

ACCESS REPORT

DEVELOPMENT APPLICATION

MEMORIAL AVENUE

77-79 BATHURST STREET & 86-94 CASTLEREAGH STREET LIVERPOOL

MIXED RETAIL / RESIDENTIAL DEVELOPMENT



Prepared By Mark Relf

25TH February 2019



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Introduction

The purpose of this report is to provide an accessibility review of a Development Application for a mixed use retail / residential development on a site on Memorial Avenue, 77-79 Bathurst Street and 86-94 Castlereagh Street, Liverpool.

In particular, the report considers the accessibility of common and retail areas within the development and the provision of 10% of units as Adaptable Housing within the meaning of AS4299.

Assessment Criteria

This assessment considers the following legislation, planning instruments and standards pertaining to access for people with disabilities:

- (1) Building Code of Australia (2016) and DDA Premises Standards
- (2) Liverpool Development Control Plan 2008 – Section 6.1 – *Housing Choice & Mix*
- (3) Australian Standard AS1428.1 – Design for Access & Mobility & referenced standards.
- (4) Australian Standard AS1428.4.1 – Tactile Ground Surface Indicators.
- (5) Australian Standard AS2890.6 – Parking for people with a disability.
- (6) Australian Standard AS1735.12 – Lifts for people with disabilities.
- (7) Australian Standard AS4299 – Adaptable Housing.
- (8) SEPP 65 amdt 3 (2015) – Apartment Design Guide
- (9) Livable Housing Guidelines [4th edition]

Development Application Plans

The plans relied upon for this accessibility assessment include:

DA0002	PERSPECTIVE - AERIAL VIEW FROM NORTH		DA3101	NORTH ELEVATION - MEMORIAL AVENUE	
DA0003	PERSPECTIVE - BATHURST STREET VIEW		DA3102	WEST ELEVATION - CASTLEREAGH STREET	
DA0004	PERSPECTIVE - MEMORIAL AVENUE VIEW		DA3103	SOUTH ELEVATION	
DA0005	PERSPECTIVE - PODIUM VIEW		DA3104	EAST ELEVATION - BATHURST STREET	
DA1001	SITE PLAN		DA3105	EAST AND WEST COURTYARD ELEVATIONS	
DA1002	NORTH ELEVATION STREETSCAPE		DA3111	FINISHES AND MATERIAL SAMPLE/IMAGE BOARD	
DA1003	EAST & WEST STREETSCAPES		DA3112	MATERIAL ELEVATION	
DA2000	GROUND FLOOR PLAN		DA3201	SECTION 1	
DA2001	BASEMENT 1		DA3202	SECTION 2	
DA2002	BASEMENT 2		DA3203	SECTION 3 AND 4	
DA2003	BASEMENT 3		DA3204	RESTAURANT SECTION	
DA2010	BASEMENT 1 FUTURE PARKING CONNECTIVITY		DA4101	WALL SECTION 1	
DA2101	LEVEL 1 PLAN		DA4102	WALL SECTION 2	
DA2102	LEVEL 2 PLAN		DA5101	ADAPTABLE APARTMENT PLANS	
DA2103	LEVEL 3 PLAN		DA8501	SHADOW DIAGRAMS - 21 JUNE	
DA2104	LEVEL 4 PLAN		DA8511	SUN EYE VIEWS 1	
DA2105	LEVEL 5 PLAN		DA8512	SUN EYE VIEWS 2	
DA2106	LEVEL 6 PLAN		DA8513	SUN EYE VIEWS 3	
DA2107	LEVEL 7 PLAN		DA8520	PROJECT SUMMARY	
DA2108	LEVEL 8 PLAN		DA8521	96-98 CASTLEREAGH ST SOLAR ACCESS	
DA2109	LEVELS 9-17 PLAN		DA8531	ADG SOLAR ACCESS ANALYSIS	
DA2118	LEVELS 18-23 PLAN		DA8532	ADG NATURAL VENTILATION ANALYSIS	
DA2124	ROOF PLAN		DA8533	ADG OPEN SPACE/DEEP SOIL	
			DA8534	GFA DIAGRAMS	

Executive Summary

The development proposes a residential development consisting of the following elements:

- Retail areas on the ground floor adjoining Memorial Avenue and Bathurst Street will incorporate on-grade access from the public domain. The Castlereagh Street frontage will achieve level threshold entry to the commercial tenancy and residential lift lobby to readily comply with D3.2 of the BCA and Council's DCP.
- The principal entrance lobbies and lift access within the two towers will provide direct and equitable access to two hundred sixty-four (264) apartments to satisfy BCA 2016 and Council's DCP accessibility requirements.
- The internal foyers, corridor accessways and lifts facilitate universal access to all storeys and apartment entrance doorway entrances to satisfy BCA 2016 and Council's DCP accessibility requirements. Details of ramps, doorway thresholds and lifts shall be confirmed at a later construction certificate stage in accordance with AS1428.1.
- The communal central plaza and garden areas on the ground floor shall provide wheelchair accessible path of travels to comply with AS1428.1 to satisfy Table D3.1 of the BCA.
- The common area recreational amenities on level 1 propose landscaped pathways to barbecue area, play areas, gymnasium and swimming pool that will incorporate accessible features to comply with BCA 2016 and Council's DCP accessibility requirements.
- On-site parking for 318 vehicles (279 resident, 27 visitor and 12 retail spaces), which incorporates twenty-four (24) accessible resident parking bays for the adaptable units and at least four (4) accessible retail and four (4) visitor spaces in accordance with AS4299 / AS2890.6.
- The development proposes at least twenty-four (24) adaptable units (9.1% of 264) with designs complying with AS4299 – Adaptable Housing which is consistent with the intent of Council's DCP requirement of 10%.
- With respect to the Universal Access requirements of the SEPP 65 Apartment Design Guide the development can provide at least 62 apartments or 23.5% of the 264 apartments that will include design features complying with the Silver Level Livable Housing Guidelines, which exceeds the 20% minimum.

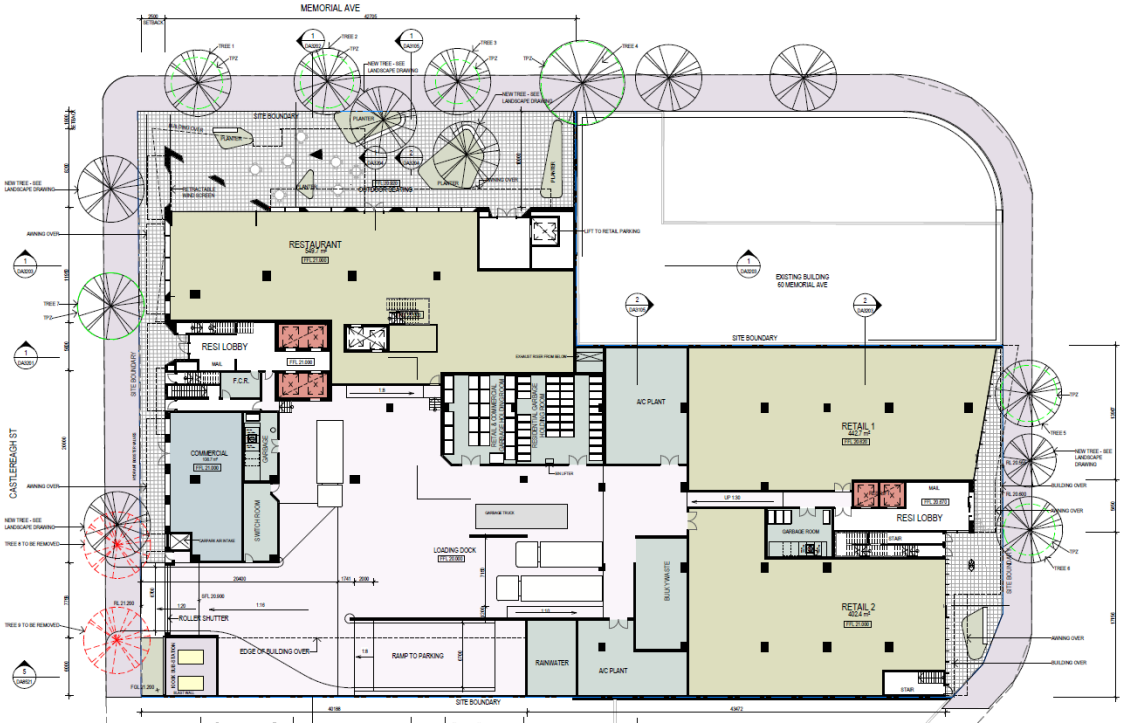
In summary the access and adaptability review of the development demonstrates compliance with the relevant objectives and design code requirements of BCA 2016/DDA Premises Standard pertaining to accessible retail and common domain areas which facilitate equitable access to all apartments and the Adaptable Housing standard AS4299 in terms of twenty-four (24) adaptable units for people with disabilities.



Mark Relf,
Access Consultant (ACAA)

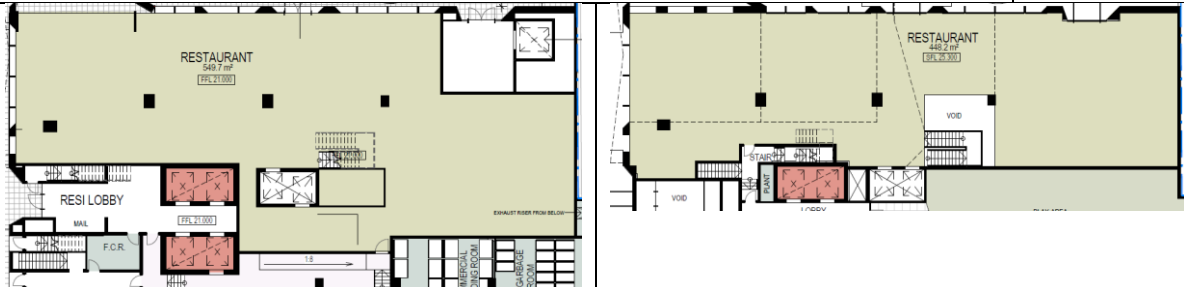
Part A – Retail & Common Areas Access Assessment

External Pathway Links and Building Entrances (Parts D3.2 & D3.3 of the BCA)

BCA / DDA Access Code Review	Complies
	
<ol style="list-style-type: none"> 1. The development occupies a site that has three street frontages with retail/commercial uses and two residential entrance lift lobbies that serve two towers to the east on Bathurst Street and to the west on Castlereagh Street. 2. The Memorial Avenue frontage shall incorporate a 10m X 45m outdoor plaza that adjoins a potential restaurant and a lift lobby to the basement level 1 retail parking. 3. The general topography of the site and adjacent public domain is very moderate with less than 1000mm height variation across the site which enables on-grade accessways from the public domain footpaths to all retail/commercial tenancies and common lobby entrances. 	<p>YES</p> <p>YES</p> <p>YES</p>
<ol style="list-style-type: none"> 4. Memorial Avenue – While the proposed FFL 21.000 floor level has a 330mm to 620mm height difference to the public domain footpath the 10m setback provides ample opportunity to incorporate 1:25 or less gradient accessways to the ground floor restaurant tenancy and carpark lift lobby to ensure level threshold entries in accordance with AS1428.1 to satisfy Parts D3.2 and D3.3 of the BCA. 5. The entry lobbies include swing doors with ample circulation spaces in accordance with AS1428.1 to satisfy Parts D3.2 and D3.3 of the BCA. 6. Where the outdoor plaza proposes a stairway then the first riser or ramp must be setback at least 900mm a future design stage to accommodate handrails and tactile indicators and stairway nosings in accordance with AS1428.1 and AS1428.4.1 to satisfy Parts D3.3 and D3.8 of the BCA. 	<p>YES</p> <p>YES</p> <p>YES at CC stage</p>

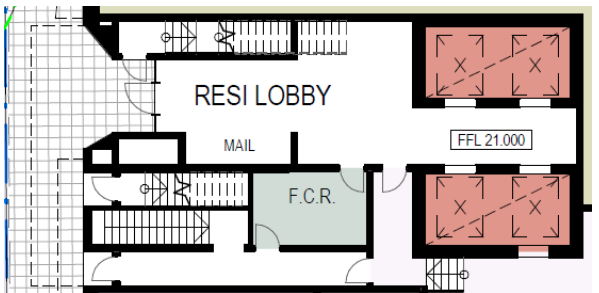
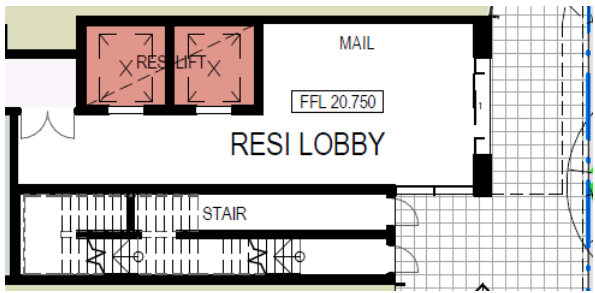
BCA / DDA Access Code Review	Complies
<p>7. Bathurst Street - The plans propose two retail tenancies and a residential lift lobby. The Retail 1 and lift lobby proposes FFL 20.670 which will enable a level doorway landing and level threshold from the public domain footpath @RL 20.600 to comply with ASI428.1 and satisfy Parts D3.2 and D3.3 of the BCA.</p> <p>8. The Retail 2 level of FFL 21.000 closely aligns with the public footpath and will achieve a level doorway landing and level threshold to enter the lobby to comply with ASI428.1 and satisfy Parts D3.2 and D3.3 of the BCA.</p> <p>9. The entry lobby and retail tenancies illustrate auto sliding doors to ensure appropriate access for people with disabilities.</p>	<p>YES</p> <p>YES</p> <p>YES</p>
10. Castlereagh Street – The plans propose a commercial tenancy and a residential lift lobby. The commercial tenancy and lift lobby levels of FFL 21.000 closely align with the public footpath and will achieve level doorway landings and level entry thresholds to comply with ASI428.1 and satisfy Parts D3.2 and D3.3 of the BCA.	YES
11. Details regarding door sizes, door hardware, level thresholds, doorway luminance contrast and accessible intercom controls shall be documented at the construction certificate stage in accordance with ASI428.1 to satisfy Parts D3.2 and D3.3 of the BCA.	YES at CC stage


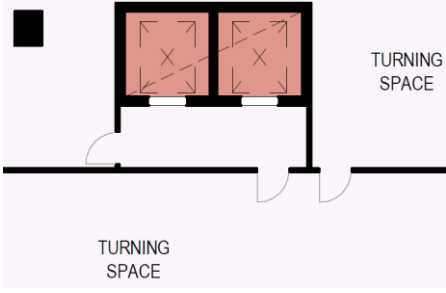
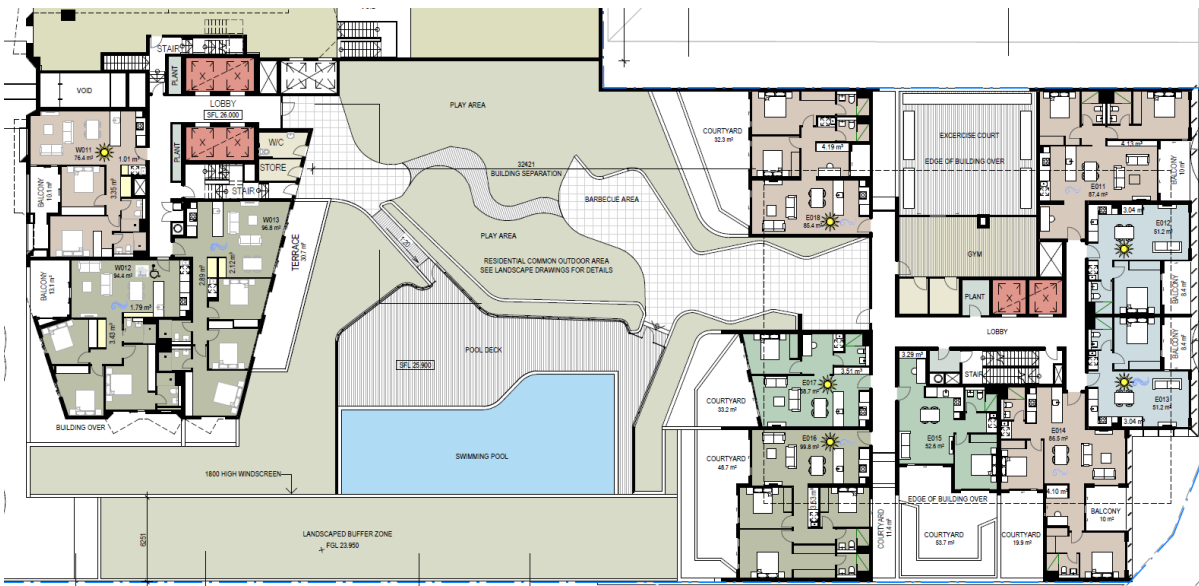
Internal Circulation

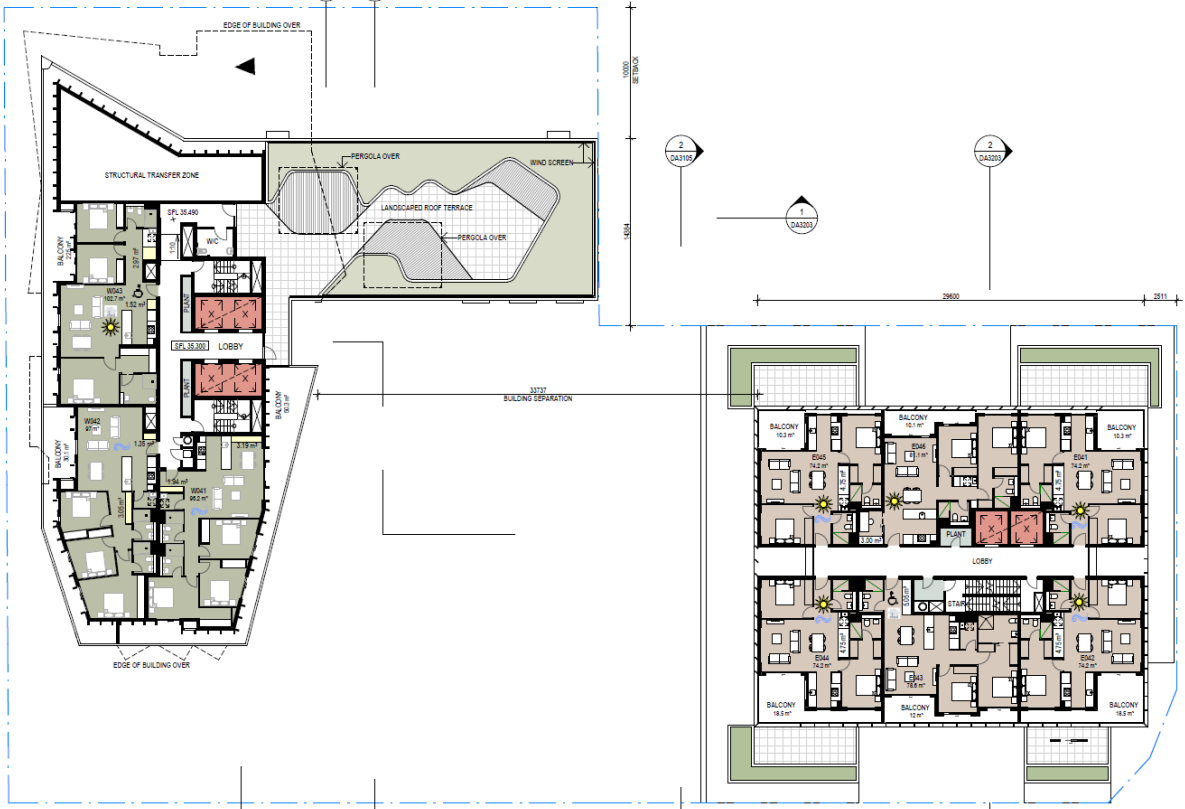
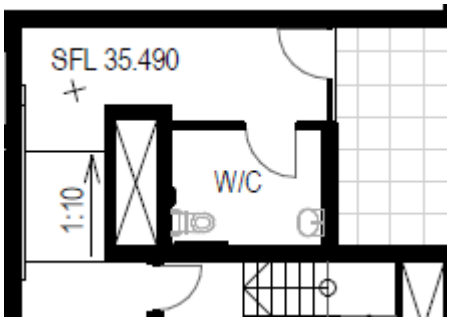
BCA / DDA Premises Standards Review	Complies
<p>12. Ground Floor Retail – The plan illustrates four (4) separate retail/commercial tenancies with open plan areas across a single floor level, which facilitates equitable access to all areas in accordance with ASI428.1 to satisfy Part D3.3 of the BCA and DDA Premises Standards.</p> <p>13. Restaurant – With respect to the restaurant the plans illustrate two lifts and stairway that facilitate equitable access between the ground and first floor levels to comply with Part D3.3 of the BCA and DDA Premises Standards.</p> <p>14. The rear access ramp and stair to the loading dock are deemed exempt from all accessibility requirements associated with ASI428 due to the nature of usage of the loading, which is consistent with the provisions of Part D3.3 of the BCA and DDA Premises Standards.</p>	<p>YES</p> <p>YES</p> <p>YES</p>
	
15. Basement 1 (Retail Parking & Access) – The plan proposes a common area lift which interconnects with the outdoor Memorial plaza area on the ground	YES


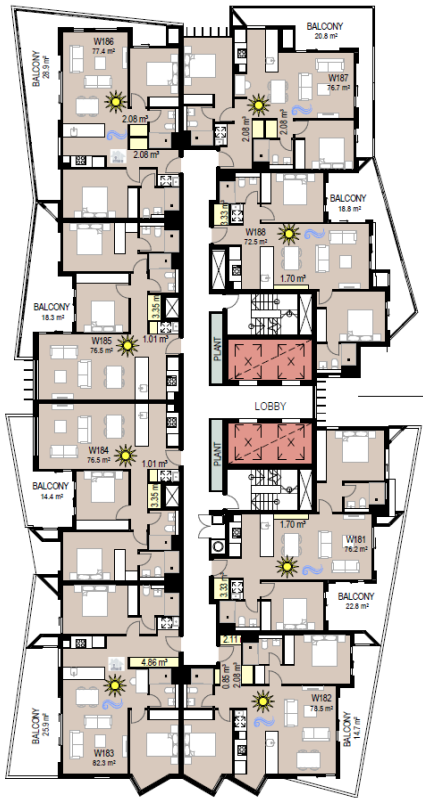
BCA / DDA Premises Standards Review		Complies
<p>The diagram is a detailed floor plan of the basement level, designated for retail and commercial use. On the left side, there are green-shaded areas for 'WSUD' (Water Sensitive Urban Design), 'SPRINKLER TANKS', and 'FIRE SERVICES'. The main area is divided into several sections. At the top, there are eight narrow retail spaces, three of which are adaptable, and one commercial space. Below these are more retail spaces, some of which are highlighted with yellow diagonal hatching. A central area is labeled '8 RETAIL SPACES', '3 RETAIL ADAPTABLE SPACES', and '1 COMMERCIAL SPACES'. To the right, there are more retail spaces, a 'LIFT TO PLAZA', and a 'SITE BOUNDARY' indicated by a blue line. At the bottom, there are visitor spaces, some of which are highlighted with yellow diagonal hatching. Dimensions are provided for various areas, including a 6700mm width for the fire services area and a 2400mm width for the accessible parking spaces. A 'TURNING SPACE' of 5400mm is also indicated. The plan includes symbols for accessible parking (a wheelchair icon) and visitor spaces (a person icon). A 'MDF' (Mechanical Distribution Facility) is located in the center. A 'LIFT TO PLAZA' is shown on the right. The plan also shows a 'SITE BOUNDARY' on the right side. The overall layout is designed to comply with the BCA and DDA Premises Standards.</p> <p style="text-align: center;"><i>Basement I retail/commercial</i></p>		
16. The development proposes 12 retail/commercial and a total of 27 visitor car spaces within the basement I carpark, which includes 4 accessible retail and 4 accessible visitor spaces easily complying with Table D3.5 of the BCA and DDA Premises Standards.	YES	
17. The design of the Accessible Parking spaces providing 2400mm minimum width adjoining a 2400mm width shared area complies with AS2890.6 to satisfy Part D3.5 of the BCA and DDA Premises Standards.	YES	
18. The accessible parking will be situated on generally level pavement no steeper than 1:40 to comply with AS2890.1 and direct access to the common retail lift.	YES	
19. 2200mm minimum entry and driveway aisle heights and 2500mm height over the accessible spaces shall be confirmed at construction certificate stage in accordance with AS2890.6.	YES at CC stage	

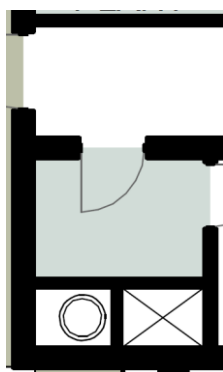
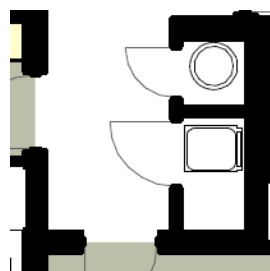
Accessibility of Common Domain Areas (Table D3.1, Parts D3.2 & D3.3 of the BCA)

BCA / DCP Access Review	Complies
<p>20. In accordance with Table D3.1 of the BCA a development is required for Class 2 Areas of a development (residential flat buildings);</p> <ul style="list-style-type: none"> To provide a pedestrian entrance to be accessible to at least one (1) floor containing sole occupancy units and to the entrance doorway of each sole occupancy unit located on that level, and To and within not less than one (1) of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed — <ul style="list-style-type: none"> a) to the entrance doorway of each sole-occupancy unit; and b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp. 	
 <p>Western Tower lobby on Castlereagh Street</p>	 <p>Eastern Tower lobby on Bathurst Street</p>
<p>Ground Floor accessways –</p> <p>21. As described above the development proposes accessible site entrances and external pedestrian walkways that facilitate accessible pathways to the entrance lobbies at the ground floor.</p> <p>22. The western lobby to Castlereagh Street provides ample internal circulation space within the 2500mm minimum width entry lobby with level access to the 2000mm width lift landing which enables Turning and Passing in all areas in accordance with AS1428.1 to satisfy Part D3.3 of the BCA.</p> <p>23. The eastern lobby to Bathurst Street provides ample internal circulation space within the 4500mm minimum width entry lobby with level access to the 2000mm width lift landing which enables Turning and Passing in all areas in accordance with AS1428.1 to satisfy Part D3.3 of the BCA.</p>	<p>YES</p> <p>YES</p> <p>YES</p>
<p>Basement level lift lobby accessways –</p> <p>24. The development proposes three levels of residential parking with lift access to all levels.</p> <p>25. The Basement level 1 western lift lobby provides adequate access to the enclosed lift lobby and subject to the western swing door rehinged to swing into the lift lobby or reconfigured as auto sliding door complying with AS1428.1 to satisfy Part D3.3 of the BCA while the 2000mm width lift landing enables Turning</p>	<p>YES</p> <p>Y</p>

BCA / DCP Access Review	Complies
and Passing to also satisfy Part D3.3 of the BCA.	
 <p data-bbox="355 607 630 640">Western Tower lift lobby</p>	 <p data-bbox="970 607 1236 640">Eastern Tower lift lobby</p>
<p>26. The Basement level 1 eastern lobby to Bathurst Street provides ample accessway approaches and doorway circulation spaces complying with AS1428.1 to satisfy Part D3.3 of the BCA. The 1800mm width lift landing enables Turning and Passing to also satisfy Part D3.3 of the BCA.</p>	YES
<p>27. Basement levels 2 and 3 propose unenclosed lift landings with 1900mm to 2000mm minimum width which enables Turning and Passing in all areas in accordance with AS1428.1 to satisfy Part D3.3 of the BCA.</p>	YES
<p>Level 1 –</p> 	
<p>28. Level 1 proposes a large communal outdoor terrace that adjoins the common lift lobbies of both towers and incorporates various resident amenities with a swimming pool, barbecue area and outdoor play areas while the eastern tower provides a gymnasium and outdoor exercise courtyard.</p>	YES
<p>29. With respect to the access to the amenities the two lift lobbies propose doorways that will have level thresholds and adequate doorway circulation spaces in accordance with AS1428.1 to satisfy Part D3.3 of the BCA.</p>	YES
<p>30. The two lift lobbies propose 2000mm minimum width lift landings, which lead to 1600mm width common accessways that incorporate 1540 X 2070mm Turning Areas at the end of the accessways. The spatial areas and layout inherently</p>	YES

BCA / DCP Access Review	Complies
<p>entrance doorways, Passing Areas and facilitate 1540 X 2070mm Turning Areas at the end of the accessways in accordance with AS1428.1 to satisfy Part D3.3 of the BCA.</p>	
	
<p>Level 4 Outdoor Terrace –</p> <p>36. The western tower incorporates ramp access to a communal roof terrace area which includes a unisex accessible toilet in accordance with AS1428.1 to satisfy Part D3.3 of the BCA.</p>	 <p>YES</p>
<p>Levels 5 to 7 (8 to 17 similar)</p>	
<p>37. Eastern Tower - The 2000mm width lift landing and central corridor inherently facilitates Turning and Passing Areas in accordance with AS1428.1 to satisfy Part D3.3 of the BCA.</p>	<p>YES</p>
<p>38. Western Tower - The 2000mm width lift landing provides access to 1600mm minimum common corridors to the west, which enable to access to apartment entrance doorways, Passing Areas and facilitate 1540 X 2070mm Turning Areas at the end of the accessways in accordance with AS1428.1 to satisfy Part D3.3 of the BCA.</p>	<p>YES</p>

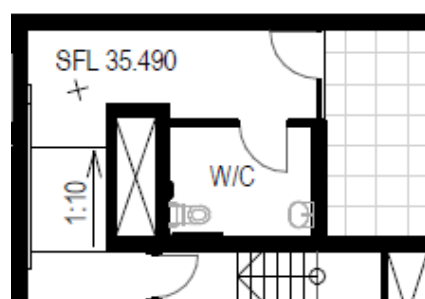
BCA / DCP Access Review		Complies
<div><div></div><div>Levels 5-7 (8-17 similar)</div></div>		
<div><div>Levels 18 to 23</div><div><div><p>39. Western Tower - The 2000mm width lift landing provides access to 1600mm minimum common corridors to the west, which enable to access to apartment entrance doorways, Passing Areas and facilitate 1540 X 2070mm Turning Areas at the end of the accessways in accordance with AS1428.1 to satisfy Part D3.3 of the BCA.</p><p>40. Summary of Apartment Access - As detailed above the development will provide equitable access to enter the residential lobbies and lifts at the ground floor and basement parking levels to travel to all levels within the residential development and ultimately from the lifts to approach the entry doorways of all 264 apartments to satisfy Table D3.1 of the BCA.</p></div></div></div>	<div><div></div></div>	<div><div>YES</div><div>YES</div></div>
<div><div><p>41. Stairways (Fire Isolated) - In accordance with part D3.3(a)(iii) of the BCA the fire-isolated stairs will be detailed at construction certificate stage with step nosings to the requirements of AS1428.1 to satisfy Parts D3.3(a)(iii) of the BCA.</p><p>42. The fire isolated stairways shall also be required to provide at least one continuous inner handrail complying with clause 12 and figure 28 of AS1428.1 to</p></div></div>	<div>YES at CC stage</div>	

BCA / DCP Access Review		Complies
satisfy Part D2.17(a)(vi) of the BCA.		
43. The stairways shall be slip resistant		
44. Slip Resistance - In accordance with part D2.14 of the BCA and AS1428.1 all stairs, ramped accessways and common area accessways generally will be detailed at construction certificate stage.		YES at CC stage
45. Letterboxes – The two towers propose letter boxes within the internal lobby landing areas with adequate access that will comply with AS1428.1 and satisfy part D3.3 of the BCA.		YES
46. Garbage – The plans illustrate resident garbage chutes on all levels with direct access from common corridors to hatch doors, which facilitate appropriate access to comply with AS1428.1 and satisfy Table D3.1 and Part D3.3 of the BCA as a common use residential area.	 <p>Eastern tower</p>	YES
	 <p>Western tower</p>	

Lifts (Part E3.6 of the BCA)

BCA / DCP Access Review	Complies
47. While the development provides 1400 X 2000 minimum lift cars to comply with Table D3.1 / Part D3.3 BCA in enabling vertical access to various details of lift car controls, handrails and the like will be provided at construction documentation stage to confirm compliance with AS1735.12 to satisfy Part E3.6 of the BCA.	YES at CC stage

Accessible Sanitary Facilities (Part F2.4 of the BCA)

BCA / DCP Access Review		Complies
<p>48. Level 4 of the west tower provides a communal sanitary facility which provides 2100mm X 2800mm with a 1600mm minimum width corridor approach and 530mm minimum latchside clearance to the external doorway to comply with AS1428.1 and F2.4 of the BCA. Fittings and fixtures will be provided at construction documentation stage.</p>		YES

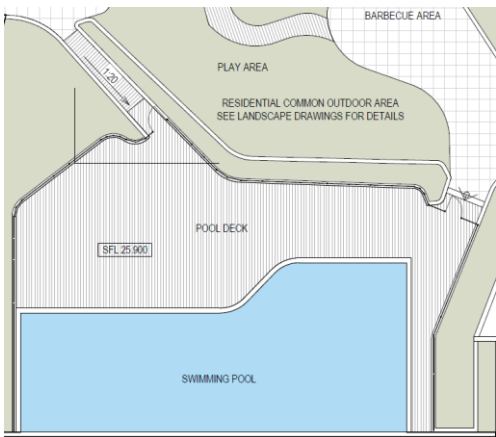
Tactile & Braille signage (Part D3.6 of the BCA)

BCA / DCP Access Review	Complies
49. The common toilets shall be documented at construction certificate stage with tactile and Braille signage in accordance with AS1428.1 to satisfy Parts D3.6 of the BCA.	YES at CC stage
50. The FIRE EXIT doors shall be documented at construction certificate stage with tactile and Braille signage in accordance with AS1428.1 to satisfy Parts D3.6 of the BCA.	YES at CC stage

Tactile ground surface indicators (Part D3.8 of the BCA)

BCA / DCP Access Review	Complies
51. Where 1:14 to 1:19.9 ramps and non fire-isolated stairways are included during detailed design then they shall be documented at construction certificate stage with tactile ground surface indicators (TGSI's) in accordance with AS1428.4.1 to satisfy Parts D3.3 and D3.8 of the BCA on the following areas; <ul style="list-style-type: none"> (a) Pedestrian ramps steeper than 1:20; (b) Common area stairways (excluding fire-isolated and loading stairs); 	YES at CC stage

Swimming Pools (Part D3.10 of the BCA)

BCA / DCP Access Review	Complies
<p>52. The pool indicates a 55 metre perimeter and will include a pool hoist to comply with D3.10 of the BCA.</p> <p>53. The narrow 1200mm width 1:20 accessway approach to the pool gate needs to be increased to 1600mm X 1600mm at the gate while the stairway will require detailing to comply with AS1428.1 and AS1428.4.1 to comply with D3.3 and D3.8 of the BCA.</p>	 <p>YES at CC stage</p>



Glazing Markings (Part D3.12 of the BCA)

BCA Accessibility Review	Complies
54. Details of glazing markings within the common areas on the ground floor, basement lift lobbies and roof terrace areas will be confirmed at construction certificate stage to comply with AS1428.1.	YES at CC stage

Part B - Adaptability Assessment

Adaptability Assessment

The following provides an assessment of the designated “adaptable” units in accordance with Category C of the Adaptable Housing Standard – AS4299.

The development proposes twenty-four (24) or 9.1% of the two-hundred and sixty-four (264) apartments shall be adaptable and shall comply with AS4299 to Class C, which is reasonably consistent with the intent of Council’s DCP requirement of 10%. The development also provides a total of 23.5% of the apartments as silver level livable housing as reported in part C of this report.

The adaptable apartment types are –

- Type 1 – 5 X 3 bedroom apartments – West Tower from Level 1 to 6
- Type 2 – 1 X 3 bedroom apartments – West Tower on Level 4
- Type 3 – 4 X 2 bedroom apartments – East Tower from Level 4 to 7
- Type 4 – 10 X 1 bedroom apartments – East Tower from Level 8 to 17
- Type 5 – 2 X 2 bedroom apartments – West Tower from Level 2 to 3
- Type 6 – 1 X 3 bedroom apartments – East Tower on Level 2



The following provides an assessment of the designated “adaptable” apartments in accordance with Category C of the Adaptable Housing Standard – AS4299.

Clause	Adaptability Assessment	Compliance
AS4299 Cls 3.3 and 3.5	<p>Common Resident Site Access & Entry Lobbies – Part A of this report confirms that the development will provide accessible lobby entrances and continuous accessible paths of travel to enter the lifts and ensure equitable access in accordance with AS1428.1 to satisfy Parts D3.2/D3.3 of the BCA and Council's DCP.</p> <p>Overall I am satisfied that the principal site and building entrances and access to the lifts and common corridor accessways will provide appropriate access for people with disabilities in accordance with AS1428.1 / AS4299.</p>	YES
AS4299 Cls 3.7	<p>Resident Car Parking</p> <p>The car park provides twenty-four (24) accessible resident parking spaces of; 2400mm width that adjoin a 2400mm width shared area to comply with AS2890.6 and be consistent with AS4299.</p> <p>The car spaces will be graded at a 1:40 maximum slope and crossfall in accordance with AS2890 with an accessible path of travel to the lifts.</p> <p>The car parking provides 2200mm minimum entry height clearance and 2500mm height over the designated accessible parking spaces in accordance with AS4299.</p>	YES YES YES
AS4299 Clauses 4.3.1, 4.3.2 and 4.3.3	<p>Accessible entries – The front entrances to the adaptable units provide at least 1600mm X 1600mm externally with 530mm minimum latch side clearance, which complies with the spatial requirements of AS4299. The internal foyer areas can also provide 530mm minimum latch side clearance to comply with the spatial requirements of AS4299 by adapting the fridge location within the kitchen.</p> <p>Interior: general – With regard to the internal corridors and doorway approaches to a <u>main bedroom</u>, adaptable bathroom and laundry the post adaption of an adjacent stud wall or sliding door conversion to swing doors will enable complying the doorway circulation spaces to satisfy AS1428/4299.</p>	YES YES
AS4299 Cls 4.3.7	<p>Doors and Door Hardware</p> <p>The plans will confirm 920mm external door widths, 870mm internal door widths and lever handles at construction drawing stage to confirm compliance.</p>	YES
AS4299 Clause 4.7	<p>Living and Dining rooms – The plans show combined living and dining areas on a single level with sufficient area to provide a 2250mm diameter turning area to comply with this clause.</p>	YES
AS4299 Clause 4.5	<p>Kitchen – The single galley kitchens provide the required 1550mm minimum circulation space adjacent to the benches and appliances to comply with AS4299 requirements. The double galley kitchens with the free standing island bench can be readily adapted to achieve 1550mm clearance to comply with AS4299.</p> <p>With regard to the “adaptability” of the kitchen the construction drawings shall provide details of an appropriate layout of sink, fridge, wall oven,</p>	YES YES

Clause	Adaptability Assessment	Compliance
	<p>cooktop and height adjustable workbench that readily satisfies the “ease of adaptation” guidelines outlined in section 2 – Performance Objectives of AS4299.</p> <p>Therefore, subject to confirmation of the installation of kitchen cupboards, appliances and the like at the construction documentation stage it is evident that the kitchens will comply with AS4299.</p>	YES
AS4299 Clause 4.6	<p>Main bedroom – The plans show a main bedroom for the adaptable Units will allow a circulation area of 1540mm X 2070mm clear of a queen sized bed while maintaining 1000-1200mm clearance on the side and 1000-1200mm at the foot of the bed and clear of the wardrobe to satisfy AS4299.</p> <p>Generally, the post adapted main bedrooms shall have a minimum area of;</p> <ul style="list-style-type: none"> • 4100mm-4500mm X 3000mm clear of the robe. • 3250mm X 3500mm plus 2070 X 1540 circulation zone clear of the robe. • 3500mm X 3600mm clear of the robe. <p>There are several options to adapt the wardrobe location to enhance internal bedroom access to comply with AS4299.</p>	YES YES YES
AS4299 Clause 4.7	<p>Bathroom – The plans show that the bathrooms for each apartment will be at least 2100mm X 3000mm, 2300mm X 2700mm, 2400mm X 2400mm or similar with a post adaptation modification to;</p> <ul style="list-style-type: none"> • Remove the shower screen and relocate the toilet pan which enables compliance with AS1428 in terms of spatial area setout. • Modify the vanity to a wall basin which enables compliance with AS1428 in terms of spatial area setout. 	YES YES
AS4299 Cls 4.4.3	<p>Toilet – The toilet within the bathroom shall comply with AS4299 by providing 1250mm X 900mm in front of the WC pan.</p>	YES
AS4299 Clause 4.8	<p>Laundry – The laundry facilities are provided in a closet, which enables 1550mm X 1550mm clear circulation space in front of the appliances to comply with AS4299.</p>	YES
AS4299 Cls 3.5(b)	<p>Outdoor Private Open Space – The plans show outdoor terrace areas adjacent to living areas with sliding doors.</p> <p>The areas provide adequate space to perform a 180 degree wheelchair manoeuvre.</p> <p>While the plans do not indicate thresholds the construction drawings will confirm a 35mm maximum change in level with the capability for threshold ramps to comply with AS1428/4299.</p>	YES

In summary, I conclude that these units and associated common domain facilities will comply with fundamental spatial design criteria of Adaptable Housing AS4299.

PART C – SEPP 65 Apartment Design Guide Universal Access

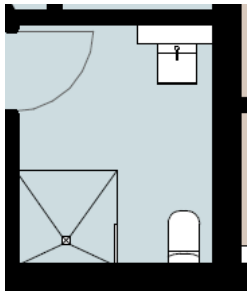


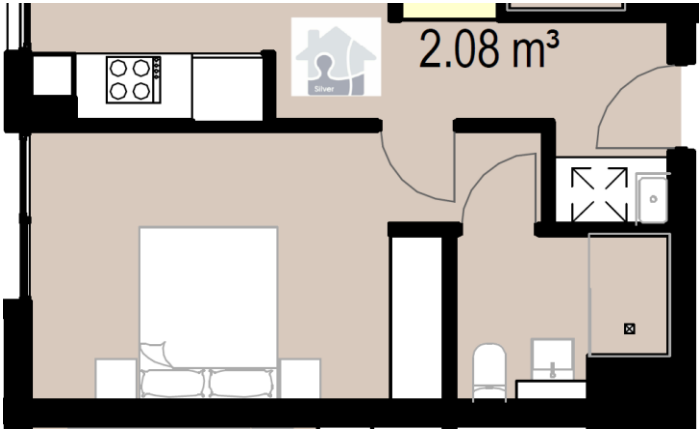
SEPP 65 Apartment Design Code – Section 4Q : Universal Access

The following assessment findings are provided to demonstrate compliance with the Silver Level requirements of the SEPP 65 Apartment Design Code for 20% of the 264 apartments.

The nominated 53 Silver Level Livable Housing apartments are selected from the following 62 apartments;

- 10 X 1 Bedroom Apartments E084, E094, E104, E114, E124, E134, E144, E154, E164, E174.
- 4 X 2 Bedroom Apartments E043, E053, E063, E073.
- 5 X 3 Bedroom Apartments W012, W022, W032, W052, W062.
- 2 X 2 Bedroom Apartments W025, W035.
- 2 X 3 Bedroom Apartments W026, W036.
- 2 X 3 Bedroom Apartments W028, W038.
- 1 X 3 Bedroom Apartments W043.
- 36 X 2 Bedroom Apartments W073, W083, W093, W103, W113, W123, W133, W143, W153, W163, W173, W183, W193, W203, W213, W223, W233, W056, W066, W076, W086, W096, W106, W116, W126, W136, W146, W156, W166, W176, W186, W196, W206, W216, W226, W236.

Silver Level Livable Housing	Assessment Findings
Element 1 – Common Area Access to Apartments	<p>Section A of this report confirms that the site entrances and pathways to the principal entry lobbies will comply with AS1428.1 and enable access to lifts which travel to all floors and along 1800mm minimum width corridors to the abovementioned apartments within the East and West tower buildings in accordance with AS1428.1 to satisfy Parts D3.2 and D3.3 of the BCA.</p> <p>As a consequence the access to apartments also satisfies the Silver Level Livable Housing Guidelines.</p>
Element 2 – Apartment Entrances	The entrances doorways will be detailed with 920mm doors with level thresholds and 1200mm X 1200mm minimum doorway landing areas to comply with the Silver Level Livable Housing Guidelines.
Element 3 – Car Parking	The parking is located within the basement and does not form, part of an access path to an apartment entrance and therefore Class 2 residential flat building are exemption from this clause.
Element 4 – Internal Doors & Corridors	The plans illustrate 1000mm minimum width corridors while the construction documentation shall confirm 870mm minimum internal doors to achieve 820mm clear opening widths to comply with the Silver Level Livable Housing Guidelines.

Silver Level Livable Housing	Assessment Findings	
Element 5 – Toilet	The bathrooms shall provide a toilet in the corner of a room to allow for future installation of grabrails and provide at least 900mm X 1200mm clear circulation space in front of the toilet pan with no inward swing door encroachment to comply with the Silver Level Livable Housing Guidelines.	 <p>10 x Apt E084 and similar</p>
Element 5 – Toilet	The ensuites provide a toilet in the corner of a room to allow for future installation of grabrails and provide at least 900mm X 1200mm clear circulation space in front of the toilet pan to comply with the Silver Level Livable Housing Guidelines.	 <p>14 x Apt W026, E043 and similar</p>
 <p>2 x Apt W028</p>	 <p>36 Apartments W073, W076 and similar</p>	
Element 6 – Shower	The bathrooms shall provide a shower in the corner of a room with a level entry (no hob) and a slip resistant floor surface, which will be confirmed at the construction certificate stage to comply with the Silver Level Livable Housing Guidelines.	
Element 7 – Reinforcement of bathroom walls & toilet walls	The construction certificate documentation shall confirm wall reinforcing around the toilet pan and a hobless shower in accordance within the technical specifications of the Silver Level Livable Housing Guidelines.	
Element 8 – Internal apartment stairs	This element is not applicable as all apartments are single level.	

Appendix A – Statement of Expertise



Accessibility Solutions consultancy offers a range of services to provide advice for clients to develop new and modify existing buildings, facilities and services to be accessible to people with disabilities to comply with legislation and regulations relevant to people with disabilities.

Relevant legislation and regulations that underpins advice includes the Disability Discrimination Act (DDA) Building Code of Australia, Australian Standards 1428, DDA Premises Standards, DDA Transport Standard, State Environment Planning Policy Housing for Seniors or People With a Disability (SEPP HS) / Seniors Living Policy, SEPP 65 – Apartment Design Guide and various local government DCP's.

The scope of services provided by Accessibility Solutions includes:

- Plan Appraisals and design advice
- Access Reports for development applications and construction certificates
- Expert Reports for Court evidence
- Access Auditing of existing buildings, facilities, transport conveyances and infrastructure
- Policy and document reviews and development of Disability Action Plans
- Staff training in access auditing

The services consider issues concerning people with all types of disability including; physical; vision; hearing, intellectual and other cognitive impairments that may affect access for people with a disability consistent with the Disability Discrimination Act.

As principal consultant Mark Relf has considerable experience and expertise in a wide range of access related projects and is an accredited member of the Association of Consultants in Access Australia for the purposes of providing advice concerning access to the built environment and services for people with disabilities.

His expertise has been gained over 20 years working in management and advocacy roles within the disability sector and since 1994 providing advice to clients on access issues. Mark also participates on various key committees concerning access for people with disabilities. His qualifications and affiliations are:

- Accredited Member of the Association of Consultants in Access Australia.
- Member, Standards Australia ME/64 Committee responsible for the AS1428 suite and AS4299 – Adaptable Housing.
- Former Member 2000-2014, NSW Heritage Office's – Fire, Access and Services Advisory Panel.

