CROWN GROUP

MACQUARIE PLACE, PARRAMATTA

ACCESS REVIEW
PROJECT APPLICATION

Morris-Goding Accessibility Consulting

FINAL

12th March 2010

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1. EXECUTIVE SUMMARY

The Access Review Report is a key element in design development of Macquarie Place, Parramatta and an appropriate response to the AS1428 series, Building Code of Australia (BCA), 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 development has been reviewed to ensure that ingress and egress, paths of travel; circulation areas, toilets, lifts, adaptable units, and car parking comply with relevant statutory guidelines.

2. INTRODUCTION

2.1. General

Crown Group has engaged Morris-Goding Accessibility Consulting to provide an access report of the proposed Macquarie Place mixed-use development in Parramatta, NSW.

The site of the Macquarie Place development is located on the western side of Marsden St between Macquarie Street and Hunter Street. The development consists of retail tenancies, commercial office tenancies, upper-level residential accommodation, a public archaeological centre, and associated off-street car parking.

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, and
- Recommend solutions that will ensure the design complies with the Disability Discrimination Act (DDA), Building Code of Australia (BCA) and AS 1428 series.

2.2. Objectives

The Report considers user groups, who include residents, 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)
- People with a dexterity impairment

The Report seeks to provide compliance with the DDA. In doing so, the report attempts to eliminate, as far as possible, discrimination against persons on the ground of disability.

2.3. Access Requirements

The following standards are to be used to implement the Report:

- AS 1428.1 – (80% of people with a disability accommodated)
- AS 1428.2 – (90% of people with a disability accommodated)
- AS 1428.4 – (Tactile Ground Surface Indicators)
- AS 1735.12 – (Lift Provision for People with a Disability)
- AS 1735.14 – (Low-Rise Platform Lifts for Passengers)
- AS 4299 – (Adaptable Housing Code)
- BCA - Building Code of Australia
- Parramatta City Centre DCP 2007
- Draft DDA Premises Standards

3. INGRESS & EGRESS

3.1. Macquarie Street Entry Plaza

There is a covered main entry plaza located at the corner of Macquarie Street and Marsden Street. There is a pedestrian entry ramp which connects Marsden Street with the above entry plaza. The Marsden Street entry ramp currently has a clear width which is appropriate for a path of travel for a single wheelchair user under AS 1428.2. The entry ramp has a gradient of 1:14 throughout, which is compliant with AS 1428.1.

There is an entry gate at the bottom of the entry ramp. The above entry gate has a suitable clear width under AS 1428.1. However, the entry gate has a poor internal latch-side clearance – that is, the latch-side clearance is 0mm, and the nearby structural column encroaches on the required minimum clearance behind the door – known as the 'L-dimension' under AS 1428.1. This will require revision.

The landing at the bottom of the entry ramp has appropriate internal dimensions under AS 1428.1. The intermediate landing at RL 9.72 has appropriate internal dimensions under AS 1428.1. The entry ramp itself therefore provides a continuous accessible path of travel from Marsden Street to the Macquarie Street entry plaza.

The entry ramp continues from RL 9.72 to RL 10.05. There is an intermediate landing at approximately RL 10.05. The above intermediate landing has appropriate internal dimensions under AS 1428.1. There is an upper landing at the top of the ramp at RL 10.50. The upper landing has appropriate internal dimensions.

Accordingly, the entry ramp itself provides a continuous accessible path of travel from Marsden Street to the upper portion of the Macquarie Street entry plaza.

It is noted that the main entry ramp and the entry plaza together currently constitute the sole continuous accessible path of travel to the each the following components of the Macquarie Place development, all of which are public in nature: the café tenancy west of grid line E on ground level, the Archaeology Centre main entrance, as well as the various archaeology viewing areas. In order to constitute a continuous accessible path of travel which is functional for people with a disability, the ramp entry gate should be kept open, or should be or independently operable by members of the public.

There are various entry stairways fronting Macquarie Street and Marsden Street which each connect to the main entry plaza. The bottom risers of each of the above entry stairways are in line with the building line. This will configuration will mean that the provision of handrail extensions compliant with AS 1428.1 and TGSIs compliant with AS 1428.4 will encroach on the transverse path of travel along the Macquarie Street footpath, which may pose a safety hazard.

There are also two entry stairways which each separately connect the main entry plaza at RL 9.72 with the landing at RL 10.50.

Recommendations:

(i) Provide a minimum internal latch-side clearance of 145mm over a minimum depth of 1040mm at the main entry gate at the bottom of the main 1:14 entry ramp, compliant with AS 1428.1.

(ii) Provide handrails compliant with AS 1428.1 on either side of the Marsden Street main entry ramp and on either side of each the Macquarie Street and Marsden Street main entry stairways

3.2. Residential Main Entrances

There is one residential main entrance at grid reference N.5 on ground level (level 00) which fronts the Macquarie Street entry plaza. The above residential main entrance consists of a single-leaf automatic sliding door. The main entry doorway has a clear width which is compliant with AS 1428.2. Whilst the above doorway has a non-compliant latch-side clearance, it is assumed that the doorway will be powered or automatic in operation.

There is a continuous accessible path of travel to the above main entrance from Marsden Street via the Marsden Street pedestrian entry ramp, compliant with the BCA and Parramatta City Centre DCP clause 4.1(e).

There are two banks of residential passenger lifts, the northern bank of which includes lifts 1, 2, and 3, and the southern bank of which includes lifts 4, 5, and 6.

There is a continuous accessible path of travel from the above main entry doorway to residential lifts 1-3 from the Macquarie Street entry plaza main entry doorway via the lower portion of the residential main entry lobby at RL 10.50.

There is a 1:14 ramp connecting the lower portion of the residential main entry lobby at RL 10.50 with the upper portion of the lobby at RL 10.75. The ramp has a suitable clear width and a suitable length under AS 1428.1. The ramp provides a continuous accessible path of travel from the Macquarie Street entry plaza main entry doorway to residential lifts 4, 5, and 6.

The paths of travel from the Macquarie Street entry plaza main entry doorway to the residential passenger lifts have a clear width which will allow two wheelchair users to pass each other whilst travelling in the opposite direction, compliant with AS 1428.2.

There is a circulation space in front of the northern and southern banks of residential passenger lifts respectively which will allow a wheelchair user to turn 180° in an equitable and independent manner, compliant with AS 1428.2.

There is also a second residential main entrance on ground level (level 00) at grid reference O.11 fronting Hunter Street. There is no continuous accessible path of travel from Hunter Street into the ground level residential lobby due to the stairway immediately north of the above main entry doorway. As noted above, an accessible residential main entrance has been provided at the Macquarie Street end.

Recommendation:

(i) Provide handrails compliant with AS 1428.1 on either side of the Hunter Street residential main entry stairway and on either side of the 1:14 ramp within the residential lobby at grid reference N.5.

3.3. Archaeology Centre Main Entrance

There is an Archaeology/Interpretation Centre located in the north-west sector. The main entrance of the Archaeology Centre fronts the Macquarie Street entry plaza on ground level and is located approximately at grid reference E.4. The main entry doorway consists of a set of dual-leaf hinged doors. Each leaf of the ground level main entry doorway has a clear width of 950mm, compliant with AS 1428.2 and Parramatta City Centre DCP clause 4.1(d).

The path of travel from the main entry plaza into the entry level of the Archaeology Centre appears to be continuously level throughout.

Accordingly, there is a continuous accessible path of travel from Marsden Street to the main entry doorways via the Marsden Street entry ramp and the Macquarie Street main entry plaza.

3.4. Commercial Main Entrance (Marsden Street)

There is one commercial main entrance on ground level (level 00) fronting Marsden Street, located at grid reference K.8.

There is a main entry stairway in front of the commercial main entrance. Accordingly, there is no direct continuous accessible path of travel from street frontage to the commercial main entrance.

There is an alternative continuous accessible path of travel via the following path: through the main entry gate at the bottom of the Marsden Street main entry ramp, up the Marsden Street main entry ramp, through the Macquarie Street entry plaza residential main entry doorway, through the residential main entry lobby, through the dual-leaf sliding main entry doorway at grid reference O.8 connecting the residential main entry doorway with the commercial main entry lobby, and across the main entry lobby to the commercial passenger lift.

The above path of travel, whilst continuously accessible, is inappropriate for two reasons. First, the path of travel is highly circuitous and lengthy. Secondly, it requires traversal of the residential main entry doorway and entry lobby, which are assumed to be security-controlled for resident-use only. Therefore, a more direct continuous accessible path of travel from street frontage to the commercial main entry lobby is required.

There is a vertical level difference of 950mm from the bottom landing of the commercial main entry stairway to the top landing. Under AS 1735.14, the provision of a vertical platform lift is a viable solution for the provision of a continuous accessible path of travel for commercial office users.

There is a circulation area in the commercial lift lobby which will allow a wheelchair user to turn 180° in an equitable and independent manner, compliant with AS 1428.2.

Recommendations:

(i) Provide a direct continuous accessible path of travel from street frontage to the commercial main entry lobby. The provision of a low-rise platform lift compliant with AS 1735.14 is recommended. Ensure the low-rise platform lift is installed in a sheltered location.

(ii) Provide handrails compliant with AS 1428.1 on either side of the commercial main entry stairway.

3.5. Retail and Cafe Tenancy Main Entrances

There is a retail tenancy fronting Marsden Street on ground level (level 00) at each of the following grid reference points: K.7 (RL 10.75); K.8 (RL 11.00); K.9 (11.00); and K.11 (RL 11.00). There is one retail tenancy fronting Hunter Street on ground level at grid reference F.11 (RL 11.00).

The main entry doorway into each of the above retail tenancies consists of a set of dual-leaf hinged doors. A clear width of 850mm (920mm door leaf) is achievable at a minimum of one leaf of each of the above dual-leaf main entry doorways.

There is an entry stairway behind each of the above dual-leaf entry doorways. Accordingly, there is no direct continuous accessible path of travel from street frontage into any of the above retail tenancies.

There is a separate back-of-house entrance into each of the above retail tenancies, each of which connects to the residential main entry lobby. There is a continuous accessible path of travel into each of the above back-of-house entries via the Marsden Street entry ramp, the Macquarie Street entry plaza and the residential main entry and main entry lobby.

Provision of a path of travel via the residential main entry lobby is inappropriate on three separate grounds. First, the paths of travel are highly circuitous and lengthy. Secondly, the paths of travel require traversal of the residential security-controlled areas, which is inappropriate for a casual retail patron.

Finally, use of the back-of-house entry is contrary to the DDA principle of equality of access for people with a disability, especially if the back-of-house areas are used as storage areas for stored merchandise and packaging, and so on.

The provision of vertical platform lift at the commercial main entrance (see under Commercial Main entrance above) and the provision of a continuous accessible path of travel via the commercial entry lobby and thereafter the rear main entries is a preferred solution.

There is a café/retail tenancy on the western side of the Macquarie Street main entry plaza on ground level (level 00). There is a continuous accessible path of travel from the Marsden Street main entry ramp across the Macquarie Street main entry plaza to the main entrance of the above café tenancy.

There are four main entry doorways into the above tenancy, two of which consist of sets of bi-fold doors, and the other two of which each consists of a single-leaf hinged entry doorway. A minimum clear width of 850mm (920mm door leaf) is readily achievable at each leaf of the bi-fold doors and as well as at each of the single-leaf hinged main entry doorways. There is level access between the tenancy and the entry plaza at each of the main entry doorways and at the bi-fold door openings.

There is a continuous accessible path of travel to the above café tenancy from street frontage.

There is one café/retail tenancy fronting Marsden Street at RL 10.50 at grid reference K.5. There is one main entry doorway fronting Marsden Street into the above tenancy. There is a main entry stairway behind the main entry doorway. Accordingly, there is no continuous accessible path of travel into the tenancy at this main entry.

The above café/retail tenancy, however, also fronts the Macquarie Street main entry plaza. There are two main entry doorways connecting the plaza with the tenancy, one of which consists of set of bi-fold doors and the other of which consists of a set of dual-leaf hinged doors. A minimum clear width of 850mm (920mm door leaf) is readily achievable at each leaf of the bi-fold doors. Each leaf of the dual-leaf hinged doorway has a clear width of 1000mm, which is compliant with AS 1428.2. There is a continuous accessible path of travel from street frontage to each of the above main entry doorways via the Marsden Street main entry ramp.

Recommendations:

(i) Ensure at least one leaf of each of the dual-leaf rear entry doorways at each of the ground level retail tenancies has a minimum clear width of 850mm (920mm door leaf). A minimum clear width of 850mm is preferred at both leaves.

(ii) Provide a level landing a minimum of 1350mm in depth respectively at the top of the 1:14 ramp at grid reference O.14 and at the bottom of the 1:14 ramp at grid reference N.14.

(iii) Provide handrails compliant with AS 1428.1 on either side of each of the rear 1:14 ramps which lead to the retail tenancies.

(iv) Ensure the back-of-house retail entries are re-designated as front-of-house main entries. Ensure the rear entries are designed to an aesthetic standard which is equivalent to that of the main entries at street frontage.

(v) Provide a vertical platform lift compliant with AS 1735.14 at the main entrance into the Hunter Street retail tenancy at grid reference F.11. In the alternative, provide a 1:14 ramp at the Hunter Street residential main entrance and a new retail main entrance at the top of the ramp into the F.11 retail tenancy. Ensure the entry ramp is publicly accessible – that is, not security-controlled for residents only. Note that the latter option affords the opportunity to ensure the Hunter Street residential main entrance is accessible.

(vi) Provide a comprehensive system of way-finding signage directing users to the location of the rear retail main entries.

3.6. Emergency Egress

Emergency egress from upper and basement levels is via the following emergency egress stairways: stairways at north-west sector (at level 00); stairway at grid reference O.4 (at level 00); stairways at grid reference O.11 (at level 00); and stairway at grid reference A.12 (at level 00).

Emergency egress from the level 00 is via the building main entrances described in sections 3.1, 3.2, 3.3, 3.4 and 3.5 above or via the vehicular trance at grid reference B.12.

The path of travel for emergency egress from level 01 of the Archaeology Centre is either via the emergency egress stairway connecting directly to Macquarie Street or via the Archaeology Centre main entry stairway.

Recommendations:

(i) Consideration to be given for the provision of a minimum clear width of 850mm (920mm door leaf) at each doorway leading to emergency egress stairways. (DDA Premises Standards issue)

(ii) Consideration for any emergency warnings systems to be installed to include both audible and visual warnings indicators to assist people with a sensory disability.

4. PATHS OF TRAVEL

4.1. Archaeological Features Viewing Area (Macquarie Street)

It is proposed that various archaeological features within Macquarie Street entry plaza will be viewable via viewing platforms.

There is a continuous accessible path of travel from Marsden Street to the Macquarie Street entry plaza via the Marsden Street entry ramp, which is compliant with the BCA and Parramatta City Centre DCP clause 4.1(e). The paths of travel around the archaeological site viewing platforms are assumed to be level throughout.

4.2. Archaeological Centre

The Archaeology Centre is located on levels 00 and 01.

There are continuous accessible paths of travel throughout level 00 areas of the Archaeology Centre. The paths of travel are assumed to be level throughout.

There is a passenger lift connecting the Archaeology Centre main entry lobby on level 00 with the Archaeology Centre's main floor on level 01. The passenger lift provides a continuous accessible path of travel from level 00 to level 01 of the Archaeology Centre.

There is a circulation area within each of the lift lobbies of the Archaeology Centre which will allow a wheelchair user to turn 180º in an independent and equitable manner, compliant with AS 1428.2.

There is also a stairway which connects the level 00 main entry lobby with the level 01 of the Archaeology Centre.

There are continuous accessible paths of travel throughout the level 01 areas of the Archaeology Centre. The paths of travel are assumed to be level throughout.

Recommendation:

(i) Provide handrails compliant with AS 1428.1 on both sides of the Archaeology Centre entry lobby stairway.

4.3. Retail Tenancies (Ground Level)

There are continuous accessible paths of travel within the main retail floors of each of the seven ground-level retail tenancies. The paths of travel have suitable clear widths which will allow a single wheelchair user to turn 180°, and two wheelchair users to pass each other in an independent and equitable manner, compliant with AS 1428.2.

4.4. Building Manager's Office (Level 00)

There is a building manager's office on level 00 (ground level) adjacent to passenger lift 3, located at grid reference N.6. There is a continuous accessible path of travel from the residential main entrance to the entry doorway of the above office via the residential main entry lobby. There is also a continuous accessible path of travel from each of the

residential lifts to the entry doorway of the above office via the residential main entry lobby.

The office entry doorway consists of a single-leaf hinged door. A minimum clear width of 850mm (920mm door leaf) is readily achievable at the above doorway.

There are continuous accessible paths of travel throughout the building manager's office. The paths of travel are assumed to be level throughout.

4.5. Commercial Office Tenancies

There are commercial office tenancies located on levels 1, 2, and 3.

There is a continuous accessible path of travel from street frontage to levels 1, 2 and 3 via the commercial passenger lift (lift 7). There is a circulation area in each of the lift lobbies of lift 7 which will allow a wheelchair user to turn 180° in an equitable and independent manner, compliant with AS 1428.2.

There is a continuous accessible path of travel from each of the commercial lift lobbies to each of the main entry doorways of the commercial office tenancies on levels 1, 2, and 3 respectively. The corridors leading from the lift lobby to the commercial office tenancies have a clear widths throughout which will allow two wheelchair users to pass each other simultaneously whilst travelling in the opposite direction, compliant with AS 1428.2. There are in addition circulation areas at the ends of the corridors which will allow a wheelchair user to turn 180º in an independent and equitable manner, compliant with AS 1428.2.

There are appropriate circulation spaces on either side of the main entry doorway of the majority of the commercial office tenancies on levels 1, 2 and 3. The main entry doorway to the commercial office tenancy located at grid reference N.5 on level 1, however, has an internal latch-side clearance of approximately 300mm, which will require revision under AS 1428.1.

Recommendations:

(i) Ensure the main entry doorway to each of the commercial office tenancies on levels 1, 2, and 3, has a minimum clear width of 850mm (920mm door leaf).

(ii) Provide a minimum internal latch-side clearance of 460mm at the main entry doorway to the commercial tenancy at grid reference N.5 on level 1.

4.6. Commercial and Archaeology Centre Passenger Lifts

There is one passenger lift which serves the commercial office tenancies on levels 1and 2 – namely, lift 7. Lift 7 provides a continuous accessible path of travel between basement level 1 (commercial car parking), ground level (level 00), and commercial office tenancies on levels 1 and 2.

The lift car of lift 7 has internal floor dimensions of 1400mm (width) x 2100mm (length), which is compliant with the Parramatta City Centre DCP clause 4.1(d), the draft DDA Premises Standards, and AS 1428.2.

There is one passenger lift which serves the Archaeology Centre on level 1 – namely, lift 8. The above passenger lift has internal floor dimensions of 1600mm (width) x 2000mm

(length), which is compliant with the Parramatta City Centre DCP clause 4.1(d), the draft DDA Premises Standards, and AS 1428.2.

Recommendation:

(i) Ensure that components in the lift 7 and 8 lift cars (control panels, audio/visual indicators, handrails and light levels) comply with AS 1735.12.

4.7. Commercial Sanitary Facilities (Levels 1 and 3)

There is one common-use commercial unisex accessible toilet on level 1. There is a continuous accessible path of travel from the commercial passenger lift and from each of the commercial office tenancies on level 1 to the accessible toilet. The accessible toilet entry doorway appears to have a clear width of 750mm, which will require revision.

The internal dimensions of the level 1 accessible toilet will accommodate the minimum combined pan and washbasin circulation requirements under AS 1428.1. However, under Parramatta City Centre DCP, the room internal dimensions will need to be enlarged to comply with AS 1428.2.

There is one common-use commercial unisex accessible toilet on level 3. There is a continuous accessible path of travel from the commercial passenger lift and from each of the commercial office tenancies on level 3 to the accessible toilet. The accessible toilet entry doorway appears to have a clear width of 750mm, which will require revision.

The internal dimensions of the level 3 accessible toilet will accommodate the minimum combined pan and washbasin circulation requirements under AS 1428.1. However, under Parramatta City Centre DCP, the room internal dimensions will need to be enlarged to comply with AS 1428.2.

There are no commercial sanitary facilities of any description on level 2. There is, however, a continuous accessible path of travel from each of the level 2 commercial tenancies to the level 1 or level 3 accessible toilets.

There is also one commercial accessible shower room on basement level 1, located near passenger lift 3. There is a continuous accessible path of travel from the lift lobbies for lifts 1-6 as well and from the lift L7 lobby respectively to the above shower room. A clear width of 850mm is achievable at the main entry doorway to the accessible shower room. There are appropriate circulation areas on either side of the above doorway.

The accessible shower room has internal dimensions which will readily accommodate an accessible shower as well as an accessible pan and washbasin in compliance with AS 1428.1.

Recommendations:

(i) Provide a minimum clear width of 850mm (920mm door leaf) at the entry doorway of the unisex accessible toilets on levels 1 and 3 and the basement level 1 accessible shower room.

(ii) In accordance with Parramatta City Centre DCP, ensure the commercial accessible toilets on levels 1 and 3 each comply with AS 1428.2. That is, provide a minimum circulation area of 2300mm x 1900mm around the pan, with the washbasin to sit outside this area.

5. RESIDENTIAL ACCOMMODATION

5.1. Path of Travel: General

There are residential units on levels 3-25 (inclusive) of the development.

There is a continuous accessible path of travel from street frontage and from each of the car parking levels to all residential levels via the six residential passenger lifts.

Each of the corridors leading to residential unit entry doorways has a minimum clear width which is suitable for a path of travel for a single wheelchair user under AS 1428.2.

There is a circulation area at the end of all of the residential arterial corridors which will allow a wheelchair user to turn 180° in an independent and equitable manner, compliant with AS 1428.2 and the DDA principle of equality of access.

There is a requirement under clause 6.1(c) of Parramatta City Centre DCP for the provision of 'barrier-free' access to a minimum of 20% of all residential units. There is a continuous accessible path of travel to the main entry doorway of all residential units presently specified in the development. A minimum clear width of 850mm (920mm door leaf) is achievable at a minimum of 20% of all residential units.

There is some ambiguity within the DCP as to whether the requirement of 'barrier-free access' to residential units is analogous to the provision of *visitable* units.

Currently, all units have a path of travel with a minimum clear width of 1000mm from the main entry doorway to the living area, which is suitable for a visitable unit under AS 4299. However, less than 20% of the units have a suitable bathroom.

5.2. Passenger Lifts

There are a total of six passenger lifts in the proposed development for residential use – namely, lifts 1-6. Each of the six passenger lift cars has internal floor dimensions of 1700mm (width) x 2500mm (length), which is compliant with Parramatta City Centre DCP clause 4.1(d), AS 1428.2 and the draft DDA Premises Standards.

There is a circulation space within each of the residential lift lobbies which will allow a wheelchair user to turn 180° in an independent and equitable manner, compliant with AS 1428.2.

Recommendation:

(i) Ensure that components in all lift cars (control panels, audio/visual indicators, handrails and light levels) comply with AS 1735.12.

5.3. Adaptable Units: Allocation

There are a total of approximately 350 residential units in the development. It is proposed that 35 of the above units will be adaptable units. The development therefore satisfies the requirement under Parramatta City Centre DCP clause 6.1(d) that 10 per cent of the residential units are to be adaptable.

As previously noted, there is a continuous accessible path of travel from street level and the from basement car parking to all units in the development. Therefore, there is continuous accessible path of travel to each adaptable unit.

5.4. Adaptable Units: Design

The following analysis is based on two drawings each dated 15th January 2010 showing the pre- and post-adaptation schemes for unit designs 305 and similar and 512 and similar. Both of the above drawings are untitled.

Main Entry

The main entry doorway in each adaptable unit design has a clear width of 900mm, which is compliant with AS 4299. There is an appropriate external latch-side clearance at the main entry doorway in each adaptable unit design. There appears to be an internal latch-side clearance of 510mm at the main entry doorway in each adaptable unit design, which is compliant with AS 4299.

Living Areas

A circulation area with a minimum diameter of 2250mm is readily achievable in the living room at post-adaptation stage in each adaptable unit designs.

Kitchen

A clearance of 1550mm is readily achievable between kitchen benches in each design at post-adaptation stage, which is compliant with AS 4299. The provision of a wall-mounted oven at pre-adaptation stage is achievable. The provision of a bench 800mm in length adjacent to the cooktop, oven and sink is achievable.

Main Bedroom

There is a clearance of 1210mm at the foot of the bed in the main bedroom at post-adaptation stage in each adaptable unit design, which is compliant with AS 4299. There is a circulation area which will allow a wheelchair user to turn 180º in an independent and equitable manner within the main bedroom in each adaptable unit design, compliant with AS 4299.

A minimum clearance of 1000mm is achievable on either side of the queen-size bed in the main bedroom at post-adaptation stage in each adaptable unit design, which is compliant with AS 4299.

There are two entry doorways into the main bedroom in the unit 305 design, one of which consists of a hinged door and the other which consists of a sliding door. The hinged door has a clear width of 850mm at both pre- and post-adaptation stages, which is compliant with AS 1428.2. There are internal and external latch-side clearances at the above doorway compliant with AS 1428.1.

The outermost leaf of the sliding door system at second entry doorway has a suitable clear width. The internal and external latch-side clearances at the above doorway are non-compliant with AS 1428.1. The provision of compliant latch-side clearances is not mandatory due to the provision of an accessible hinged main bedroom doorway. However, the provision of compliant latch-side clearances should be considered at post-

adaptation stage so as to provide a direct accessible path of travel from the living area to the bedroom and to the unit terrace.

Main Bathroom

The internal dimensions of the bathroom in both the unit 305 and unit 512 designs will readily allow for the combined pan, washbasin and shower circulation areas in accordance with AS 1428.1 at post-adaptation stage.

The bathroom entry doorway in each of the adaptable unit designs has a clear width of 800mm, which is compliant with AS 1428.1. There are internal and external latch-side clearances compliant with AS 1428.1 at the bathroom entry doorway in the unit 305 design. There is an external latch-side clearance compliant with AS 1428.1 at the unit 512 bathroom entry doorway. An internal latch-side clearance at the bathroom entry doorway is readily achievable at post-adaptation stage.

Laundry

There is a circulation area with a minimum diameter of 1550mm in front of the laundry appliances in both designs at pre-adaptation stage. This will ensure that minimal or no modification will be required to achieve compliance with AS 4299 at post-adaptation stage, which is in accordance with the objectives of AS 4299.

The laundry tub is located within a laundry room in the unit 305 design. The laundry room entry doorway has a clear width of 800mm, which is compliant with AS 1428.1. The laundry entry doorway also has an internal and external latch-side clearance, compliant with AS 4299.

The laundry tub is located within a closet arrangement in unit 512 design. The doors to the laundry each have a clear width of 750mm. Whilst this is non-compliant with AS 1428.1, it is assumed that in any given instance both door leaves will need to be opened in order for the laundry appliances to be used.

Paths of Travel

The widths of the corridors outside the entry doorway to the main bedroom, the bathroom and the laundry in each of the adaptable unit designs are in accordance with AS 1428.1, which is compliant with AS 4299.

There is a terrace within each adaptable unit design. The doorway connecting the terrace to the unit internal areas has a clear width of 800mm in each adaptable unit design, which is compliant with AS 1428.1. There are suitable internal and external latch-side clearances at the terrace doorways in each adaptable unit design.

The level difference between the floor level of the terrace and the floor level of the unit internal areas, if any, is not presently indicated. A level difference compliant with AS 1428.1 is readily achievable.

Recommendation:

(i) Provide an 800mm-long bench adjacent to the sink, cooktop and wall-mounted oven unit designs 305 and 512 respectively. This is readily achievable.

5.5. Residential Common Facilities

The following facilities are all designated for resident use only and are all located on level 2: a reception area, a gymnasium, a pool, a spa, an al-fresco-style entertainment area, a sauna, change rooms, a cinema, a library, and a roof terrace. Under clause 4.1(c) of the Parramatta City Centre DCP, 'barrier-free' access is required to each of the above common facilities.

There is a continuous accessible path of travel from the basement and ground levels to each of the above common facilities via the passenger lifts. There is also a continuous accessible path of travel to each of the above facilities from each of the residential units in the proposed development via the residential passenger lifts.

Continuous accessible paths of travel are readily achievable within the gymnasium, pool deck, cinema, library, and roof terrace areas respectively. A continuous accessible path of travel is readily achievable to each of the above areas from the passenger lifts to the roof terrace.

There are a total of 25 seats in the level 2 cinema. The seating is assumed to be fixed. Under the BCA, a system of hearing augmentation and 1 wheelchair space should be provided within the cinema. The paths of travel throughout the cinema are assumed to be continuously level.

There are two residential garbage disposal rooms per level on levels 3-21 respectively. There is one garbage disposal room per level on levels 22-24. There is a continuous accessible path of travel from each residential unit to the garbage rooms on the corresponding level.

On each of levels 3-21 (inclusive), there is a circulation area within one of the two garbage rooms which will allow a wheelchair user to turn 180º in an independent and equitable manner, compliant with AS 1428.2.

There are residential mailboxes on ground level (level 00) within the residential entry lobby near the concierge's desk. There is a circulation area in front of each bank of mailboxes which will allow a person in a wheelchair to turn 180º in an independent and equitable manner, compliant with AS 1428.2. The circulation area in front of the mailboxes is located on a hardstand surface, compliant with AS 4299. Whilst the location of adaptable units is not yet determined, a continuous accessible path of travel from any adaptable units to the mailboxes is achievable via the residential passenger lifts.

Recommendations:

(i) Ensure at least one leaf of the double doors at the main entries to the cinema and the library respectively on level 2 has a minimum clear width of 850mm (920mm door leaf). Currently, each leaf of the above double doors has a clear width of 750mm.

(ii) Provide one wheelchair seating space in the cinema on level 2. Where provided, ensure the wheelchair seating space minimum internal dimensions of 1300mm (length) x 800mm (width). A cinema seat which is designed so as to be readily removable if and when required will satisfy this requirement. Provide an unobstructed circulation area a minimum of 1550mm adjacent to the wheelchair seating space. Ensure the wheelchair seating space is located adjacent to a seat for a carer.

(iii) Ensure there is an appropriate unobstructed circulation space (1550mm in diameter) in front of each bank of residential letter boxes, compliant with AS1428.2.

(iv) Provide a minimum clear width of 850mm (920mm door leaf) and a minimum internal latch-side clearance of 460mm at the entry doorways of the garbage rooms on each residential level.

(v) Consideration to be given for future provision of sling-style swimming pool lift at the pool.

5.6. Residential Common-Use Accessible Toilets (Level 2)

There is a residential common-use unisex accessible toilet on level 2, located adjacent to the gym. There is a continuous accessible path of travel from the residential passenger lifts to the above accessible toilet.

The accessible toilet has internal dimensions which will readily accommodate the minimum combined pan and washbasin circulation requirements under AS 1428.2. Currently, due to the location of the washbasin the actual layout of the room fixtures complies with AS 1428.1. Relocation of the washbasin to achieve compliance with AS 1428.2 is readily achievable.

The toilet entry doorway has a clear width of approximately 750mm, which will require modification. There are appropriate circulation areas on either side of the entry doorway.

Recommendations:

(i) Provide a minimum clear width of 850mm (920mm door leaf) at the entry doorway to the residential common use accessible toilet on level 2.

(ii) Provide a circulation area of 2300mm x 1900mm around the pan. The washbasin is to sit outside this area. This is achievable through the relocation of the washbasin.

6. MISCELLANEOUS

6.1. Retail Staff Accessible Toilet (Level 00)

There is one retail staff accessible toilet on level 00 at grid reference N.9. The entry doorway to the above accessible toilet appears to have a clear width of 750mm, which will require revision.

The above toilet has internal dimensions which will not accommodate the minimum combined pan and washbasin circulation areas under AS 1428.1. This will require revision.

Recommendation:

(i) Provide a minimum clear width of 850mm (920mm door leaf) at the entry doorway into the retail staff accessible toilet on level 00.

(ii) In accordance with Parramatta City Centre DCP, ensure the retail staff accessible toilet on level 00 complies with AS 1428.2. That is, provide a minimum pan circulation area of 2300mm x 1900mm. The washbasin is to sit outside this area.

6.2. Car Parking

There is car parking located on basement levels 1-6 (inclusive) of the proposed development.

There is one commercial accessible car parking bay in the development, located on basement level 1. The provision of one commercial accessible car parking bay satisfies the requirement of Parramatta City Centre DCP clause 4.3(e).

There is residential visitor car parking located on basement levels 1 and 2. There are a total of two accessible visitor car parking bays in the development, one of which is located on basement level 1 and the other of which are located on basement level 2.

Each of the above commercial and visitor accessible car parking bays has an internal width dimension compliant with Parramatta City Centre DCP clause 4.2(k) and AS 2890.1. There is also an appropriate continuous accessible path of travel from each of the above accessible car parking bays to the passenger lifts.

There are a total of 35 accessible car parking bays for resident use, located on basement levels 2-6. Accordingly, there is one adaptable unit car parking bay for each adaptable unit in the development, which is compliant with AS 4299 and Parramatta City DCP clause 6.1(h). There is also an appropriate continuous accessible path of travel from each of the above accessible car parking bays to the passenger lifts.

Each of the adaptable unit car parking bays presently has a clear width of 3.2m. This will require revision under AS 4299 and Parramatta City Centre DCP clause 6.1(h).

Recommendations:

(i) Provide one car parking bay for each adaptable unit, compliant with Parramatta City Centre DCP clause 6.1(h) and AS 4299. Ensure each adaptable unit car

parking bay has minimum internal dimensions of 3.8m (width), compliant with Parramatta City Centre DCP clause 6.1(h) and AS 4299.

(ii) Ensure each adaptable unit car parking bay is located adjacent to a lift lobby.

(iii) Provide a minimum vertical clearance of 2500mm over each accessible parking bay for commercial and visitor use and over each adaptable unit car parking bay.

(iv) Provide a minimum vertical clearance of 2200mm over the vehicular path of travel leading to each accessible parking bay for commercial and visitor use and to each adaptable unit car parking bay from the car parking entrance.

7. MISCELLANEOUS

7.1. Signage

Recommendation:

(i) Signage to comply with BCA part D3.6 and AS 1428.1 requirements.

7.2. Lighting

Recommendation:

(i) Lighting levels compliant with AS 1428.2 are recommended.