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Pty Ltd

Doran Drive Precinct -  
Doran Drive,  
Castle Hill NSW

**Access Review –  
Final v2**

13 July 2021



REPORT REVISIONS		
Date	Version	Drawing No / Revision
04.10.20	Draft	FI Subject to change set (rev - / 14.10.20)
27.05.21	Draft v2	For Information (rev - / 28.04.21)
02.07.21	Final	Retail Update (rev 01 / 25.06.21)
13.07.21	Final v2	DA Submission (rev 01 / 06.07.21)  DA-110-008(03), DA-110-009(03), DA-110-010(03), DA-110-020(04), DA-110-030(04), DA-110-040(04), DA-110-050(04), DA-110-060(04), DA-110-070(04), DA-110-080(04), DA-110-090(04), DA-110-100(04), DA-110-110(04), DA-110-120(04), DA-110-130(04), DA-110-140(04), DA-110-150(04), DA-110-160(04), DA-110-170(04), DA-110-180(04), DA-110-190(04), DA-110-200(04), DA-110-210(04), DA-810-001(03), DA-810-002(03), DA-810-003(03) and DA-810-101(03), DA-810-102(03).  Prepared by Turner.

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## 1. Executive Summary

The Access Review Report is a key element in the design development of Doran Drive Precinct located at 2 Mandala Parade Doran Drive, Doran Drive, Castle Hill NSW, 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 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 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

Deicorp Projects Showground Pty Ltd has engaged Morris Goding Access Consulting, to provide a design review of Doran Drive Precinct, located at 2 Mandala Parade Doran Drive, Doran Drive, Castle Hill NSW. The new mixed-use development consists of four blocks A (19 stories), B (18 stories), C (20 stories) and D (19 Stories).

The proposed residential units provide one, two, three bedroom and double story layouts. 431 apartments are proposed in this development.

Development Levels are split as follows:

Six (6) carparking basement levels proposed for residential and retail use. End of trip Facility (EOT) with associated sanitary facilities and supermarket pickup area with associated restricted services areas in basement 01.

Three (3) basement levels (B4 to B6) are proposed for carparking residential use;

- 431 car parking bays.
- A total of 43 dedicated accessible parking bays (DAPB) are provided.

Three (3) basement levels (B1 to B3) are proposed for car parking retail use;

- 341 car parking bays are provided for parents with prams, retail staff and supermarket.

Ground floor, upper level and Towers D and C (level 2) contain supermarket and retail space, 2 community spaces with 18 tenancies and associated sanitary facilities.

Level 1 - proposed community space and associated sanitary facilities. There are new public domain works and landscape works at the ground and podium level.

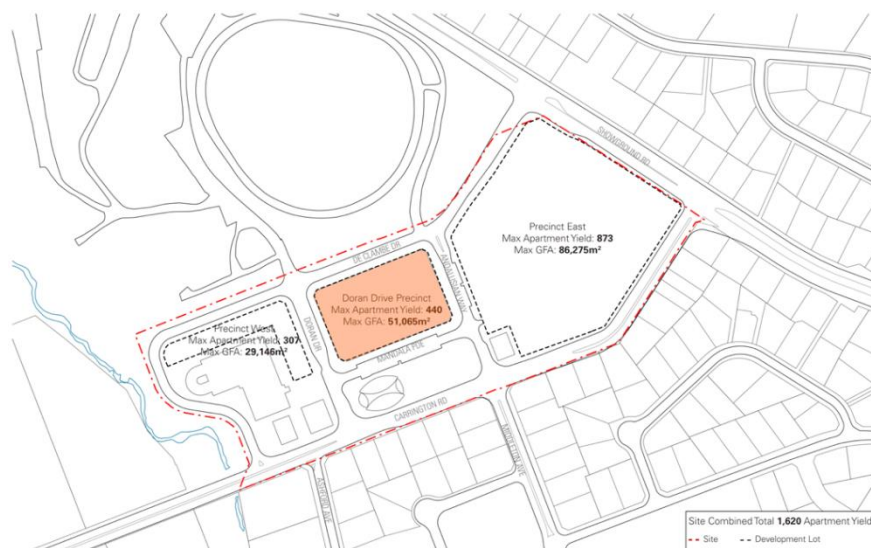


Figure 1. Project Site

The proposed development falls under a number of BCA classifications:

- Class 7a (carpark)
- Class 6 (retail tenancies)
- Class 2 (residential)
- Class 9b (communal area)

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.
- 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 residents, customers, visitors, 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 AS 1428 Series, and other design guidelines, to develop appropriate design documentation, to provide reasonable access provisions for people with disabilities.

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.

## 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 for 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);
- The Hill Shire Local Council DCP.

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);
- Livable Housing Australia guidelines (LHA) and
- AS4299:1995 - Adaptable Housing



### 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 AS 1428 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.

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:

- An accessible path of travel from main pedestrian entry points at the site allotment boundary to all building entrances compliant with AS1428.1:2009. Lobbies A, C and D principal pedestrian entrances (PPE) comply with AS1428.1, BCA Part D3 and Disability Access to Premises Standards (DAPS).

Lobby B (ground floor) - clarification on the location of the continuous accessible path of travel (CAPT) to principal pedestrian entrance (PPE), as it appears that there is a level difference of 75mm to 260mm. Provision of a step ramp is recommended outside and inside to address level differences. Ensure door provides suitable level landing circulations. Ref to AS1428.1 Fig. 25(D).

Airlock at retail (ground floor) facing Mandala Parade - clarification on the location of the accessible path of travel is required as the RL's provided indicate a continuous fall of 1-meter at the allotment boundary line. A provision is recommended at the shallower side of the entrance of 2200mm minimum wide path of travel to be in accordance with AS1428.1. There is sufficient space for amendments to be made to readily achieve compliance during a further stage.

An accessible path of travel between buildings (or parts of buildings) that are connected by a pedestrian linkage, within the site allotment boundary, compliant with AS1428.1:2009 is also required. Currently, this requirement is capable of achieving compliance.

- 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 requirement is capable of achieving compliance as there are no level changes documented in the six car parking basement levels.

#### *Assessment*

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

Ensure all cross falls in the accessible path of travel are 1:40mm max. gradient. This can be addressed with civil engineer consultant during a detail design stage.

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 through at least 50% of entrances, including the principal pedestrian entrance/s to all buildings or parts of buildings (ie. when they have a separate function and/or use eg. external retail tenancy). Note all entrances are to be accessible as these lead to different commonly used areas. All tenancies are to ensure level threshold provision is in accordance with AS1428.1. Currently this requirement is capable of achieving compliance.
- A non-accessible entry located no more than 50m distance from an accessible entry (for buildings greater than 500m<sup>2</sup>). Currently this requirement is capable of achieving compliance.
- All accessible doors with 850mm min. clear width opening and suitable door circulation area, compliant with AS1428.1:2009. Currently, this requirement is capable of achieving compliance.
- An accessible path of travel eg. ramp or lift 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 requirement has been partially achieved as one of the tenancies proposed on block A 4100CLR HH facing Doran Drive (ground floor) provides connection to the upper level via stairs only. Design is to consider the continuous accessible path of travel (CAPT) journey to be made by a wheelchair user from the inside of the tenancy at the ground floor to the upper level. Provide lift access or MGAC is to support compliance under a Performance Based Solution, by a management plan. This to include an agreement with builder owner to ensure that tenants are provided the same experience equally on both levels. Agreement is to be recorded in the tenancy agreement bylaws. This requirement can be addressed during detail design stage. Note: the Performance Based Solution will be subject to the provision of a statement from the stake-holder outlining the reasons why compliance has not 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.

### **4.3 Emergency Egress**

BCA 2016 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 management systems and fire wardens for emergency egress for people with disabilities.

### *Assessment*

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

There is soft landscape in the egress path. Ensure egress path is compliant hard stand surface. Landscape is to be adjusted. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.

There is a stair proposed for egress only use linking podium and level 1. Ensure compliance with BCA D2.7.



## 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) when a direct line of sight is not available and are to be provided at 20m max. intervals along access-ways. Currently this requirement is capable of achieving compliance.
- Turning spaces (at least 1540mm W x 2070mm L) within 2m of every corridor end and at 20m.max intervals along all access-ways. Currently, this requirement has not been achieved as basement 1 provides a corridor 1300mm wide. It is recommended to provide a door to close this off. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.

L2 (Communal podium), L3 (Lobby D and C) and L8 (lobby A) entry doors to communal landscape areas do not provide suitable clear space to achieve 'U' turns. Provide 1540mm W x 2070mm to achieve compliance in accordance with AS1428.1. It is recommended to adjust landscape to achieve compliance. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.

- All common-use doors (ie. not excluded under Part D3.4) with 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 for the majority of the doors, however, various doors on the continuous accessible path of travel (CAPT) lack suitable latch side clearance in accordance with AS1428.1 Fig 31 and 32. Doors and landscape on GF, L2, L3, L8 (lobbies leading to landscape areas) and L2 sanitary facilities are to be adjusted or be automated for compliance. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.

Tenancy 3700CLR HH (ground floor) entry door has a lack of latch side clearance and suitable clear circulation at the landing. Door is to provide 530mm min. (internal) and 510mm min. (external) latch side clearance, or door is to be automated. Landing is to provide 1500mm min. depth to achieve 90-degree turn in accordance with AS1428.1. Fig 4. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.

Lobby B (ground floor) entry door has a lack of latch side clearance and suitable clear circulation. Door is to provide 510mm min. (internal) and 530mm min. (external) latch side clearance, or door is to be automated. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.

- All common-use corridors and accessible paths of travel with 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 partially achieved as there is a lack of 1 meter clearance on Level 2 landscape area adjacent to lobby B. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.



There is soft landscape on L2 that does not allow passage to a section of the landscape. This is not in accordance with AS1428.1 in the egress path. Ensure all accessible paths of travel are hard stand surface. Landscape is to be adjusted for compliance. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.

Ensure curved walkways have 1500mm min. clear width with appropriate min. inside curve radius compliant with AS1428.1. Currently this requirement has not been achieved as there are various curved pathways (landscape areas) with deficient clear circulation. Provide 1500mm min. clear width. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.

#### *Assessment*

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

Non-compliant clauses above are to be reviewed and addressed to achieve compliance.

### **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 with min. internal size at floor of 1400mm width x 1600mm depth, compliant with BCA/DDA Access Code Part E3.6 and AS1735.12. Currently, this requirement is capable of achieving compliance.
- All lift lobbies and main corridors on each level with 1800mm min. clear width to allow two wheelchairs ability to space pass each other. Currently, this requirement is capable of achieving compliance.
- All travelators are to comply with AS1735.2-2001. Lifts, escalators and moving walkways. Note: If level difference occurs, a kerb ramp is to be provided in accordance with AS1428.1. This is to address the level change on the accessible path of travel. Currently, this requirement is capable of achieving compliance.

#### *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 Stairs, Ramps and Walkways**

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 and walkway landings are to provide 1200mm length or 1500mm length at 90 degree turns. Currently this requirement is not achieved as the 1:25 Walkway on De Clambe Drive (ground floor) does not provide transitional landing when joining the transversal proposed pathway. Refer to AS1428.1 Fig. 4 and 13. There is sufficient space for amendments to be readily made to achieve compliance during a further stage. Landscaper architect is to ensure compliance in accordance with AS1428.1.

Stair facing De Clambe Drive(ground floor), does not provide top level landing. All stairs are to provide level landings to achieve compliance. There is sufficient space for amendments to be readily made to achieve compliance during a further stage. Landscaper architect is to ensure compliance in accordance with AS1428.1.

- Stair handrails on both sides in accordance with AS1428.1. Currently this requirement is capable of achieving compliance.
- Stairs and ramps with offset on the continuous accessible path of travel (CAPT) are to ensure no encroachment of handrail extensions into transversal path of travel at top and bottom of stair. Currently this requirement is capable of achieving compliance.
- Stairs and ramps are to be offset from the property allotment boundary 900mm min. This to ensure no encroachment occurs at later stage of handrail extensions into transverse path of travel. Currently, this requirement is capable of achieving compliance.
- Step ramps are to have 1:10 gradient, 190mm max. height and 1900mm max. length. Clarification is required as it is not clear whether the gradient or the level difference of the proposed ramp at the entry lobby B (ground floor). Given the adjacent RL's it appears there is a level difference of 75mm to 260mm. The provision of a step ramp outside and inside is recommended to address level differences. Ensure door provides suitable level landing circulations. Ref to AS1428.1 Fig. 25(D).
- Doorway threshold ramps are to have 1:8 gradient, 35mm max. height and 280mm max. length, compliant with AS1428.1. (Note: No threshold ramps are allowed inside of the building under the BCA unless open to a road, open space or are in a building class 9a). Currently this requirement is not achieved as Tenancy 3700CLR HH (ground floor) has a 25mm level difference, which is not compliant under AS1428.1. Level difference is required to be addressed with a compliant threshold ramp. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.
- Walkways are to provide landings at 15meter intervals. Currently this requirement is not achieved as there is a walkway (ground floor), from the principal pedestrian entrance (PPE) with 89.900 RL leading to a pedestrian pathway at 89300RL, this is over 18meters and does not provide middle landing. Provide a landing at 15meter interval. There is sufficient space for amendments to be readily made to achieve



compliance during a further stage. Landscaper architect is to ensure compliance in accordance with AS1428.1.

#### *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-adaption) so they can be easily adapted to meet changing needs of residents in the future (post-adaption) in accordance with AS4299.

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

- A total of 43 adaptable units are required based on Council DCP 2012 B Section 5 Residential Flat. Currently this requirement is not achieved as only 42 adaptables are being provided.
- The adaptable units are to be designed in accordance with AS4299 Class C. and
  - (c) At least 1, or 5 percent, of the units in a development of 20 or more dwellings must be either;
    - an accessible unit to Australian Standard 1428 Part 2, suitable for occupation by a wheelchair user; or
    - meeting Class B adaptability under Australian Standard 4299.

Provide at least 1 or 5% Class B adaptability (which is all essentials and 50% of desirable feature incorporated, including those noted as first priority).

- The adaptable units designed in accordance with AS4299 Class C.

#### *Assessment*

A total of 431 dwellings have been proposed throughout the development. There are 43 apartments (10%) designed to be adaptable, which does satisfy Council DCP 2012 B Section 5 Residential Flat.

The adaptable units have been nominated as units:

B206; B307; B407; B507; B607; B707; B806; B906; B1006; B1105; B1205; B1305; B1405; B1505; B1605; B1705; B1805; B1102; B1202; B1302; B1402; B1502; B1602; B1702; B1802; B204; D304; D404; D504; D604; D704; D804; D904; D1004; D1104; D1204; D1304; D1404; D1504; D1605; D1705; D1805 and D1905.

Above noted unit numbers are a mixture of 1, 2 and 3 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 (920 door leaf). Latch side clearance of 530mm achieved at pre-adaptation, externally and internally of the door in accordance with AS4299. Currently this requirement has been achieved
- The kitchen with 1550mm circulation space outside of the kitchen work spaces. Currently this requirement appears capable of being achieved. Ensure where islands are proposed in pre-layout that tile is provided under the island and services are capped.
- The bathroom 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 (hobless). Currently this requirement appears capable of being achieved. Services such as pan and shower are to be capped. This is required for compliance.
- The living area large enough to achieve a circulation space of 2250mm min diameter after furniture placement, compliant with AS4299. Currently, this requirement is capable of achieving compliance.
- The bedroom achieves 1 metre either side of queen size bed and 1550 x 2070mm at the base of bed or similar configuration. Currently this requirement can achieve compliance in the majority of layouts, however, units 2B\_18 even though it complies with 1meter each side of the bed, the circulation to the bathroom has been compromised. Bathroom circulation is to provide 1240mm min. clear circulation in front. It appears the bed is too wide with over 1600mm W in lieu of 1530mm. Bed width is to be adjusted.
- The laundry area with 1500mm in front of laundry appliances in accordance with AS4299. Currently, this requirement appears capable of being achieved. Ensure desk in front of laundry is not fixed.
- All doors 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 is capable of achieving compliance.
- Architect is to ensure balconies are threshold level (accessible from living areas). Ensure latch side is suitable in accordance AS1428.1. Note: Preferable where practicable and possible, both bedrooms and living room areas provide access to balconies.

### *Assessment*

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

Non-compliant clauses above are to be reviewed and addressed to achieve compliance. Refer to markups for additional comments.



## 7. Silver Liveable Units

### 7.1 Silver Liveable Unit Provision

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

- A total of 20% units to satisfy SEPP 65 (including referenced Apartment Design Guide) requirements to incorporate Liveable Housing Guidelines Silver Level Universal design features.
- Note the 10% adaptable units can be counted in the 20% calculation if the apartment also meets the following requirements.

#### *Assessment*

A total of 431 dwellings have been proposed throughout the development. There are 86 apartments (20% of total) designed to be visitable and these meet the above requirements.

Note: 'visitability' under AS4299 i.e. to allow people using wheelchairs to visit their family/friends from the unit entry door on a path of travel to the main living area and a 'visitable' toilet.

The Livable Housing units have been nominated as units are: A203; A204; A303; A304; A403; A404; A503; A504; A603; A604; A703; A704; A803; A804; B202; B302; B402; B502; B602; B702; B1102; B1202; B1302; B1402; B1502; B1602; B1702; B1802; A901; A1001; A1101; A1201; A1301; A1401; B201; B301; B401; B501; B601; B701; B801; B901; B1001; A201; A506; A606; A706; A207; A307; A407; A507; A607; A707; C302; C402; C301; C401; C502; C602; C702; C802; C902; C1002; C1102; C1202; C1302; C1402; C1502; D305; D405; D505; D605; D705; D805; D905; D1005; D1105; D1205; D1305; D1405; D1505; C1603; C1703; C1803; C1903 and C2003.

### 7.2 Silver Livable Unit Design

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

- Provide a safe, continuous step-free pathway from the front boundary of the property to an entry door to the dwelling. Currently, the Lobby B entrance is not compliant. It is recommended to move the ramp further from the principal pedestrian entrance. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.
- 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 Liveable Housing Design Guideline 2015. Currently this requirement is capable of achieving compliance.
- From the unit entry, there needs to be appropriate 1m (skirting to skirting) clearances throughout the unit to allow suitable accessible paths of travel within accordance with Silver Level rating requirements in accordance with Liveable Housing Design Guideline 2015. Currently this requirement is capable of achieving compliance.



- 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 Liveable Housing Design Guideline 2015. Currently this requirement is capable of achieving compliance.
- 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 Liveable Housing Design Guideline 2015. Currently this requirement appears capable of being achieved.
- The walls surrounding the shower and toilet pan require sufficient reinforcements for the provision of grab rails in the future when required. Currently this requirement appears capable of being 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.

## 8. Facilities & Amenities

### 8.1 Sanitary Facilities

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

- For 7a, 9b: At least 1 unisex accessible toilet, adjacent to every bank of toilets (where provided) on each storey, compliant with AS1428.1 under BCA/DDA Access Code part F2.4. If more than 1 toilet bank provided on each level, accessible toilet is required at 50% min. of toilet banks at each level. Currently this requirement has been partially achieved. There is no unisex accessible toilet (USAT) provided for a bank of toilets in level 02 community space. Provide a unisex accessible toilet in accordance with AS1428.1, adjacent to proposed female and male bank of toilets. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.
- An even number of left hand (LH) and right hand (RH) transfer WC pans (accessible toilets) within the building. There is a lack of unisex accessible toilets to assess this requirement. Communal space and retail facilities are to provide layout for review of this requirement. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.
- Accessible WC with 2300mm x 1900mm around the pan with the basin to sit outside this area in accordance with AS1428.1. Currently this requirement is required to be addressed on level 1. However, there is an area allowance for retail amenities. Ensure Unisex accessible toilet is provided along with ambulant cubicles in female and male bank of toilets in accordance with AS1428.1 Clause 15 and 16. There is sufficient space for amendments to be readily made to achieve compliance during a further stage.
- An ambulant cubicle within every standard toilet bank adjacent to an accessible toilet under DDA Access Code Part F2.4 compliant with AS1428.1:2009. Currently this requirement has not been achieved. However, there is an area allowance for retail amenities. Level 1 - there is sufficient space for amendments to be readily made to achieve compliance during a further stage. Ensure bank of toilets provide a Unisex Accessible Toilet (USAT) in accordance with AS1428.1 Clause 15.

Community space 2 (Level 2) provides a Unisex Accessible Toilet (USAT), however there is no indication of ambulant cubicles. Provide AS1428.1 compliant ambulant cubicles for male and female bank of toilets for compliance. There is sufficient space for amendments to be readily made to achieve compliance during a further 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.

## 8.2 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:

- For class 2 buildings, access to a unique common use facility such as community spaces, communal podium, etc. Currently, this requirement is partially achieved as there is level access provided from the lifts to the podium. This is in accordance with AS1428.1 and DDA Premises Standards.

Residential communal podium access achieved accessibility from each lobby of towers A, B, C & D) at level 2.

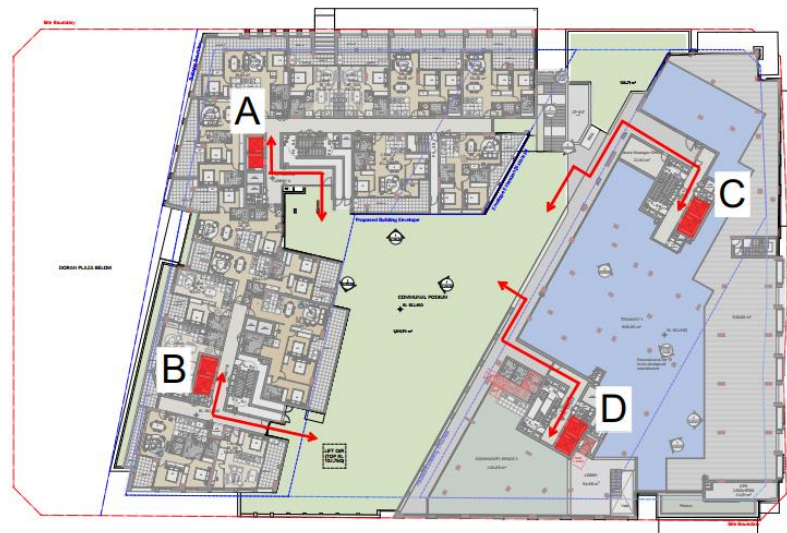


Figure 2. Level 2 access to Residential Podium

Landscape architect is to ensure that the continuous accessible path of travel (inside/outdoor) is compliant with AS1428.1 Clause 6 and 7. Pathways link intersections are to provide compliance with AS1428.1 Figure 4.

End of Trip Facilities (EOT) internal circulations are deficient as 90 degree turns can not be achieved. Provide compliance in accordance with AS1428.1. Or, equal facility is to be provided in an accessible area. This will achieve equal facilities for both able-bodied people and people that are wheelchair users. It has been confirmed by the architect that lockers will be provided in the unisex accessible toilet to address

non-compliance during detail design stage.

- Mailboxes, bike storage, storage cages and garbage chutes within residential buildings are to provide appropriate accessibility. Currently, this requirement is capable of achieving compliance.
- Rubbish chute doors are to be 850mm min. clear width or the chute handle is to be an arm's reach. Currently the chute door is a 620mm away from reach. Provide one 850mm clear width door or adjust the chute location for compliance.

## 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.

### 8.3 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:

- Class 9b development: 1 accessible car bay for every 100 car bays or part thereof, compliant with AS2890.6. Currently, this requirement is capable of achieving compliance.
- Class 6 retail development: 1 accessible car bay for every 50 car bays or part thereof, compliant with AS2890.6. There are 318 proposed car parking spaces for retail and 7 accessible car parking spaces. Currently, this requirement is capable of achieving compliance.
- Under the Hills Council the accessible parking provisions require 3.2metres x 5.4meters. However, MGAC will support 2.4metre x 5.4metre and 2.4 metre with 5.4 metre shared area as this is compliant with AS2890.6:2009 and suitable for the function. Currently this requirement is capable of achieving compliance.
- Class 2 residential. An adaptable unit car bay for each adaptable unit. These car bays can have 3.8 metre width or 2.4 m with 2.4 metre shared zone. Currently this requirement is capable of achieving compliance. Currently this requirement is capable of achieving compliance.
- There are 43 accessible carparking car parking spaces for 43 adaptable units. Currently this requirement is capable of achieving compliance.
- (b) One visitor parking bay and one pick-up and drop-off bay for mobility impaired people must be provided complying with the provisions of AS 2890 for people with a disability, additional to the requirements for any visitor parking elsewhere in The Hills Shire Council DCP. Clarify if this requirement is addressed in the basement level pick up area.
- All accessible car bays 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. Currently, this requirement is capable of achieving compliance.
- 2.5m min. height clearance, compliant with AS2890.6 fig 2.7 over accessible car bays with 2.2 m min. vertical clearance leading to the accessible and adaptable unit car bays (Note: consideration for 2.3 or 2.4m min. height preferred for higher vans/adapted vehicles is recommended as good practice). Currently this requirement is capable of achieving compliance as proposed height is 3meters.

### *Assessment*

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

There are electrical car charging bays proposed to serve retail. MGAC recommends that the closest car bay to the lift (on 3 x retail levels) be used as an electric car charging station. (Advice)

An additional car bay should be 3.8 m wide, allowing a person in a wheelchair enough circulation to use it. The car bay must not be marked with accessible signage – to be used by any ability. (Advice)

There are no electrical charging stations for accessible car parking bays. MGAC recommends the provision of electrical charging to a percentage of accessible car parking bays representative of the non-accessible bay numbers. (Advice)

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. Conclusion

MGAC has assessed the proposed scheme for Doran Drive Precinct. The proposed drawings indicate that accessibility requirements, pertaining to building access, external site linkages, common area access, sanitary facilities and parking can be readily achieved. However, adaptable units are to be adjusted for compliance. 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.