OWNER AND APPLICANT

D&C PARTNER

ACCESS CONSULTANT

Lendlease

D14 Academic Building

Access Report prepared for UNSW Sydney Final v2

8 November 2018

Morris Goding
Access Consulting
ABN 70 414 330 060

Studio 106
56 Bowman Street
Pyrmont NSW 2009

T (02) 9692 9322
F (02) 9692 8433
W mgac.com.au

NSW
QLD
VIC

Morris Goding
Access Consulting

REPORT REVISIONS		
Date (Y.M.D)	**Version**	**Drawing No / Revision**
2018.10.19	Draft	ADDA00000; ADDA00001; ADDA20000; ADDA20M00; ADDA20100; ADDA20200; ADDA20300; ADDA20700; ADDA20800; ADDA20900; ADDA41000; ADDA42000; ADDA43000; ADDA44000; ADDA51000; ADDA52000; and ADDA20100.
2018.11.06	Final	ADDA00000-02; ADDA00001-02; ADDA00002-02; ADDA20000-02; ADDA20M00-02; ADDA20100-02; ADDA20200-02; ADDA20300-02; ADDA20700-02; ADDA20800-02; ADDA29000-02; ADDA41000-02; ADDA42000-02; ADDA43000;-02 ADDA44000-02; ADDA51000-02; and ADDA52000-02.
2018.11.08	Final v2	Ditto.
-	-	-

This report prepared by:

Eden Fong
Senior Access Consultant
Morris Goding Access Consulting

Morris Goding
Access Consulting

Table of contents

Morris Goding
Access Consulting

1. Executive Summary

The Access Review Report is a key element in the design development of UNSW D14 Academic Building, and an appropriate response to the AS1428 series, Building Code of Australia (BCA), DDA Premises Standards (including DDA Access Code) and ultimately the Federal Disability Discrimination Act (DDA).

Morris Goding Access 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 all of the following elements comply with relevant statutory guidelines, and in addition, compliance with a higher level of accessibility and inclusiveness benchmarks set by the project: ingress and egress; paths of travel; circulation areas; common area access; and sanitary facilities.

2. Introduction

2.1 Background

Lendlease has engaged Morris Goding Access Consulting to provide an accessibility design review of the D14 Academic Building at UNSW Sydney (The University of New South Wales).

The site of the project is located within the Kensington Campus of UNSW on Anzac Parade in Kensington NSW 2052. The project will include the following elements:

- A new education building, cited herein as 'the subject building'; and
- Associated landscaping and site works.

The following table sets out the building classifications and locations of the various elements of the subject building:

Location	Element	Building Classification
Ground Level	Retail tenancies	Class 6
Ground Level	Parents room, bicycle parking room, and end-of-trip facilities	Class 9b
Ground Level, and Levels 1 and 2	Student-led spaces	Class 9b
Levels 1-3	Centrally Allocated Teaching Spaces ('CATS')	Class 9b
Levels 4-7	Academic workspaces	Class 5

The requirements of the investigation are to:

- Review the supplied drawings of the project;
- Provide a report that will analyse the provisions of disability design of the project; 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. The Report considers user groups, who include students, staff, and members of the public. The Report seeks 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 ensure the development is designed to meet the object of the Disability Discrimination Act 1992 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-resistance of 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

This report will apply all of the following for the purposes of providing reasonable access provisions for people with disabilities: the Federal Disability Discrimination Act (DDA), the Disability (Access to Premises – Buildings) Standards 2010, the BCA, Universal Design principles, the AS 1428 Series, and other design guidelines.

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

2.5 Statutory Requirements

The report has been prepared with reference to the following:

- Randwick City Council Development Control Plan 2013
- AS1428.1(2009) – Design for Access and Mobility
- AS1735.12(1999) – Lift Facilities for Persons with Disabilities
- Building Code of Australia (BCA) Parts D3, F2, and E3
- Federal Disability (Access to Premises – Buildings) Standards 2010, Schedule 1 of which is known as the ‘Access Code for Buildings’
- Federal Disability Discrimination Act 1992 (DDA)

There are also additional advisory standards that are not currently adopted by the DDA Access Code 2010 or the BCA or that can be considered, including:

- Universal Design Principles
- AS1428.2(1992) – Enhanced and Additional requirements

Morris Goding
Access Consulting

3. General Access Planning Considerations

3.1 Codes

The Disability Discrimination Act 1992 (DDA) is federal legislation. Under the DDA, it is unlawful to discriminate against a person on the grounds of that person's disability.

The Disability (Access to Premises – Buildings) Standards 2010 ('Premises Standards 2010') are disability standards that were made pursuant to the DDA. The Premises Standards 2010 entered into force on 1 May 2011, and apply both to new buildings and the affected parts of existing buildings. Schedule 1 of the Premises Standards 2010 is also known as the Access Code 2010. The disability provisions in the Building Code of Australia are substantially similar to those of the Access Code 2010.

Compliance with the Premises Standards 2010 and the BCA is achieved either via satisfaction of the Deemed-to-Satisfy requirements, or via an appropriate Performance Solution, or via a combination of both.

3.2 Universal Design

MGAC supports the use of universal design ('UD') principles to maximise access for all people. MGAC will assist the design team to incorporate UD principles where possible within the project, whilst still meeting mandatory compliance requirements.

UD principles consider the needs of a broad range of people including older people, families with children, 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 specialised 'accessible' features that can be costly, visually unappealing, and may perpetuate exclusion and potential stigma.

A UD approach has numerous benefits for the client, 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 makes good business sense, and is more sustainable.

The seven key Universal Design principles are:

- 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

Morris Goding
Access Consulting

4. External Linkages

4.1 General

The DDA Access Code 2010 and BCA contain requirements for site approaches to be suitable for persons with disabilities. These requirements can be summarised as follows:

- An accessible path of travel that complies with AS1428.1(2009) is required from the main pedestrian entry points at the allotment boundary to the building entrances.
- An accessible path of travel that complies with AS1428.1(2009) is required between buildings (or parts of buildings) that are connected by a pedestrian linkage.
- An accessible path of travel that complies with AS1428.1(2009) is required from associated accessible car bays to accessible building entrances.

4.2 Context

The subject building will be located within the Kensington Campus of UNSW. The subject building will be set back from both Anzac Parade and High Street. The context in which the subject building will sit is illustrated in plan below:

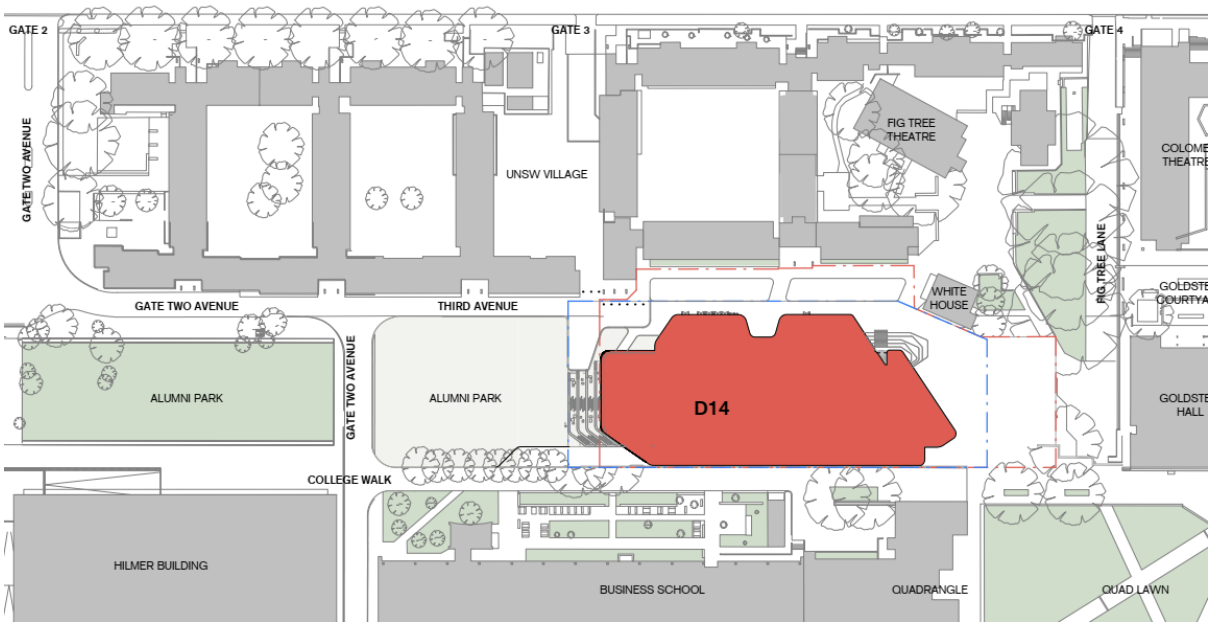

Figure 1: Extract (not-to-scale) from drawing ADDA00001. North is up the page, and High Street runs from left to right at the very top of the image.

There will be multiple external approaches to the subject building. Each approach is considered in turn below.

4.3 Fig Tree Lane and Third Avenue

Assessment

The allotment boundary of the Kensington campus of UNSW is located on the existing public roadway of High Street, which runs in an east-west alignment. The subject building will be offset a distance of some 80 metres from High Street. The existing Fig Tree Lane runs on-grade from High Street in a north-south alignment through the Kensington campus to the site of the subject building.

The project will include a new section of footpath that will run parallel to Third Avenue. The new section will run in an east-west alignment along the northern edge of the subject building. The new section will be capable of providing an accessible path of travel within the meaning of AS1428.1(2009) from the existing Fig Tree Lane to the various new building main entrances on the northern façade of the subject building for compliance with the DDA Access Code 2010 and BCA.

It is noted that there will be a new truck service bay on Third Avenue on Ground Level in the north-west sector of the building, as shown on drawing ADDA20000. The truck service bay will be on-grade with the adjacent pedestrian-only footpath. The vehicular path of travel will be designated as a 'shared zone'.

Insofar as trucks are sharing the same space as pedestrians, the trucks will pose a safety hazard for people with a disability. This is given that people with a disability may have not have the same capacity to detect an oncoming vehicle or, if they do detect an oncoming vehicle, they may not have the capacity to avoid that vehicle in time.

To address this safety risk for people with a disability, the area will require a package of safety measures. This could include, but would not be limited to, the folllowing: restricted hours of use for vehicles, speed limits, contrasting flooring, bollards, and clear signage. Alternatively, the use of a kerb-and-gutter roadway would be advisable in lieu of a shared zone. This area will be appropriately addressed during the design development phase.

4.4 South Colonnade and College Walk

Assessment

There will be a new colonnade that will run in an east-west direction on the southern edge of the Ground Level of the subject building, cited herein as the 'south colonnade'. The flooring of the south colonnade will be designed to provide an accessible path of travel that meets AS1428.1(2009) for users both in an east-west direction from Fig Tree Lane and the existing Quadrangle to the main entry doorways into the building.

The south colonnade will both abut, and run parallel to, an external pedestrian thoroughfare known as 'College Walk'. The works to construct the footpath of College Walk are not within the scope of the present application.

There may be a vertical drop in the finished flooring of the new south colonnade and that of the existing adjacent footpath. This will pose a safety risk for people with a vision impairment in particular. To address potential safety issues of any such fall, a balustrade, or

similar continuous obstruction, will be provided along the southern edge of the southern colonnade.

4.5 West Colonnade and Alumni Park

Assessment

There will be a new colonnade that will run in a north-south direction on the western edge of the Ground Level of the subject building, cited herein as the 'west colonnade'. There will be on-grade access to the west colonnade from both Third Avenue and the south colonnade for compliance with the DDA Access Code 2010 and BCA.

There will also be a series of terraced steps that will connect the existing turf of Alumni Park with the west colonnade. For the purposes of compliance with the DDA Access Code 2010 and BCA, the above steps are not classified as part of the subject building; rather, they are classified as a landscaping feature. As such, for the purposes of minimum compliance with those codes, there will be no requirement for those steps to include accessible features.

5. Main Entrances

5.1 General

The DDA Access Code 2010 and BCA contain requirements for building entrances to be suitable for the use of persons with disabilities. Key amongst those requirements are the following:

- The principal pedestrian entrance of the building is required to be accessible.
- Where there is more than one main entrance, access is required through at least 50 per cent of the entrances. Note that, wherever possible, it is preferred that 100 per cent of the entrances are accessible.
- For buildings with a floor area of greater than 500m^2, any non-accessible entrance cannot be located more than 50m distance from an accessible entrance.
- 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. Revolving doors are not deemed to be accessible; if they are provided, an alternate accessible entry door is required adjacent.
- An accessible path of travel, eg. 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 is accordance with UD principles.

The design will include multiple main entrances on Ground Level for the education element of the subject building. The design will also have separate main entrances for each of the retail elements of the subject building. Each is assessed in turn below.

5.2 Main Entrances – Education (Class 9b) and Offices (Class 5)

Assessment

The design will incorporate spaces with a building classification of Class 9b (education) on Ground Level and on Levels 1 and 2. The design will also incorporate spaces with a building classification of Class 5 (offices) on Levels 3-7.

There will be a total of five new pedestrian main entrances on Ground Level that will be for the common use of the Class 9b and Class 5 areas. Those five main entrances are annotated with red arrows in plan in Figure 2 below:

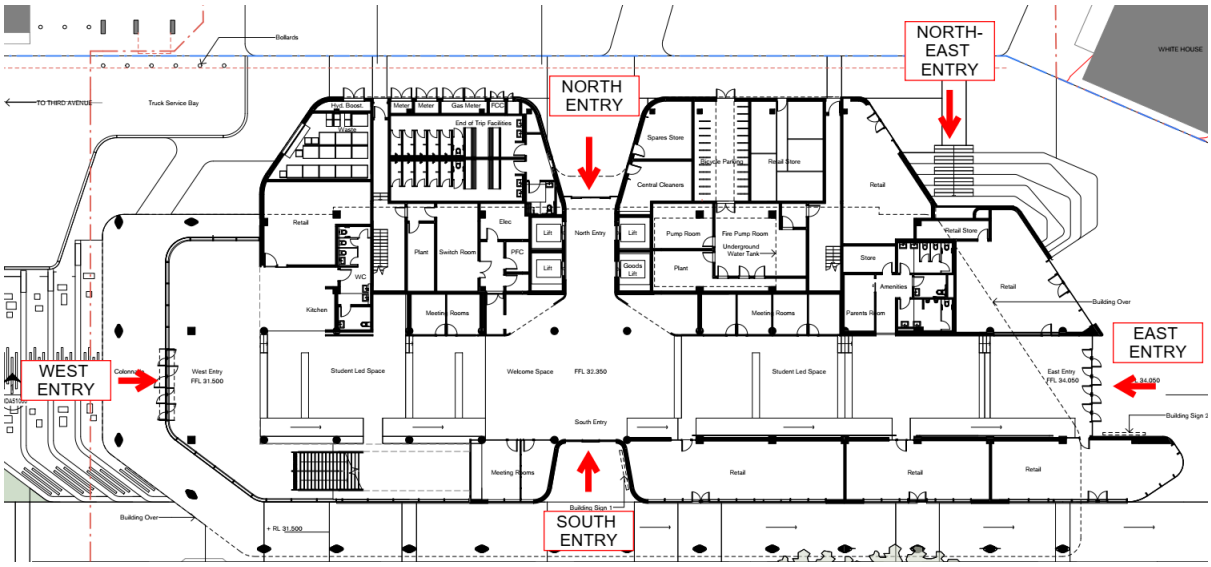

Figure 2: Extract (not-to-scale) from drawing ADDA20000. North is up the page.

Of the main entrances, four will be on-grade doorways that will be designed to be accessible within the meaning of AS1428.1(2009) – namely, the north entrance, the south entrance, the east entrance, and the west entrance. As discussed previously under 'External Linkages' in this report, there will also direct accessible paths of travel respectively from Third Avenue, College Walk, and Fig Tree Lane to each of the above four accessible main entry doorways for compliance with DDA Access Code 2010 / BCA.

In addition to the four accessible, on-grade main entrances, there will be one external main entry stairway in the north-east sector of the subject building that runs from Ground Level to Level 1. A stairway-only main entry is not deemed to be 'accessible'.

Even so, the provision, of four accessible main entrances out of total of five main entrances is permissible under the DDA Access Code 2010 / BCA. In addition, the main entry stairway will be located at a distance of less than 50 metres from two of the accessible main entrances on Ground Level – namely, the north and east entrances. This is a permissible arrangement under the DDA Access Code 2010 and BCA. In totality, the designation of accessible and non-accessible main entrances will be suitable for compliance with the DDA Access Code 2010 and BCA.

It is to be noted that the main entry stairway will be a non-fire-isolated stairway. As a non-fire-isolated stairway it would, under the DDA Access Code 2010 and BCA, require AS1428.1 features. This would include handrails. This will be addressed during design development stage.

There will also be an end-of-trip facility and a bicycle store room on Ground Level, both of which will be common facilities. Each of the above will be detailed to have an appropriately accessible main entrance for compliance with the DDA Access Code 2010 and BCA.

Morris Goding
Access Consulting

5.3 Main Entrances – Retail Tenancies (Class 6)

The subject building will have a total of six separate retail tenancies, all of which will be located on Ground Level. The provision of an accessible main entrance into each of the above tenancies for compliance with the DDA Access Code 2010 and BCA will be achievable.

6. Emergency Egress

6.1 General

There are no general or holistic requirements for accessible egress under either the DDA Access Code 2010 or the BCA. Rather, the requirements under those codes pertain only to a limited number of design details.

6.2 Egress Stairs

The DDA Access Code 2010 and BCA contain limited requirements for accessible egress. Key amongst those requirements are the following:

- Clause D2.17 of BCA 2016 requires fire-isolated egress stairs from areas that are required to be accessible to include at least one continuous handrail designed to be compliant with clause 12 of AS1428.1(2009).
- The provision of either 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, would be considered appropriate to ensure that handrail achieves a consistent height – that is, without vertical or sections of an inconsistent rake.

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. Upon review, the following is noted.

There will be two separate fire-isolated egress stairways in the subject building, each of which will be located in the lift core of the building. An off-set tread configuration has been shown at each stairway for compliance with the BCA. Each of the fire-isolated stairways will be capable of accommodating at least one handrail for compliance with the BCA.

7. Paths of Travel

7.1 Circulation Areas

The DDA Access Code 2010 and BCA contain requirements for circulation areas for the use of persons with disabilities. These requirements can be summarised as follows:

- Wheelchair passing bays of 1800mm (width) x 2000 (length) are required along the parts of an accessway at which a direct line of sight is not available and are to be provided at 20m max. intervals along accessways.
- Wheelchair turning bays of 1540mm (width) x 2070mm (length) are required within 2m of every corridor end and at 20m.max intervals along all accessways. This is needed for wheelchairs to make a 180 degree turn, compliant with AS1428.1(2009).
- All doorways for common use to have 850mm min. clear width opening (each active door leaf) and suitable door circulation area, compliant with AS1428.1(2009).
- 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.

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.

7.2 Ramps and Walkways

The DDA Access Code 2010 and BCA contain requirements for ramps and walkways for the use of persons with disabilities. These requirements can be summarised as follows:

- Ramps are to have maximum 1:14 gradient with intermediate landings at not more than 9 metre intervals
- Ramps are to have handrails on both sides, with minimum 1 metre clearance in accordance with AS1428.1(2009)
- Ramp landing at a 90-degree turn is to have 1200mm length with 1500mm length
- Ramps are to be offset to ensure no encroachment of handrail extensions into from transverse path of travel at top and bottom of ramp.

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. Upon review, the following is noted.

There will be multiple internal graded walkways on Ground Level of the subject building. Each of the graded walkways will be detailed to comply with AS1428.1(2009).

7.3 Stairways

The DDA Access Code 2010 and BCA contain requirements for stairways for the use of persons with disabilities. These requirements can be summarised as follows:

- Stairways are to have handrails on both sides in accordance with AS1428.1(2009)
- Stairways are to be offset to ensure no encroachment of handrail extensions into from transverse path of travel at top and bottom of stairway.

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. Upon review, the following is noted.

There will be multiple internal stairways within the student-led spaces on Ground Level of the subject building. There will also be a common-use stairway that runs from Ground Level to Level 1, and a second common-use stairway that runs from Level 1 to Level 2.

Each of the stairways will be detailed to comply with AS1428.1(2009). Care will be required that all stairways will be appropriately set back from transverse paths of travel so as to ensure that the provision of handrails and tactile ground surface indicators will not conflict with transverse paths of travel.

The fire stairs of the subject building will be available for day-to-day, non-emergency common use. As such, those stairways will potentially be used by people with a disability on an everyday basis. The provision of handrails on both sides of each of the fire stairs will be required. This will be achievable during design development phase.

7.4 Passenger Lifts

The DDA Access Code 2010 and BCA 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 Part E3.6 of the DDA Access Code 2010 / BCA.
- All lift lobbies and main corridors on each floor level should have a minimum clear width of 1800mm to allow two wheelchairs the ability to pass each other.

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.

8. Common Areas

8.1 General

The DDA Access Code 2010 and BCA contain requirements for access to and within common areas for persons with disabilities. These requirements can be summarised as follows:

- For class 9b buildings, access is required to and within all areas normally used by the occupants.
- Wheelchair access compliant with AS1428.1(2009) is required to any common-use outdoor terrace areas, including roof terraces.

8.2 Student Learning Areas

Assessment

There will be student-led spaces on Ground Level, and on Levels 1 and 2 of the subject building. The student-led spaces are open-plan spaces that will be capable of a variety of modes of uses for students. These uses will include, but would not necessarily be limited to, individual study and collaborative learning.

There will also be an enclosed parents' rooms and bicycle store room on the Ground Level of the subject building. There will finally be a common-use terrace on Level 1 of the subject building.

The provision of an accessible path of travel for people with a disability to and within not less than one of each unique type of facility within the common facilities is achievable for compliance with the DDA Access Code 2010 and BCA.

There will also be multiple teaching and learning spaces and study rooms on Levels 1 and 2 of the subject building. The provision of an accessible path of travel to and within each of the teaching and learning spaces and study rooms will be achievable for compliance with the DDA Access Code 2010 and BCA.

8.3 Bleacher Seating

Assessment

There will be external bleacher-style seating in the north-east sector of Ground Level of the subject building. The bleacher-style seating will be used principally as an informal 'hangout' space.

The path of travel to each tier of the bleacher-style seating is via the external main entry stairway. Care will be required that any stairway access will be appropriately accessible. This may entail the provision of, amongst other things, additional steps between the bleachers.

8.4 Academic Workspaces

Assessment

There will be academic workspaces on Levels 3-7 of the subject building. The academic workspaces will have a building classification of Class 5.

The majority of the academic workspaces areas will be open-plan, with the remainder being enclosed meeting rooms. There will, in addition, be an external winter garden terrace on Level 7.

The provision of an accessible path of travel to and within all of the above common-use areas on Levels 3-7 will be achievable for compliance with the DDA Access Code 2010 and BCA.

8.5 Timber Cross-Bracing

Assessment

It is noted that on Levels 2-7 respectively of the subject building, there will be timber cross-bracing on the side faces of the glazed southern and eastern facades respectively. The vertical clearance from the plane of the finished flooring to the underside of the cross bracing will be less than 2000mm.

For compliance with AS1428.4.1(2009), measures to minimise the hazard for people with a vision impairment of the low head height at those points will be required during design development. Such measures could include the provision of warning tactile ground surface indicators or some form of physical obstruction, such as joinery, around the areas at which there is a low head height. This will be addressed during design development stage.

Morris Goding
Access Consulting

9. Facilities & Amenities

9.1 Sanitary Facilities

The DDA Access Code 2010 and BCA contain requirements for sanitary facilities suitable for the use of persons with disabilities. These requirements can be summarised as follows:

- For Class 9b: Provide one unisex accessible toilet that complies with AS1428.1(2009) at each bank of common-use amenities for compliance with the DDA Access Code 2010 / BCA.
- If more than one toilet bank provided on a floor level, one unisex accessible toilet is required at 50% min. of the toilet banks on that floor level.
- Each accessible WC requires 2300mm x 1900mm around the pan, with the basin to sit outside this area in accordance with AS1428.1(2009).
- Under clause F2.4 of the DDA Access Code 2010 / BCA, a male and a female ambulant cubicle is required within every standard toilet bank adjacent to an accessible toilet

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements. Upon review, the following is noted.

On Ground Level, there is one bank of toilets for end-of-trip use, and two separate common banks of toilets for student use. Each of the above banks will be detailed to comply with the DDA Access Code 2010 and BCA.

There is one bank of toilets on Levels 1-7 respectively. Each of the above banks will be detailed to comply with the DDA Access Code 2010 / BCA during the design development phase.

Of the pans in the accessible toilets on Ground Level and Levels 1-7, the division between left-hand and right-hand-transfer pans will be as even as possible for compliance with the DDA Access Code 2010 and BCA during design development phase.

9.2 Hearing Augmentation

Under the DDA Access Code 2010 and BCA, a system of hearing augmentation is required at areas in a class 9b building that have an inbuilt system of audio amplification.

Assessment

The provision of inbuilt audio amplification is yet to be determined. If inbuilt audio amplification is required, investigations of the installation of hearing augmentation will be undertaken for compliance with the DDA Access Code 2010 and BCA.

Morris Goding
Access Consulting

10. Conclusion

MGAC has assessed the proposed scheme for the proposed UNSW D14 Academic Building. The drawings indicate that accessibility requirements pertaining to external site linkages, building access, common area access, and sanitary facilities can be readily achieved.

MGAC will work with the project team as the scheme progresses to ensure appropriate outcomes are achieved in building design and external domain design.