding Accessibility Consulting has prepared the Access Report to provide advice and strategies to maximise reasonable provisions of access for people with disabilities.

The review will ensure that ingress and egress, paths of travel, circulation areas, and sanitary facilities comply with relevant statutory guidelines, and in addition, compliance with a higher level of accessibility and inclusiveness benchmarks set by the project.

## 2. Introduction

### 2.1. Background

Turner has engaged Morris-Goding Accessibility Consulting, to provide a design review of 4-6 Bigge Street, Liverpool, NSW 2170. The development consists of a residential building.

The proposed development falls under a number of BCA classifications:

- Class 2 (residential building)

The requirements of the investigation are to:

- Review supplied drawings of the proposed development;
- Provide a report that will analyse the provisions of disability design of the development, and;

Recommend solutions that will ensure the design complies with the Disability Discrimination Act (DDA), Building Code of Australia (BCA), relevant Australian Standards, and enhanced benchmark requirements set by the project.

### 2.2. Objectives

The report seeks to ensure compliance with statutory requirements and enhanced benchmark requirements set by the project. The report considers user groups, who include students, staff, and members of the public. The report attempts to deliver equality, independence and functionality to people with a disability inclusive of:

- People with a mobility impairment (ambulant and wheelchair);
- People with a sensory impairment (hearing and vision), and;
- People with a dexterity impairment;

The report seeks to provide compliance the Disability Discrimination Act 1992. In doing so, the report attempts to eliminate, as far as possible, discrimination against persons on the ground of disability.

### 2.3. Limitations

This report is limited to the accessibility provisions of the building in general. It does not provide comment on detailed design issues, such as: internals of accessible/ambulant toilet, fit-out, lift specification, slip resistant floor finishes, door schedules, hardware and controls, glazing, luminance contrast, stair nosing, TGSIs, handrail design, signage etc. that will be included in construction documentation.

### 2.4. Accessibility of Design

The proposed design will utilise the Federal Disability Discrimination Act (DDA), Disability (Access to Premises – Buildings) Standards 2010, BCA/DDA Access Code, Universal Design principles, the AS1428 Series and other design guidelines, to develop appropriate design documentation and to provide reasonable access provisions for people with disabilities.



The project architect and an appropriately qualified accessibility consultant will examine key physical elements during design development stage, to identify physical barriers and incorporate solutions as a suitable response to disability statutory regulations and other project objectives.

The design will be developed to ensure the principles of the DDA are upheld. Under the DDA, it is unlawful to discriminate against people with disabilities in the provision of appropriate access, where the approach or access to and within a premise, makes it impossible or unreasonably difficult for people with disabilities to make use of a particular service or amenity.

The design will comply with the requirements of the DDA Access to Premises Standards and include requirements for accessible buildings, linkages and the seamless integration of access provisions compliant with AS1428.1. The developed design will consider all user groups, who include members of the public, visitors, students and staff members.

## **2.5. Statutory Requirements**

The statutory and regulatory guidelines to be encompassed in the developed design to ensure effective, appropriate and safe use by all people including those with disabilities will be in accordance with:

- Federal Disability Discrimination Act (DDA);
- Disability (Access to Premises – Buildings) Standards 2010;
- Building Code of Australia (BCA) Part D3, F2, E3;
- AS 1428.1:2009 – (General Requirement of Access);
- AS 1428.4.1:2009 – (Tactile Ground Surface Indicators);
- AS 2890.6:2009 – (Parking for People with Disabilities);
- AS 1735.12:1999 – (Lift Facilities for Persons with Disabilities);
- Liverpool Local Council DCP 2018 Part 1 – General Control Plans for all Developments.

Please note that there are also additional advisory standards (not currently referenced by BCA or DDA Premises Standards) as well as other relevant guidelines that will be considered, as relevant to promote equity and dignity in line with over-arching DDA principles and aspirational objectives. These include:

- Universal Design Principles;
- Human Rights Commission (HEREOC);
- Advisory Note February 2013 on Streetscape, Public, Outdoor Areas, Fixtures, Fittings and Furniture;
- AS1428.2:1992 – (Enhanced and Additional Requirements);
- AS1428.4.1 – (Draft Way-Finding Standard);



- AS3745:2010 – Planning for Emergencies in Facilities (To Assist with Design Strategies for Provision for Escape for People with Disability that may Require Assistance);

### 3. General Access Planning Considerations

The Disability Discrimination Act 1992 (DDA) is a legislative law that protects the rights of all people. The Act makes disability discrimination unlawful and promotes equal rights, equal opportunity and equal access for people with disabilities. The Australian Human Right Commission is the governing body who control and enforce DDA compliance.

Nevertheless, building elements that provide insufficient accessible provisions for people with disabilities remain subject to the DDA. The improvement of non-compliant building elements and areas to meet current access requirements will mitigate the risk of a DDA complaint be made against the building owner.

Since the 1st May 2011, the Commonwealth's Disability (Access to Premises – Buildings) Standards 2010 (DDA Premises Standards) apply to all new building works and to affected parts of existing buildings.

The DDA Premises Standards' requirements (DDA Access Code) are mirrored in the access provisions of the BCA. New building work and affected parts must comply with the DDA Premises Standards and AS1428.1:2009 in the same manner as they would comply with the BCA by meeting deemed-to-satisfy provisions or by adopting an alternative solution that achieves the relevant performance requirements.

By utilizing AS1428 suite of Standards, the overall aim is to provide continuous accessible paths of travel to connect the proposed development to and through public domain areas and between associated accessible buildings in accordance with the DDA Access Code.

MGAC supports the use and consideration of universal design (UD) principles into the design to maximize access for all people. We will assist the design team to incorporate UD principles where possible within the project, while still meeting mandatory compliance requirements.

A UD approach has numerous benefits for the client as an education provider, for businesses within the building, for individual users and for society in general. An inclusive environment that can be accessed, understood and used by as many people as possible, is good business sense, is more sustainable and is socially progressive, in line with the aims of the DAP.

Universal Design Principles consider the needs of a broad range of people including older people, families with children and pushing prams, people from other cultures and language groups, visitors in transit and people with disability. By considering the diversity of users, the design will embed access into and within it, so that benefits can be maximized, without adding on specialized 'accessible' features that can be costly, visually unappealing and may perpetuate exclusion and potential stigma.

The seven key Universal Design Principles to consider in the on-going design include:

- Principle 1: Equitable Use
- Principle 2: Flexibility in Use
- Principle 3: Simple and Intuitive Use
- Principle 4: Perceptible Information



- Principle 5: Tolerance for Error
- Principle 6: Low Physical Effort
- Principle 7: Size and Space for Approach and Use

## 4. Ingress & Egress

### 4.1. External Linkages

The BCA and DDA Premises Standards contain requirements for site approaches for the use of persons with disabilities. These requirements can be summarised as follows:

- It will be necessary to provide an accessible path of travel from main pedestrian entry points at the site allotment boundary to all building entrances compliant with AS1428.1:2009. Currently, this has been achieved as a level 1:40 transition from the pedestrian linkage to site is shown.
- An accessible path of travel to building entrances (required to be accessible) from associated accessible car-parking bays, compliant with AS1428.1:2009 is required. Currently, this has been achieved as car parking bays to the entrance has been provide via access of lifts.

#### Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

### 4.2. Entrances

The BCA and DDA Premises Standards contain requirements for building entry for the use of persons with disabilities. These requirements can be summarised as follows:

- Access is required through at least 50% of entrances, including the principal pedestrian entrance/s to all buildings or parts of buildings). Note it is preferred that all entrances are accessible. Currently, this has been achieved as there is an accessible path of travel to the main entrance of the building lobby area.
- A non-accessible entry cannot be located more than 50m distance from an accessible entry (for buildings greater than 500m<sup>2</sup>). Currently, this has been achieved as a ramp has been provided adjacent to the stairs from the main entrance point.
- All accessible doors to have 850mm min. clear width opening and suitable door circulation area, compliant with AS1428.1:2009. Note: Manual doors require lightweight door forces to be operable by people with disabilities (20N max.). We recommend that main entrances include automated sliding doors to be used where possible.
- An accessible path of travel e.g. ramp or lift needs to be provided adjacent (or in reasonable proximity) to any stair access. Note: providing choice of access route directly adjacent so that people can start and finish in the same location/travel similar route promotes inclusion and UD principles. Currently, this has been achieved as a ramp has been provided adjacent to the stairs from the main entrance point.

#### Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

#### **4.3. Emergency Egress**

BCA 2019 Part D2.17 has requirements for all fire-isolated egress stairs from areas required to be accessible (not communication stairs) to include at least one continuous handrail designed to be compliant with AS1428.1 Clause 12. Provision of an off-set tread at the base of stair flights or an extended mid-landing that will allow a 300mm extension clear of egress route is considered appropriate for achieving a consistent height handrail (without vertical or raked sections). Such an off-set tread configuration has been shown at the majority of stairs and would appear to be possible elsewhere, subject to further detail design.

Where fire-isolated egress stairs will also be used for communication stair purposes between levels, they should be designed to meet AS1428.1:2009. Confirmation is required on the likely use of certain stairs for this purpose.

There is currently no mandatory requirement within BCA or DDA Premises Standards for provision of independent accessible egress for people with a disability in accordance AS1428.1 and this remains an important DDA issue. Consideration of an accessible egress strategy with emergency evacuation plan will be needed as a minimum starting point.

Consideration of waiting spaces within fire-stairs should be strongly considered for people with mobility impairment.

The current configuration of stairs suggests the spatial requirements would not be incorporated without layout amendments, but if provided with future design development these would generally require:

- 850mm min. clear width egress door and 510mm min. external door circulation area, compliant with AS1428.1:2009.
- Wheelchair space (800mm W x 1300mm L min. dimensions) within fire-isolated stair, outside of the required egress path, that can be accessed on a continuous path of travel.
- Alternative evacuation means e.g. emergency passenger lift/s could be provided instead of/ or only in addition to 'waiting spaces' in line with ABCB Handbook and/or consideration of stair evacuation devices (with appropriate storage and staff training) within fire stairs.

## 5. Paths of Travel

### 5.1. Circulation Areas

The BCA and DDA Premises Standards contain requirements for circulation areas for the use of persons with disabilities. These requirements can be summarised as follows:

- Wheelchair passing bays (1800mm width x 2000 length) are also required when a direct line of sight is not available and are to be provided at 20m max. intervals along access-ways. Currently, the drawings provided show 1800mm x 2000mm passing bays have been provided at adequate location, and that the majority of path ways measures at a min. of 1800mm wide.
- Turning spaces (at least 1540mm W x 2070mm L) are required within 2m of every corridor end and at 20m.max intervals along all access-ways. This is needed for wheelchairs to make a 180 degree turn, compliant with AS1428.1:2009. Currently, this is not fully achieved on all residential levels. However, given the nature, MGAC will support under a future performance solution that this is acceptable.
- All common-use doors (i.e. not excluded under Part D3.4) to have 850mm min. clear width opening (each active door leaf) and suitable door circulation area, compliant with AS1428.1:2009. Currently, this requirement has been achieved. Further work to be done at DD to ensure compliance is carried through.
- All common-use corridors and accessible paths of travel to be at least 1000mm min. width when travelling in linear direction. Note: Increased clear width paths of travel required for doorway circulation, turning areas etc. Currently, this requirement has been achieved. Particular alternation to the external path way is to be done to achieved compliance in accordance with AS1428.1. However, there is sufficient space provided for this requirement to readily achieve compliance with AS1428.1 and the DDA Premises standards.

#### Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

### 5.2. Passenger Lifts

The BCA and DDA Premises Standards contain requirements for passenger lifts and circulation areas for the use of persons with disabilities. These requirements can be summarised as follows:

- Passenger lifts to have min. internal size at floor of 1400mm width x 1600mm depth, compliant with BCA/DDA Access Code Part E3.6 and AS1735.12. Currently, the lifts measure 1380mm x 2100mm. Passenger lift internal dimension require adjustment to comply with AS1735.12 and the DDA Premises Standards, however, sufficient room is available to meet said requirements.



- All lift lobbies and main corridors on each level to have 1800mm min. clear width to allow two wheelchairs ability to space pass each other. Currently, the drawings show that passing bays in front of all lift lobby areas has been achieved.

#### Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

### **5.3. Ramps**

The BCA and DDA Premises Standards contain requirements for stairs and ramps for the use of persons with disabilities. These requirements can be summarised as follows:

- Ramps are to have maximum 1:14 gradient with landings at no more than 9 metre intervals. Currently, this requirement has been achieved as the ramp gradient is shown as 1:14.
- Ramps are to have handrails on both sides with minimum 1 metre clearance in accordance with AS1428.1.
- Landings are to have 1200mm length with 1500mm length at 90 degree turns. Currently, the switch back ramp landing is required to have a 1540mm x 2070mm clear of future handrail fitment.
- Ramps are to be offset to ensure no encroachment of handrail extensions into from transverse path of travel at top and bottom of ramp. Currently, this has been provided and correct fitment of handrails can be achieved in accordance with AS1428.1 and the DDA Premises Standards.

#### Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

## 6. Adaptable Units

### 6.1. Adaptable Unit Provision

The concept of adaptable housing is to design units with provisions in place from the outset (pre-adaptation) so they can be easily adapted to meet changing needs of residents in the future (post-adaptation) in accordance with AS4299. Currently, there are no council DCP requirements to provide adaptable units and current adaptable unit provisions are implemented by the client. In addition, page 6. of the LAHC PPR requests that 10% of units comply with AS4299 to be 2-bedroom units.

The following requirements are to be satisfied in the provision of adaptable units;

- A total of 52 units are provided through the development, 29 being 1-bedroom units and 23 being 2-bedroom units, 6 adaptable units are required based on client requirements.
- The adaptable units are to be designed in accordance with AS4299 Class C.

#### Assessment

The adaptable units have been nominated as units 0.02, 1.02, 2.02, 3.03, 6.03, 7.03 which are a mixture of 1 and 2 bed types.

### 6.2. Adaptable Unit Design

The following requirements are to be satisfied in the provision of adaptable unit design at pre-adaptation stage.

- The entry door of the unit achieves 850mm clear width opening (920mm door leaf). Latch side clearance of 530mm needs to be achieved at pre adaptation, externally and internally of the door in accordance with AS4299. Currently, unit internal entry doors require door circulation as per AS1428.1 fig. 31.
- The kitchen needs 1550mm circulation space outside of the kitchen work spaces. Currently, this requirement has been achieved.
- The bathroom needs to be of an adequate size to achieve an AS1428.1 compliant bathroom of shower, WC and basin with required circulation spaces. Capped off service can be provided for the relocation of basin at post adaptation. The shower recess will require review during design development. Currently, a shower recess min. of 1160mm x 1100mm is required at pre adaptation stage and works to water proofing at shower recess to not be changed from pre to post stage.
- The living area needs to be large enough to achieve a circulation space of 2250mm min. diameter after furniture placement, compliant with AS4299. Currently, this requirement has been achieved.



- The bedroom needs to achieve 1 metre either side of queen size bed and 1550mm x 2070mm at the base of bed or similar configuration. Currently, this requirement has been achieved.
- The laundry area requires 1500mm in front of laundry appliances in accordance with AS4299. Currently, this requirement has been achieved.
- All doors need to achieve 850mm clear opening width from the outset and easily achievable latch side clearances at post adaptation, compliant with AS1428.1:2009. Currently, this requirement has been achieved. However, the secondary bedroom of both adaptable unit types requires door circulation as per AS1428.1. fig. 31.

### Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

## 7. SEPP 65 Silver Livable Units

### 7.1 Silver Livable Unit Provision

The following requirements are to be satisfied in the provision of visitable units

- Client has issued a self-imposed requirement of 100% Silver Level Livable Housing required.
- Note the 10% adaptable units can be counted in the 20% calculation if the apartment also meets the following requirements.

### *Assessment*

### 7.2 Silver Livable Unit Design

The following requirements are to be satisfied in the design of these units

- The entry door into the units are to be detailed to achieve suitable clear width of at least 820mm during detailed design development stage to be compliant with Silver Level rating requirements in accordance with Livable Housing Design Guideline 2015:
- From the unit entry, there needs to be appropriate 1m clearances throughout the unit to allow suitable accessible paths of travel within accordance with Silver Level rating requirements in accordance with Livable Housing Design Guideline 2015. Drawings show compliance is achievable. To be worked through at further detail at DD stage.
- All internal doorways into bathroom, bedroom and out to balcony are required to achieve at least 820mm clear open widths in accordance with Silver Level rating requirements in accordance with Livable Housing Design Guideline 2015. This can be achieved during detailed design development.



- The silver levels units require bathrooms that can accommodate the required 900mm wide by 1200mm long clear visitable toilet circulation space in front of the leading edge of the pan compliant with Silver Level rating requirements in accordance with Livable Housing Design Guideline 2015. Drawings show compliance is achievable. To be worked through at further detail at DD stage.
- The walls surrounding the shower and toilet pan require sufficient reinforcements for the provision of grab rails in the future when required. Drawings show compliance is achievable. To be worked through at further detail at DD stage.

### *Assessment*

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

## 9.0. Amenities

### 9.1. Common Areas

The BCA and DDA Premises Standards contain requirements for common use areas suitable for the use of persons with disabilities. These requirements can be summarised as follows:

- Access is required to a unique common use facility such as swimming pool, sauna, common laundry, entertainment rooms. Accessibility is also required to common use courtyards within buildings. Drawings show compliance is achievable. To be worked through at finer details at DD stage.
- Mailboxes and garbage rooms within residential buildings require appropriate accessibility. Currently, sufficient room has been provided to access the mailbox and garbage rooms.

#### Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

### 9.2.1 Car Parking

The BCA and DDA Premises Standards contain requirements for parking which are applicable to this project. These requirements can be summarised as follows:

- Accessible car bays require 2.4m with 2.4m shared area. Currently, accessible parking bays and adjacent share areas in accordance with AS2890.6 and AS4299-1995. Both these standards conflict yet on which type of accessible car bay is preferred, yet both are considered applicable and compliant.
- Class 2 (residential): Provide an adaptable unit car bay (6x Adaptable units) for each adaptable unit. These car bays can have 3.8m width or 2.4m with 2.4m shared zone. Drawings show a split with 4x car bays being the compliant 3.8m wide car bays compliant with AS4299-1995, and 2x accessible car bays that trying to comply with AS2890.69. MGAC can see that accessible car bays 20 and 12 don't provide the required 2.4m shared space, only a portion of it. However, MGAC would accept if car space 1 and 2 became accessible and utilised the aisle as the loading zone for accessible users. This is acceptable as the expected traffic down here would be low and the aisles are wide enough that a car could go around someone in a wheelchair loading into their car. This will be covered under a future performance solution if required. Client to update drawing to reflect these changes for DD stage.
- All accessible car bays to be located near relevant lifts and/or associated building entry points to minimise distance to relevant lift and ensure accessible path of travel between these areas. Residential car park is close enough to lift core from all car parks that any car bay could be considered an acceptable distance.



- Ensure 2.5m min. height clearance, compliant with AS2890.6 fig. 2.7 over accessible car bays with 2.2m min. vertical clearance leading to the accessible and adaptable unit car bays (Note: consideration for 2.3m or 2.4m min. height preferred for higher vans/adapted vehicles is recommended as good practice). Drawings don't show elevation details for the car park. To be worked through at DD stage.

### Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. Minor mark-ups will be required by the client for the DD stage, however compliance can be readily achieved as per above comments.

On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

## 10.0.Conclusion

MGAC has assessed the proposed scheme for 4-6 Bigge Street, Liverpool, NSW 2170. The proposed drawings indicate that accessibility requirements, pertaining to external site linkages, building access, common area access, sanitary facilities and parking can be readily achieved. It is advised that MGAC will work with the project team as the scheme progresses to ensure appropriate outcomes are achieved in building design and external domain design.