



ABE
CONSULTING

Accessibility Review Report – SSDA

Project Title: Mixed-Use Residential Development
40 The Retreat, Bringelly

Job Number: 23362

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Prepared For: SCG Developments

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Report	Revision	Date	Details
Draft	1.0	28 March 2024	For review and comment
Final	1.1	08 May 2024	For submission

ACCESSIBILITY DESIGN REVIEW

PROJECT: Mixed-Use Residential Development

ADDRESS: 40 The Retreat, Bringelly

1.0 INTRODUCTION

This report provides an Accessibility Design Review of the proposed Mixed-Use Residential Development located at 40 The Retreat, Bringelly.

1.1 Project Information & Classification

The proposed development known as “The Retreat, Bringelly” consisting of a mixed use residential development which incorporates 533 apartments across 6x buildings with associated basement carparking. The site is separated by Stage 01 & Stage 02. The development includes the following building uses:

Stage 1

- Overall site clearing and preparation works, including demolition of all existing development on the Site;
- The redevelopment of the northern portion of the Site, comprising:
 - Temporary Site access to the northern portion of the Site from The Retreat;
 - Temporary bin enclosure adjacent the temporary access;
 - Excavation works and construction of a shared two (2) storey basement to a maximum depth of RL 60.60, with capacity for 311 vehicle car spaces;
 - Construction of three (3) individual mixed use buildings, comprising:
 - Maximum building heights between 30.4m and 39.8m;
 - A total Gross Floor Area (GFA) of 26, 204sqm, comprising 25,744 sqm of residential GFA, 248 sqm of non-residential GFA and 212 sqm of retail GFA, distributed across the three buildings;
 - 254 residential units, distributed across the three buildings.
 - Associated landscaping, communal open space and embellishment works; and
 - Delivery and augmentation of services.

Stage 2

- The redevelopment of the southern portion of the Site, comprising:
 - Removal of the Stage 1 temporary access from The Retreat;
 - Connection and access of the Stage 1 basement to the western boundary (to become a future Collector Road);
 - Excavation works and construction of a shared three (3) storey basement to a depth of RL 56.35, with capacity for 336 vehicle car spaces;
 - Site and basement access from the western boundary (to become a future Collector Road);
 - Construction of three (3) individual mixed use buildings, comprising:

- Maximum building heights between 23.8m and 39.9m;
- A total Gross Floor Area (GFA) of 29,126 sqm, comprising 28,540 sqm of residential GFA, 212 sqm of retail GFA and 374 sqm of non-residential GFA, distributed across the three buildings;
- 279 residential units, distributed across the three buildings.
- Associated landscaping, communal open space and embellishment works; and
- Delivery and augmentation of services.

It is understood the following Building Code of Australia 2022 building classification(s) apply to the subject building / building part (to be confirmed by the BCA Consultant / PCA) –

Level/Building Part	Building Classification	Use
Basement 01 - 02	Class 7a	Carpark
Lower Ground	Class 2 Class 7a	Residential Lobby Carpark
Ground Floor	Class 2 Class 6	Residential Lobby Retail
Level 1 – 11	Class 2	Residential

1.2 Purpose of the Report

SCG Developments engaged the services of ABE Consulting as Accessibility Consultants for this project to undertake an assessment of the proposed design documentation in relation to the accessibility related requirements as identified in Part 1.3 of this report for submission to the relevant Authority as part of the State Significant Development Application documentation.

1.3 Report Scope

This report provides an Accessibility Design Review of the relevant project architectural documentation in the context of the following –

- Part D4, Clause E3D7, E3D8, F4D5, F4D6, F4D7 & F4D12 ‘deemed-to-satisfy’ (DtS) requirements of Building Code of Australia 2022 (BCA);
- The Disability (Access to Premises - Buildings) Standards 2010.

This Accessibility Design Review is based on –

- Architectural design documentation prepared by DKO Architecture (NSW), Project No. 13317 as follow –

Dwg#	Title	Date – Issue
DA0001	Development Summary	04.04.2024 – B
DA1002	Site Plan	04.04.2024 – B
DA1003	Site Plan - Ground Plane	19.04.2024 – D
DA1005	Staging Plan	19.04.2024 – D
DA2000	Basement 02 Plan	04.04.2024 – C
DA2001	Basement 01 Plan	19.04.2024 – D
DA2002	Lower Ground Plan	19.04.2024 – D
DA2003	Ground Level Plan	19.04.2024 – D
DA2004	Level 01 Plan	19.04.2024 – D

DA2005	Level 02 Plan	19.04.2024 – D
DA2006	Level 03 Plan	19.04.2024 – D
DA2007	Level 04 Plan	19.04.2024 – D
DA2008	Level 05 Plan	19.04.2024 – D
DA2009	Level 06 Plan	19.04.2024 – D
DA2010	Level 07 Plan	19.04.2024 – D
DA2011	Level 08 Plan	19.04.2024 – D
DA2012	Level 09 Plan	19.04.2024 – D
DA2013	Level 10 Plan	19.04.2024 – D
DA2014	Level 11 Plan	19.04.2024 – D
DA2015	Roof Plan	19.04.2024 – D
DA4014	Livable & Adaptable Units 01	08.03.2024 – A
DA4015	Livable & Adaptable Units 02	08.03.2024 – A
DA4016	Livable & Adaptable Units 03	08.03.2024 – A
DA4017	Adaptable Unit Layouts 01	08.03.2024 – A
DA4018	Adaptable Unit Layouts 02	08.03.2024 – A

- The Building Code of Australia 2022 prepared by the Australian Building Codes Board.
- The Guide to the BCA 2022, prepared by the Australian Building Codes Board.
- The Disability (Access to Premises – Building) Standards 2010.
- Australian Standards AS 1428.1-2009 - Design for Access and Mobility - Part 1: General requirements for access - New building work.
- Australian Standards AS/NZS 2890.6-2009 – Off-street parking for people with disabilities.
- Australian Standards AS/NZS 1428.4.1-2009 - Design for Access and Mobility - Part 4.1: Means to assist the orientation of people with vision impairment – Tactile ground surface indicators.
- Australian Standards AS1735.12-1999 - Lifts, escalators and moving walks, Part 12: Facilities for persons with disabilities.
- Australian Standards AS4299-1995 – Class C adaptable housing units & VISIBLE units.
- Western Sydney Aerotropolis Development Control Plan 2022 – Section 5.2.4: Diversity & Accessibility.
- Livable Housing Australia – Livable Housing Design: Guidelines, Fourth Edition 2017.

1.4 Limitations of the Report

The Disability Discrimination Act (DDA - 1992) is Federal Government legislation enacted in 1993 that seeks to ensure all new building infrastructure, refurbishments, services and transport projects provide functional, equitable and independent accessibility. The DDA is complaints based legislation, which is administered by the Australian Human Rights Commission (AHRC). For any built environment the key requirement of the DDA is to ensure functionality, equity and independence of movement by people with disabilities, their companions, family and carer givers.

A key component of compliance to the DDA is the use of the Disability (Access to Premises - Buildings) Standards 2010, Part D4, Clause E3D7, E3D8, F4D5, F4D6, F4D7 & F4D12 of the Building Code of Australia 2022 (BCA) and the relevant referenced standards primarily being Australian Standards Suite AS1428 and Australian Standards AS2890.6 – Off-street parking for people with disabilities. The AS 1428 series details technical requirements related to design for access and mobility.

The Building Code of Australia adopted key accessibility and DDA legislation into the 2011 BCA. In particular adherence to the Access to Premises Standard (2010); AS1428.1 2009; AS1428.4.1 2009 and AS2890.6 2009 has become mandatory. However, compliance with these elements does not necessarily result in compliance with the Disability Discrimination Act if the elements of equality, independence and functionality remain compromised within an environment.

This report does not include or assess the following –

- The provisions of the BCA not directly referenced in Part 1.3 of this report;
- Standards not directly referenced in this report; including AS4299-1995 (Adaptable Housing) unless otherwise explicitly specified in Part 1.3 of this report;
- Disability Discrimination Act 1992 (as explored earlier);
- Federal / State / Local planning policies and/or guidelines unless otherwise explicitly specified in Part 1.3 of this report;
- Work Health & Safety considerations or Work Cover Authority requirements;
- This report does not provide any performance based assessments (Performance Solutions) of the BCA;
- This report does not provide any exemptions from the requirements of the BCA.
- This report is not a Part 4A compliance certificate under the Environmental Planning & Assessment Act 1979 or Regulation 2000;
- Review or specification of slip-resistance classification(s) for floor surface finishes / materials. We recommend surface finish advice be sought from an independent specialist slip safety consultant.

1.5 The Disability (Access to Premises – Building) Standards 2010

The Disability (Access to Premises - Buildings) Standards 2010 provides the prescriptive requirements set out regarding the upgrade of an existing building where works are being undertaken.

The Premises Standards apply to:

- a new building
- a new part of an existing building
- the *affected part* of an existing building.

The new parts of a building and any subsequent affected part are outlined as per the below extracts of The Disability (Access to Premises - Buildings) Standards 2010 –

New Part:

A part of a building is a **New Part** of the building if it is an extension to the building or a modified part of the building about which:

- *An application for approval for the building work is submitted, on or after 1 May 2011, to the competent authority in the state or territory where the building is located; or*
- *All of the following apply:*
 - The building work is carried out for or on behalf of the Crown;*
 - The building work commences on or after 1 May 2011;*
 - No application for approval for the building work is submitted, before 1 May 2011, to the competent authority in the state or Territory where the building is located.*

Affected Part:

- *the principal pedestrian entrance of an existing building that contains a new part and*
- *any part of an existing building that contains a new part, that is necessary to provide a continuous accessible path of travel from the entrance to the new part.*

Furthermore, Part 4 of the The Disability (Access to Premises - Buildings) Standards 2010 sets out applicable exceptions and concessions. In this instance the following lessee concession is provided –

Lessees:

If the lessee of a *new part* of a building submits an application for approval for the building work, the following people do not have to ensure that the *affected part* of the building complies with these Standards:

- The building Certifier;
- The building developer;
- The building manager.

Building is considered to be a new development, therefore, an “affected part” is not triggered as part of the works. New works will be completed in-line with BCA requirements in relation to accessibility Clauses.

2.0 Summary of Mitigation Measures

A list of design mitigation measures have been identified as part of the proposed development in specific relation to accessibility.

Item	BCA Clause	Mitigation Measure
Mitigation Measure 1	D4D3	<p>Access from the allotment boundary</p> <p>Accessways from each pedestrian entry off the allotment boundary is required to be provided with in accessway. The current design indicates an accessible path of travel is provided.</p>
Mitigation Measure 2	D4D2/ D4D4/ D4D9	<p>Luminance Contrasting</p> <p>As the design of the development progresses, luminance contrasting between building elements will be required to be provided as part of the design. The following features are required to be provided with sufficient luminance contrasting:</p> <ul style="list-style-type: none"> ➤ Doorways, ➤ Stairway nosing strips ➤ TGSIs ➤ Braille signage ➤ Glazing contrasting strips.
Mitigation Measure 3	D4D4	<p>Ramps & Stairways</p> <p>Stairways and ramps are identified throughout the site. These building features are required to be installed with safety features such as handrails, nosing strips and TGSIs to assist and prevent injury to users. These features are required to achieve compliance with AS1428.1-2009.</p>

3.0 ACCESSIBILITY DESIGN REVIEW

The following tables provide an assessment of the architectural design documentation in relation to the DtS provisions of the BCA / Premises Standards in the context as outlined in Part 1 of this report.

The tables identify each of the relevant assessment outcomes into six (6) main categories, as follows –

Capable of Complying (CoC) – Spatial allowance has been made to accommodate compliance where the specification provided has been satisfied.

Compliance Departure (CD) – A compliance departure with the DtS provisions of the BCA.

Design Detail (DD) – A detail commentary/specification is offered within the report.

Performance Solution (PS) – A Performance Solution Report is being pursued to justify the compliance departures

Not Applicable (N/A) – Not applicable or not relevant to the project. Commentary provided.

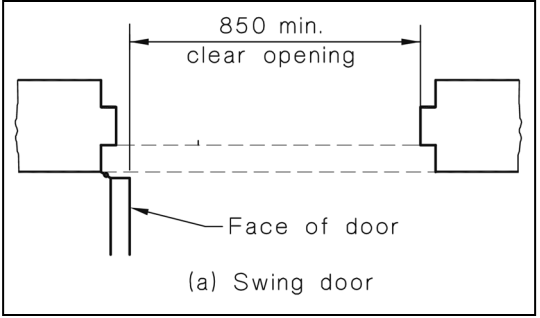
Informational (Info) – Provided for informational purposes

Interpretation Note(s) –

- Readily moveable furniture has been treated as indicative only unless otherwise noted within the report as it is not considered to form part of the building as addressed by the BCA.

BCA Part D4 – ACCESS FOR PEOPLE WITH DISABILITIES

Cl. D4D2: General building access requirements

DtS Provision	Comment(s)/Recommendation(s)	Status
<p>Buildings and parts of the building must be accessible as required by D4D2 (Table D3.1 - 2019), unless exempted by D4D5. D4D2 requires that access is provided –</p> <p><u>Class 2 –</u></p> <ul style="list-style-type: none"> From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level. To and within not less than 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><u>Class 6 –</u></p> <ul style="list-style-type: none"> To and within all areas normally used by the occupants. <p><u>Class 7a –</u></p> <ul style="list-style-type: none"> To and within any level containing accessible carparking spaces. <p><u>Class 10b –</u></p> <ul style="list-style-type: none"> To and into swimming pools with a total perimeter greater than 40 m, associated with a Class 1b, 2, 3, 5, 6, 7, 8 or 9 building that is required to be accessible, but not swimming pools for the exclusive use of occupants of a Class 1b building or a sole-occupancy unit in a Class 2 or Class 3 	<p>Access is generally proposed throughout the required portions of the building as prescribed by Cl. D4D2 of the BCA. Further review of detailed building elements will be required as the design progresses.</p> <p><u>Doorways</u></p> <p>All doorways along an accessway are required to have a clear door opening width no less than 850mm clear and be provided with door circulation spaces as prescribed by AS1428.1-2009.</p>  <p><u>Detail Design:</u></p> <p>Generally, compliance has been observed, however in a few instances, doorways are not provided with an 850mm clear opening width and/or insufficient doorway circulation as prescribed in AS1428.1-2009. Examples of these doorways include:</p> <ul style="list-style-type: none"> Reduced clear opening width of doors in residential corridors lobbies: <ul style="list-style-type: none"> All entry Lobbies Communal external area. Garbage chute rooms <p>It has been communicated that in the above locations a 1600mm clearance is provided to allow for compliant circulation spaces as the design develops.</p>	<p>CoC & DD</p>

<p>building.</p>	<p><u>Design Detail –</u></p> <p>The following items shall be specified and installed to comply with AS1428.1-2009 –</p> <ul style="list-style-type: none"> • All floor surface materials comply with the material, profile, abutment and design tolerances of AS1428.1-2009 including BCA Cl. D3.3(g) & (h) for carpets. • All doorways along an accessway are required to have a clear door opening width no less than 850mm clear and be provided with door circulation spaces as prescribed by AS1428.1-2009. • All accessway will need to have the prescribed circulation and landing areas as outlined in AS1428.1-2009. • Walkways are to have a complying abutment as prescribed in AS1428.1-2009. • Ramps and stairways are to comply with clause D3.3 of the BCA and AS1428.1-2009. <p>Further review of all doorways and gates will occur at detail design stage.</p>	
	<p><u>Access between areas</u></p> <p>Access is required to and within all areas normally used by the occupants (excluding areas that are unsafe or unsuitable for everyday access, refer D4D5 exemptions).</p>	CoC
	<p><u>Paths of travel</u></p> <p>All pathways require a minimum unobstructed width of 1000mm. Pathways shall not include impediments such as steps or turnstiles without an accessible alternative provided.</p> <p>Circulation spaces prescribed by AS1428.1-2009 are required at changes in direction and other circumstances may require a greater width than 1000mm.</p> <p>The following summary of AS1428.1-2009 requirements for accessways is provided to assist the project team during specification/construction.</p>	CoC

	<p><u>Detail Design:</u></p> <p>Numerous landscaped pathways are proposed through the site indicated with grade changes. Landscaped drawings lack information of gradients, RL's and transitions of the pathways for an adequate assessment to be undertaken.</p> <p>Further review of external pathways will occur at detail design stage of the project to ensure compliance.</p> <p><u>Design Detail:</u></p> <p>Verification of slip resistant surface finishes on all accessways should be provided prior to OC sign off. It is recommended to refer to HB-198 for area ratings and test in accordance with AS4586-2013.</p>	
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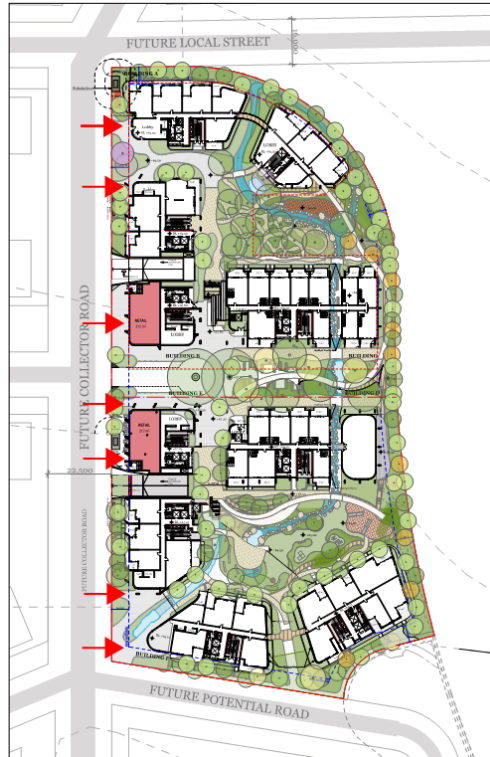
Cl. D4D3: Access to Buildings

DtS Provision	Comment(s)/Recommendation(s)	Status
<p>An accessway must be provided to a building required to be accessible –</p> <ul style="list-style-type: none"> • from the main points of pedestrian entry at the allotment boundary; and • from another accessible building connected by a pedestrian link; and • from any required accessible carparking space on the allotment. <p>In a building required to be accessible, an</p>	<p>As the proposed works are within the existing building, some of the provisions in D4D3 are not applied as there are no new associated pedestrian accessways proposed under this approval.</p>	
	<p><u>Allotment Boundary</u></p> <p>The proposed site links to 3x future roads with pedestrian pathways located along 2x of these roads.</p>	<p>CoC & DD</p>

accessway must be provided through the principal pedestrian entrance, and –

- through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and
- in a building with a floor area more than 500m², a pedestrian entrance which is not accessible must not be located more than 50m from an accessible pedestrian entrance.

except for pedestrian entrances serving only areas exempted by D4D5.



The allotment boundary to the site is indicated as having crossfalls at each façade off the future proposed roads.

Falls and gradients are identified at each of the pedestrian entrances with grades shown as not being steeper than 1:40.

Further review of external entrances from the allotment boundary will occur at detail design stage.

Other Accessible Buildings

The site proposes a total of 6x buildings (Buildings A – F).

Internal landscaped pedestrian links are proposed throughout the entire site which link to every building.

Multiple pathways are provided throughout the site providing an accessible path of travel between all buildings via a series of walkways, ramps and passenger lifts. The below figure indicates accessible landscaped pathways throughout the site shown in blue which links all parts of the development.

CoC & DD



The pathway is connected by a series of ramps/ walkways and passenger lifts.

Accessible Parking

Accessible parking spaces are proposed within basement areas of the development.
Multiple passenger lifts are provided providing access between accessible parking spaces and buildings.

CoC

Principal Pedestrian Entrances (Building)

The following building portions are provided with entrances:

- Residential lobbies; and
- Retail Tenancies.

Ensure all principal pedestrian entrances (PPEs) and building entrances are compliant as prescribed by Cl. D4D3.

Further review of detailed building elements will be required as the design progresses.

CoC & DD



Figure 1 – STAGE 01 Ground Floor: Proposed Entrances to Building

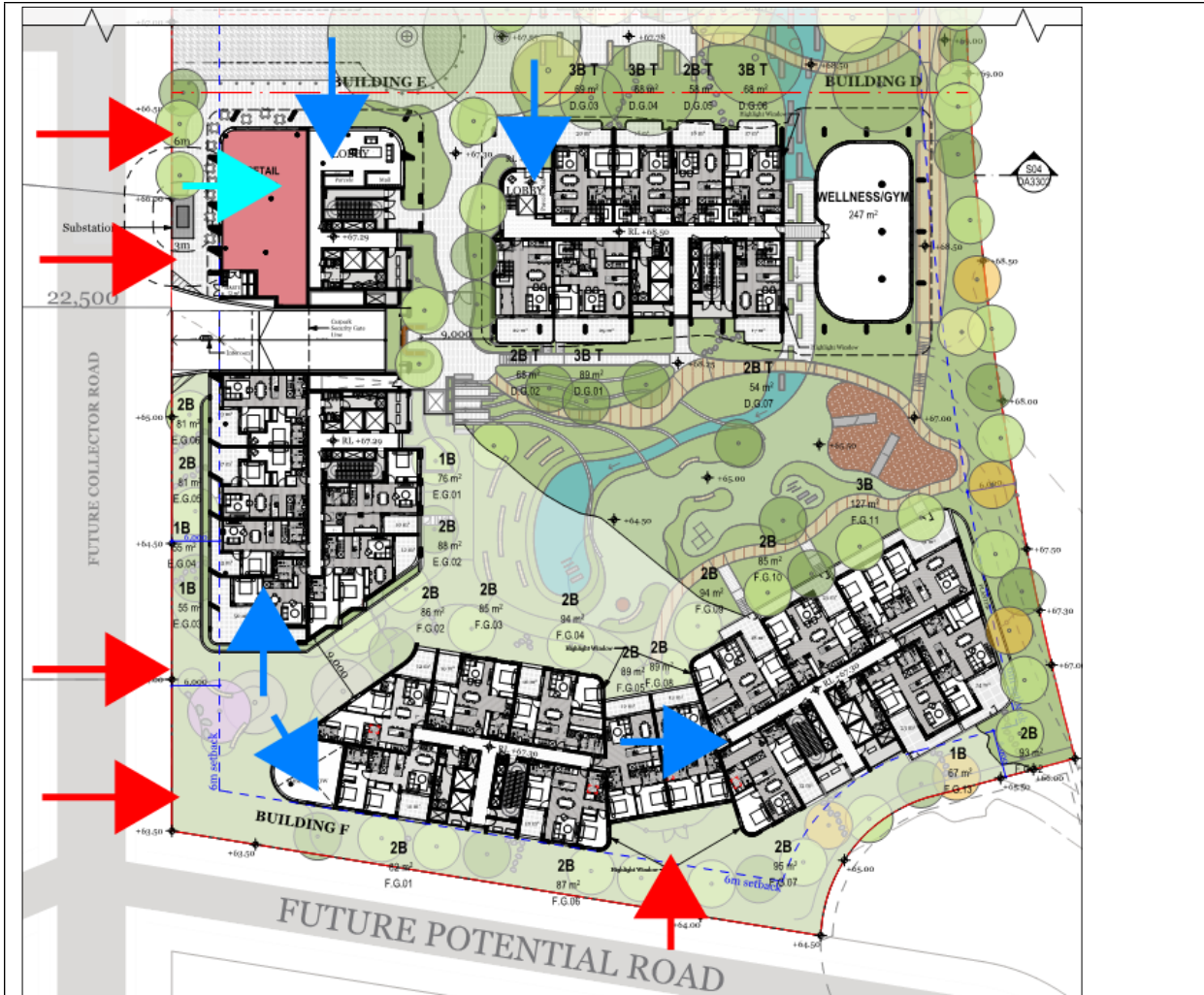


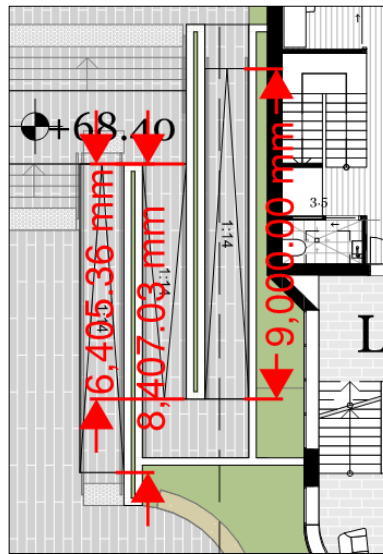
Figure 2 – STAGE 02 Ground Floor: Proposed Entrances to Building
Red Arrow – Pedestrian access from the allotment boundary
Dark Blue Arrow – Residential Lobby Entry
Light Blue Arrow – Retail Tenancy Entry

CI. D4D4: Parts of buildings to be accessible

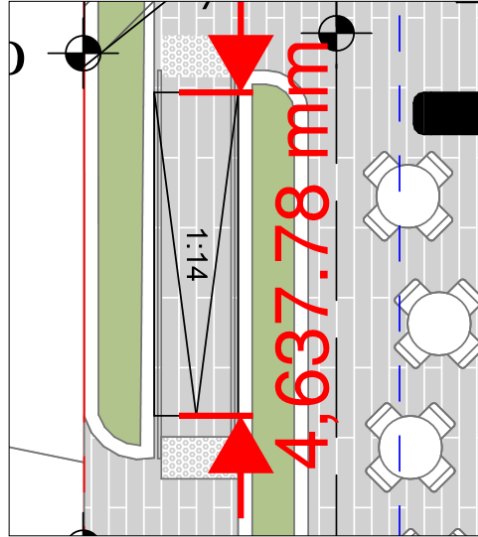
DtS Provision	Comment(s)/Recommendation(s)	Status
In a building required to be accessible every ramp and stairway, except for ramps and stairways in areas exempted by D4D5, must comply with –		
<ul style="list-style-type: none"> for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and 	<p>All non-fire-isolated ramps are required to comply with AS1428.1-2009.</p> <p>Further design development and/or specification required at the Detailed Design Stage. Key areas to review include:</p> <ul style="list-style-type: none"> Boundary access points (general notes): <ul style="list-style-type: none"> Ensure crossfall at the boundary does not exceed 1:40. At all 	CoC & DD

pedestrian entrances from the allotment boundary, a crossfall exceeds 1:40 based on RL's provided.

- Ensure kerb ramps comply with AS1428.1-2009 and sufficient landing space is provided at the top and bottom of the ramp.
- Stairways and ramps are to comply with AS1428.1-2009 (refer to clause D3.3 below).
- Stage 1: External Ramp between Buildings B & C
A 1:14 graded switch back ramp is proposed. The ramp is readily capable of complying with the requirements of AS1428.1-2009.
Further review of the ramp will occur at detail design stage.



- Stage 1: External Ramp to retail tenancy
A 1:14 graded ramp is proposed. The ramp is readily capable of complying with the requirements of AS1428.1-2009.
Further review of the ramp will occur at detail design stage.

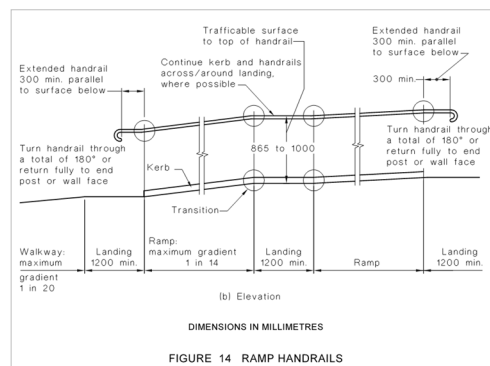


Design Detail –

- Ramp construction – **key** details from AS1428.1-2009:
 - Ramps to be setback from boundary lines – minimum 900mm;
 - Ramps to be setback from internal corridor junctions – minimum 400mm;
 - Ramp gradient to be consistent throughout the ramp (1:14-1:19 for access ramps). Note step ramps gradients are permitted to be 1:10 and kerb ramps 1:8 as per AS1428.1-2009;
 - Ramp width must be a minimum 1m (note additional width is required for landings and turning/circulation areas);
 - Ramps must have sharp transitions at the landings;
 - Landings to be provided at the top and bottom of the ramp (1200mm if in the direction of travel or 1500mm if there is a change in direction);
 - Mid-landings to be provided at the specified internals (min 1200mm long in the direction of travel or 1540mm wide to allow a 180 degree turn).
 - Maximum run for a 1:14 ramp is 9m before a mid-landing is required;

- Ramps and landings must be slip resistant as per clause D2.14 of the BCA;
- Handrails and kerb rails to be provided as per AS1428.1-2009;
- Handrails must not encroach into circulation areas; and
- Tactile indicators to be provided as per clause D3.8 of the BCA and AS/NZS1428.4.1-2009.

Refer to figure below from AS1428.1-2009 (Figure 14):

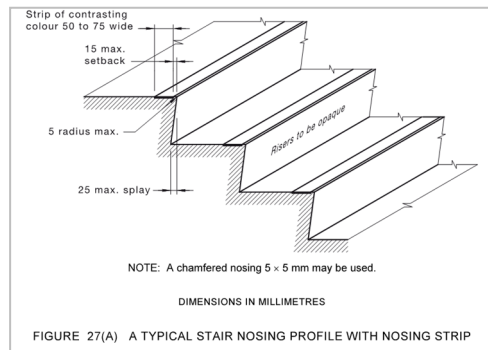
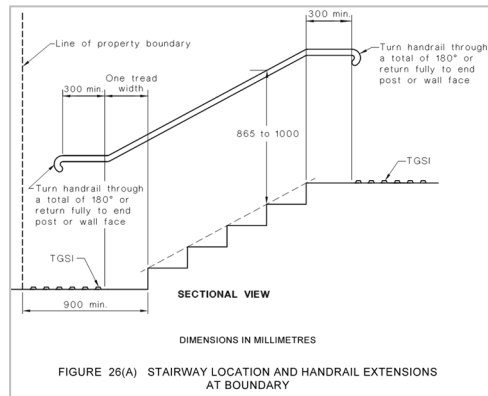


- Walkway construction – **key** details from AS1428.1-2009:
 - Walkways must be a minimum 1m wide (note additional wide is required for turning and passing spaces);
 - Curved walkways must be a minimum 1500mm wide;
 - Allowance for passing bays, 180 and 90 degree turning space is required as per the clause D3.3 of the BCA and AS1428.1-2009.
 - Walkway gradient to be consistent throughout (1:20-1:33).
 - Walkways must have sharp transitions at the landings;
 - Landings to be provided at the top and bottom of the walkways (1200mm if in the direction of travel or 1500mm if there is a change in direction);
 - Mid-landings (min 1200mm long) to be provided at the specified internals. Maximum run for a 1:20

	<p>walkway is 15m before a mid-landing is required; and</p> <ul style="list-style-type: none"> ○ Compliant walkway abutment to be provided as prescribed in AS1428.1-2009. <p>Further review of external ramps are to be developed as the design progresses.</p>	
<ul style="list-style-type: none"> • for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1; and 	<p>All non-fire-isolated stairways are required to comply with AS1428.1-2009.</p> <p>Further design development and/or specification required at the Detailed Design Stage.</p> <p>The following stairways are identified as being required to achieve compliance with AS1428.1-2009:</p> <ul style="list-style-type: none"> - Common Stairways within Basements - External Stairway between Buildings B & C - All external stairways - External landscaped stairway adjacent to Building E - External Stairways at the rear of Building D - External Stairways from Building F. <p><u>Design Detail –</u></p> <ul style="list-style-type: none"> • Single steps are not ‘stairways’. Discuss the provision of a single step and any features required with the PCA/BCA Consultant. • Stairway construction – key details from AS1428.1-2009: <ul style="list-style-type: none"> ○ Stairway width must be a minimum 1m (note additional width must be required for egress/fire safety); ○ Stairway to have complying and consistent goings and risers are per clause D2.13 of the BCA; ○ Stairways must be setback a minimum 900mm from the boundary or 400mm from an intersection of a corridor. ○ Risers must be opaque; 	<p>CoC & DD</p>

- Goings must not overhang the riser;
- Goings to be provided with 50-75mm non-slip strip which achieves a minimum 30% contrast to the going;
- Handrails to be provided as per AS1428.1-2009;
- Handrails must not encroach into circulation areas; and
- Tactile indicators to be provided as per clause D3.8 of the BCA and AS/NZS1428.4.1-2009.

Refer to figures below from AS1428.1-2009 (Figures 26A and 27A):



- for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1; and

Compliance is readily achievable with further design development and/or specification required at the Detailed Design Stage.

N.B. – Cl. D2.17(a)(vi) of the BCA is generally assessed by the PCA / BCA Consultant. Note to assist, please ensure stairways are offset one-tread width to allow for a compliant handrail design.

CoC

<p>Accessways must have—</p> <ul style="list-style-type: none"> • passing spaces complying with AS 1428.1 at maximum 20 m intervals where a direct line of sight is not available • turning spaces complying with AS 1428.1 at 20m intervals or within 2m of the termination of an accessway. 	<p><u>Internal Corridors –</u></p> <p>Compliance is readily achievable with minor design development at the Detailed Design Stage.</p> <p>Note – circulation space is to be provided clear of any intrusions including skirting boards or the like.</p> <p><u>External Corridors/Pathways –</u></p> <p>Further design development is required of the external pathways. Ensure 180° turning spaces (1540mm x 2070mm) are provided at 20m intervals or within 2m of the termination of an accessway. Provide passing spaces (1800mm x 2000mm) at 20m intervals where a direct line of sight is not available.</p> <p><u>Bin Rooms, Mail Rooms and Storage Areas –</u></p> <p>Bin rooms and mail rooms require minor design development to ensure a 180° turning spaces (1,540mm X 2,070mm) and door circulation space are provided within the bin and mail rooms clear of any fixed building features.</p> <p>It is noted that storage areas within the basement are provided with wheelchair turning spaces.</p> <p><u>Detail Design:</u></p> <p>All garbage chute rooms and mail rooms are provided with wheelchair tuning spaces.</p> <p>It is noted that these rooms are drawn with nil construction tolerance. It is advised to provide an increased clearance to the rooms during detail design.</p>	<p>CoC & DD</p>
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Cl. D4D5: Exemptions

DtS Provision	Comment(s)/Recommendation(s)	Status
<p>The following areas are not required to be accessible –</p>	<p>Exemptions are to be reviewed on a case by case basis. We highlight that the following parts of the building have been offered an access exemption (not exhaustive) –</p>	<p>Info</p>

<ul style="list-style-type: none"> • An area where access would be inappropriate because of the particular purpose for which the area is used. • An area that would pose a health or safety risk for people with a disability. • Any path of travel providing access only to an area exempted by (a) or (b). 	<ul style="list-style-type: none"> - Plant & equipment room(s) - Loading Dock - Storage rooms - Substation - Fire Control - Sprinkler/ Hydrant Pump rooms 	
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Cl. D4D6: Accessible carparking

DtS Provision	Comment(s)/Recommendation(s)	Status
<p>Accessible carparking spaces are to be provided in accordance with Cl. D4D6 of the BCA in a Class 7a building and a carparking area on the same allotment as a building required to be accessible.</p> <p>Accessible carparking spaces –</p> <ul style="list-style-type: none"> • are to comply with AS2890.6-2009. • need not be provided in a Class 7a building or a carparking area where a parking service is provided and direct access to any of the carparking spaces is not available to the public • need not be designated where there is a total of not more than 5 carparking spaces, so as to restrict the use of the carparking space only for people with a disability <p><u>Class 5, 7, 8 or 9c –</u></p> <p>1x space for every 100 carparking spaces or part thereof.</p> <p><u>Class 6 –</u></p> <p>1x space for every 50 carparking spaces or part thereof.</p> <p><u>Class 9b –</u></p> <p><i>Other assembly building –</i></p> <p>Up to 1000 carparking spaces;</p> <ul style="list-style-type: none"> • 1x space for every 50 carparking spaces or part thereof. <p>For each additional 100 carparking spaces or part thereof in excess of 10000 carparking spaces;</p> <ul style="list-style-type: none"> • 1x space. 	<p>Accessible car spaces have been provided throughout the development within the designated parking areas. The following compliance parameters are noted:</p> <p><u>Class 2 Buildings/Part –</u></p> <p>The BCA does not prescribe the provision of accessible carparking spaces for Class 2 buildings. The provision for “adaptable car spaces” is outlined in the Council’s Development Control Plan (DCP).</p> <p>We have identified that the allocated “adaptable car spaces” have been designed as “accessible car spaces” which are capable of complying with AS/NZS2890.6-2009 or AS4299-1995.</p> <p>Council DCP requires that each adaptable apartment is to be allocated with an accessible parking space.</p> <p>A total of x55 (Split: 26x Stage 01 & 29x Stage 02) adaptable parking spaces are allocated throughout the parking throughout the site.</p> <p><u>Visitor Carparking –</u></p> <p>The BCA does not specify any requirements for visitor car parking / accessible car spaces for visitors. This item is driven by the Council DCP requirements.</p> <p>6x (Split: 3x Stage 01 & 3x Stage 02) accessible visitor car space has been</p>	<p>CoC & DD</p>

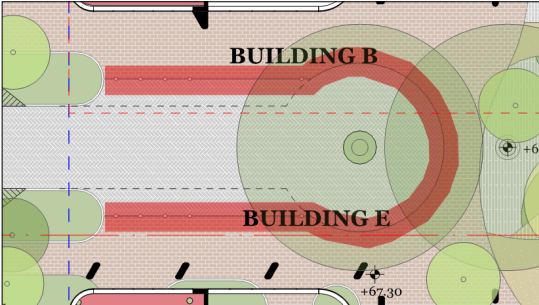
	<p>allocated for residential visitor, located within the Lower Ground carparking levels.</p> <p>The size location and number of accessible carparking spaces is readily capable of complying.</p> <p>Further review of accessible parking will occur at detail design stage.</p> <p><u>Class 6 (retail) Buildings/Part –</u></p> <p>Within the development a total of 4x car spaces have been nominated for the retail (Class 6) portions of the building (split equally between Stage 1 & 2).</p> <p>2x accessible car spaces are currently allocated to serve the Class 6 portion of the development which meets the minimum BCA requirement (split equally between Stage 1 & 2).</p> <p><u>Design Details –</u></p> <ul style="list-style-type: none">• Minimum 2.2m head height clearance from the entrance to the accessible carparking spaces.• Minimum 2.5m head height clearance at the accessible carparking spaces and shared zones. Ensure any proposed mechanical ducting / services within the identified zones does not encroach on the specified height above an accessible car space.• Minimum dimensions of accessible car spaces and shared zones 5400mm x 2400mm.• Line marking, bollards and signage to be specified and comply with AS/NZS2890.6-2009.• Structural columns or other encroachment are not permitted in the accessible car space or shared zones.• Accessible car space must be on-grade and not have a fall or crossfall steeper than 1:40.	
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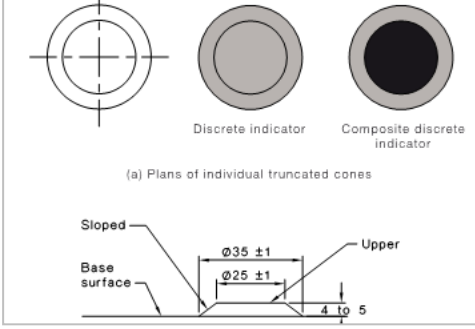
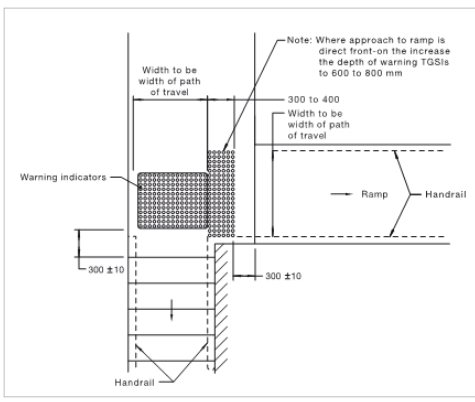
<p>“Level” followed by the floor level number;</p> <ul style="list-style-type: none"> • signage must be provided within a room containing a hearing augmentation system identifying; the type of system, the area covered within the room and if receivers are being used and where the receivers can be obtained; • signage must be provided for accessible unisex sanitary facilities to identify if the facility is suitable for left or right handed use; • signage to identify an ambulant accessible sanitary facility must be located on the door of the facility; • directional signage where a pedestrian entrance is not accessible. • directional signage where a bank of sanitary facilities are not provided with an accessible sanitary facility. 	<ul style="list-style-type: none"> - Doorways leading to an area installed with hearing augmentation. 	
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Cl. D4D8: Hearing augmentation

DtS Provision	Comment(s)/Recommendation(s)	Status
<p>A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed –</p> <ul style="list-style-type: none"> • in a room in a Class 9b building; • in an auditorium, conference room, meeting room or room for judicatory purposes; • at any ticket office, teller's booth, reception area or the like, where the public is screened from the service provider. <p>Any screen or scoreboard associated with a Class 9b building and capable of displaying public announcements must be capable of supplementing any public address system, other than a public address system used for emergency warning purposes only.</p>	<p>If an inbuilt amplification systems (other than one used solely for emergency warning) is provided within the building; suitable hearing augmentation systems are to be provided in these areas.</p> <p>It is unlikely that inbuilt amplification will be provided within this development – as part of the base building works.</p> <p>Further review of detailed building elements will be required as the design progresses.</p>	DD

Cl. D4D9: Tactile indicators

DtS Provision	Comment(s)/Recommendation(s)	Status
<p>Tactile ground surface indicators complying with sections 1 and 2 of AS/NZS 1428.4.1:2009 must be provided to warn people who are blind or have a vision impairment that they are approaching –</p> <ul style="list-style-type: none"> • a stairway, other than a fire-isolated stairway; • an escalator/moving walk; • a ramp other than a fire-isolated ramp, step ramp, kerb ramp or swimming pool ramp; • in the absence of a suitable barrier an overhead obstruction less than 2 m and where an accessway meeting a vehicular way adjacent to any pedestrian entrance to a building. 	<p>TGSIs are to be provided to –</p> <ul style="list-style-type: none"> • a ramp other than a fire-isolated ramp, step ramp, kerb ramp or swimming pool ramp; • all stairway landings other than where handrails are continuous at mid landings and fire-isolated stairways; • any overhead obstruction less than 2m above floor level. • where an accessway meeting a vehicular way adjacent to any pedestrian entrance to a building. <p>Further review of detailed building elements will be required as the design progresses.</p> <p><u>Detail Design:</u></p> <p>The internal vehicle round-about/ drop-off will require the installation of TGSIs where the vehicular way and adjacent pedestrian pathway are at the same level.</p>  <p>Further review of this feature will occur at detailed design stage.</p> <p><u>Design Detail:</u></p> <p>TGSIs shall be specified and installed to comply with AS/NZS1428.4.1-2009 including size, spacing, width, depth and luminance contrasting as follows –</p> <ul style="list-style-type: none"> • 30% - Integrated TGSIs • 45% - Discrete TGSIs • 60% - Composite Discrete TGSIs 	<p>CoC & DD</p>

	 <p>TGSIs are to be installed 300mm ±10mm from the hazard (i.e. nosing, ramp transition, vehicular way, etc.).</p> <p>TGSIs need only be a depth of 300mm - 400mm in locations where the next hazard/building element is ≤ 3000mm away. TGSIs shall be 600mm - 800mm deep when the hazard is ≥ 3000mm away.</p> <p>Refer to key extracts from AS/NZS1428.4.1-2009 below:</p> 	
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Cl. D4D10: Wheelchair seating spaces in Class 9b assembly buildings

N/A – No fixed seating is proposed within the Class 9b portion of the development.

Cl. D4D11: Swimming pools

DtS Provision	Comment(s)/Recommendation(s)	Status
<ul style="list-style-type: none"> • Not less than 1 means of accessible water entry/exit in accordance with Specification 16 must be provided for each swimming pool required by Cl. D4D2 to be accessible. • An accessible entry/exit must be by means of— 	<p>A swimming pool is proposed on Level 4 of Building D, it has been communicated that the pool perimeter is 67m.</p> <p>If the pool perimeter exceeds >40m but is less than 70m; one of the following accessible pool entrances is required –</p>	<p>CoC & DD</p>

<ul style="list-style-type: none"> ○ a fixed or movable ramp and an aquatic wheelchair; or ○ a zero depth entry at a maximum gradient of 1:14 and an aquatic wheelchair; or ○ a platform swimming pool lift and an aquatic wheelchair; or ○ a sling-style swimming pool lift. ● Where a swimming pool has a perimeter of more than 70 m in length, at least one accessible water entry/exit must be provided by a means specified in (b)(i), (ii) or (iii). ● Latching devices on gates and doors forming part of a swimming pool safety barrier need not comply with AS 1428.1. 	<ul style="list-style-type: none"> ○ a fixed or movable ramp and an aquatic wheelchair; or ○ a zero depth entry at a maximum gradient of 1:14 and an aquatic wheelchair; or ○ a platform swimming pool lift and an aquatic wheelchair. ○ A sling-style swimming pool lift. <p>Swimming pools are readily capable of being installed with an accessible pool entry as per Cl. D4D11 and Spec. D4D11.</p> <p>Further review of detailed building elements will be required as the design progresses.</p>	
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Cl. D4D12: Ramps

DtS Provision	Comment(s)/Recommendation(s)	Status
On an accessway; a series of connected ramps must not have a combined vertical rise of more than 3.6 m; and a landing for a step ramp must not overlap a landing for another step ramp or ramp.	No series of ramps with a >3.6m height difference are proposed.	CoC

Cl. D4D13: Glazing on an accessway

DtS Provision	Comment(s)/Recommendation(s)	Status
Where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1. Further details to be provided at the design development stage.		CoC

BCA Part E3 – LIFT INSTALLATIONS

Cl. E3D7: Passenger lifts

DtS Provision	Comment(s)/Recommendation(s)	Status
Every passenger lift must – <ul style="list-style-type: none"> ● be one of the types identified in Cl E3D7, subject to the limitations on use specified in the Table; and ● have accessible features in accordance with Cl. E3D8; and 	Building Passenger Lifts 19x passenger lifts are indicated as being electric/ electrohydraulic type passenger lifts. There is no limitation on the use of these passenger lifts.	CoC & DD

<ul style="list-style-type: none"> not rely on a constant pressure device for its operation if the lift car is fully enclosed. 	<p>Low Rise, Low Speed Constant Pressure Lifts</p> <p>3x Low rise, low speed constant pressure lifts are proposed at the following locations:</p> <ul style="list-style-type: none"> External Adjacent to Building E (height difference 2.05m) Lift type will need to be enclosed and <u>not</u> rely on a constant pressure. Entry lobby of Buildings C & D (height difference 1.2m – 1.5m). <p>More detail in relation to passenger lift will need to be provided at detail design stage to ensure compliance with relevant requirements.</p>	
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Cl. E3D8: Accessible features required for passenger lifts

DtS Provision	Comment(s)/Recommendation(s)	Status
<p>Passenger lifts shall have the following features –</p> <ul style="list-style-type: none"> Handrail complying with the mandatory handrail provisions of AS1735.12, Lift floor dimensions not less than 1,100mm x 1,400mm where the lift vertical travel is less than 12m, OR Lift floor dimensions not less than 1,400mm x 1,600mm where the lift vertical travel is more than 12m, Minimum clear door opening complying with AS1735.12, Passenger protection system complying with AS1735.12, Lift landing doors at the upper landing, Lift car and landing control buttons complying with AS1735.12, Lighting in accordance with AS1735.12, Automatic audible/visual information within the lift car and at the landings as prescribed, Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received. 	<p>A design compliance certificate is be obtained from the lift designer to confirm compliance with the relevant provisions of the BCA and Australian Standards at detail design stage.</p> <p><u>Design Detail:</u></p> <p>Ensure lift landing controls are provided no less than 500mm from an internal corner.</p>	<p>CoC & DD</p>

BCA Part F4 – SANITARY AND OTHER FACILITIES

Cl. F4D5: Accessible sanitary facilities

DtS Provision	Comment(s)/Recommendation(s)	Status
<p>In a building required to be accessible:</p> <ul style="list-style-type: none"> • Accessible unisex sanitary compartments must be provided as in accordance with Table F4D5(a), • Accessible unisex showers must be provided in accordance with Table F4D5(b), • At each bank of toilets where there is one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females. • An accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate disposal of sanitary towels. • Circulation spaces, fixtures and fittings of all accessible sanitary facilities must comply with AS1428.1. • An accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and • Where two or more of each type of accessible unisex sanitary facility are provided, the number of left and right handed mirror image facilities must be provided as evenly as possible. 	<p><u>Accessible sanitary compartments</u></p> <p>Detail of amenities have not been provided as part of the current design.</p> <p>BCA requires that at each bank of toilets an accessible bathroom is to be the first toilet provided.</p> <p>Further review of amenities at detail design stage.</p> <p><u>Ambulant sanitary compartments:</u></p> <p>Ambulant facilities will be required at toilet banks where male and female toilets are provided in addition to an accessible bathroom.</p> <p>Ambulant toilets are to be separated for male and female use.</p> <p>Further review of the of internal ambulant cubicle layouts will occur as the design develops.</p>	<p>DD</p>

Cl. F4D12: Accessible adult change facilities

N/A – Accessible adult change facilities are not required as part of this development.

4.0 RELEVANT DCP CONDITIONS & ADAPTABLE HOUSING REVIEW

The following is an extract of the relevant adaptable housing provisions of the Local Council DCP being – Western Sydney Aerotropolis Development Control Plan 2022 – Section 5.2.4: Diversity & Accessibility.

A summary of the above DCP Requirements and the compliance status and any comments of the proposed design are provided within the table below –

Item	Control Description	Comments(s)
PO2.1	Livable dwellings are spread throughout the proposed development at the same rate of 1 bedroom, 2 bedroom, and 3 bedroom dwellings.	100% of apartments are designed as livable. Refer to Part 4.0 of this report for assessment.
PO2.2	10% of all dwellings or a minimum one dwelling, whichever is greater, must be designed in accordance with the Australian Adaptable Housing Standard (AS4299-1995), to be capable of adaptation for people with a disability or elderly residents.	10% of total dwellings to be adaptable. A total of 533x residential units are proposed within the development Subsequently, a minimum of 54x adaptable housing units are required to be provided. The project specifies 55 adaptable units which complies with the 10% required in the Council DCP.

To comply with the requirements of AS4299, Class C Adaptable Housing Units must include all ‘essential’ features.

The following table provides a review against AS4299 – Class C adaptable housing units. The tables identify each of the relevant adaptable housing unit features and furthermore identifies the essential features –

ESS Essential – Required for Class C adaptable housing unit

Item No.	Description	Clause No.	Comments	
DRAWINGS				
1	Provision of drawings showing the housing unit in its pre-adaption and post-adaption stages along with a description of how the adaptation is to be achieved shall also be provided.	2.3	<p>Plans indicating pre-adaption and post-adaption stages have been provided and can comply with design development at the Detailed Design Stage to incorporate all features prescribed by AS4299-Class B adaptable housing units.</p> <p>Capped services are to be provided where required in order to provide a suitable adaptation process.</p> <p>The key elements which cannot be adapted are the location of service risers, any change to structural building members or common property.</p> <p>The number of bedrooms/bathrooms is to remain consistent pre and post adaptation.</p>	ESS
SITING				
3	A continuous accessible path of travel from street frontage and vehicle parking to entry complying with AS1428.1	3.3.2	As per the BCA review table of this report.	ESS
LETTERBOXES IN ESTATE DEVELOPMENTS				
11	Letterboxes to be on hard standing area connected to accessible pathway	3.8	Complies	ESS
PRIVATE CAR ACCOMODATION				
14	Carparking space or garage min. area 6.0m x 3.8m.	3.7.2	<p>Refer to Table Cl. D4D6 of this report.</p> <p>There are a total of 55x parking spaces allocated to adaptable apartments capable of meeting the requirement.</p>	ESS
ACCESSIBLE ENTRY				

20	Accessible entry	4.3.1	The main entry unit doors are required to be provided with door circulation compliant with AS1428.1-2009. Entry doorways to adaptable units are indicated to achieve compliance with AS1428.1-2009 from the pre-adaptation phase.	ESS
22	Accessible entry to be provided with a landing outside the door with a maximum fall of 1:40 with a low threshold if not protected from weather by a minimum of 1,600mm overhang.	4.3.2	Unit entrance doors are located within internal common/public corridors.	ESS
23	Threshold to be low-level	4.3.2	Where threshold ramps are proposed to service external areas they must comply with AS1428.1 and AS4299.	ESS
24	Landing to enable wheelchair manoeuvrability	4.3.2	Compliance is readily achievable.	ESS
25	Accessible entry door to have 850 mm min. clearance	4.3.1	Compliance is readily achievable with further design development required.	ESS
27	Door lever handles and hardware to AS1428.1 clause 11.1 door to be unlocked and opened with one hand. Where lever handles are provided, the clearance between the handle and the back plate or door face at the centre of the handle shall be not less than 35 mm and not more than 45 mm.	4.3.4	To be provided/specified at the Construction Certificate Stage.	ESS
EXTERIOR: GENERAL				
INTERIOR: GENERAL				
32	Internal doors to have 820 mm min. clearance	4.3.3	It is to be noted that AS4299 is superseded in this case by AS1428.1 which requires the appropriate 850mm clear opening width of all accessible doors.	ESS

			<p>Internal doors to areas required to be adaptable are required to comply including –</p> <ul style="list-style-type: none"> • Adaptable bedroom; • Sanitary facility; • Kitchen (where a doorway is provided); and • Laundry (where a doorway is provided). <p>To be reviewed further at detailed design stage.</p>	
33	Internal corridors min. Width of 1000mm	4.3.7	Compliance is readily achievable.	ESS
34	Provision for compliance with AS1428.1 for door approaches	4.3.7	Compliance is readily achievable with further design development required.	ESS
LIVING ROOM & DINING ROOM				
36	Provision for circulation space of min. 2250 mm diameter	4.7.1	Compliance is readily achievable.	ESS
38	Telephone adjacent to GPO	4.7.4	Compliance is readily achievable with appropriate specification at CC Stage.	ESS
41	Potential illumination level min. 300 lux	4.10	Compliance is readily achievable with appropriate specification at CC Stage.	ESS
KITCHEN				
42	Minimum width 2.7 m (1,550 mm clear between benches)	4.5.2	<p>Drawings indicate a 1550mm clearances between benches of the adaptable kitchens in post stage design.</p> <p>Further review of kitchen bench layout and design will occur at detail design stage.</p>	ESS
43	Provision for circulation at doors to comply with AS1428.1	4.5.1	N/A – no doorways to kitchen.	ESS
44	Provision for benches planned to include at least one worksurface of 800mm length, adjustable in height from 750mm to 850mm or replaceable. Refer to Figure 4.8	4.5.5	Refer to Item 42.	ESS

45	Refrigerator adjacent to work surface	4.5.5	Refer to Item 42.	ESS
46	Kitchen sink adjustable to heights from 750mm to 850mm or replaceable	4.5.6	Refer to Item 42.	ESS
47	Kitchen sink bowl max. 150mm deep	4.5.6	Refer to Item 42.	ESS
48	Tap set capstan or lever handles or lever mixer	4.5.6(e)	Refer to Item 42.	ESS
49	Tap set located within 300mm of front of sink	4.5.6(e)	Refer to Item 42.	ESS
51	Cooktops to include either front or side controls with raised cross bars	4.5.7	Refer to Item 42.	ESS
52	Cooktops to include isolating switch or gas stop valves which can be easily and safely operated while the cooktop is in use.	4.5.7	Refer to Item 42.	ESS
53	Worksurface min. 800 mm length adjacent to cooktop at same height.	4.5.7	Refer to Item 42.	ESS
54	Oven located adjacent to an adjustable height or replaceable work surface	4.5.8	Refer to Item 42.	ESS
59	GPOs to comply with AS1428.1. At least one double GPO within 300 mm of front of worksurface	4.5.11	To be provided/specified at the Construction Certificate Stage.	ESS
60	GPO for refrigerator to be easily reachable when the refrigerator is in its operating position	4.5.11	To be provided/specified at the Construction Certificate Stage.	ESS
61	Slip-resistant floor surface	4.5.4	To be provided/specified at the Construction Certificate Stage.	ESS
MAIN BEDROOM				
62	At least one bedroom of area sufficient to accommodate queen size bed and wardrobe and circulation space requirements of AS1428.2	4.6.1	Compliance is readily achievable with further design development required.	ESS
OTHER BEDROOMS				

BATHROOM				
75	<p>Provision for bathroom area to comply with AS1428.1; circulation spaces at doors and around WC pans, washbasins and showers shall be able to be provided without major plumbing changes. Also:</p> <ul style="list-style-type: none"> toilet paper dispenser (see Clause 10.2.7AS1428.1) Flushing control (see Clause 10.2.6AS1428.1) 	4.4.1	<p>Post-adaptation bathroom design does indicate compliance with AS1428.1-2009.</p> <p>The minimum size of an adaptable compartment proposed is 2650mm (l) X 2300mm (w) (the riser is clear of the WC Pan circulation space).</p> <p>Compliance is readily achievable with further design development to ensure the post-adaptation bathroom configuration complies with AS1428.1-2009.</p> <p>Capped services, wall reinforcement and the like are to be provided to allow future adaptation of the sanitary facility.</p>	ESS
76	Slip-resistant floor surface	4.4.2	To be provided/specified at the Construction Certificate Stage.	ESS
77	Shower recess-no hob. Minimum size 1160 x 1100 to comply with AS1428.1 (refer Figures 4.6 and 4.7)	4.4.4(f)	Refer to Item 75.	ESS
78	Shower area waterproofed to AS3740 with floor to fall to waste	4.4.4(f)	Refer to Item 75.	ESS
79	Recessed soap holder	4.4.4(f)	Refer to Item 75.	ESS
80	Shower taps positioned for easy reach to access side of shower sliding track	4.4.4(f)	Refer to Item 75.	ESS
82	Provision for adjustable, detachable hand held shower rose mounted on a slider grabrail or fixed hook (plumbing and wall-strengthening provision)	4.4.4(h)	Refer to Item 75.	ESS
83	Provision for grabrail in shower (refer to Figure 4.7 in AS 4299) to comply with AS1428.1	4.4.4(h)	Refer to Item 75.	ESS
86	Taps sets to be capstan or lever handles with single outlet	4.4.4(c)	Refer to Item 75.	ESS
88	Provision for washbasin with clearances to comply with AS1428.1	4.4.4(g)	Refer to Item 75.	ESS

90	Double GPO beside mirror	4.4.4(d)	Refer to Item 75.	ESS
TOILET				
92	Provision of either 'visitable toilet' or accessible toilet	4.4.3	An AS1428.1-2009 compliant sanitary compartment as per the above 'bathroom' section capable of being provided with the appropriate grabrails at a later stage will comply with the requirements of this clause.	ESS
93	Provision to comply with AS1428.1	4.4.1	Refer to Item 75.	ESS
94	Location of WC pan at correct distance from fixed walls	4.4.3	Refer to Item 75.	ESS
95	Provision for grabrail zone. (refer Figure 4.6)	4.4.4(h)	Refer to Item 75.	ESS
96	Slip resistant floor surface (vitreous tiles or similar)	4.4.2	Refer to Item 75.	ESS
LAUNDRY				
98	Circulation at doors to comply with AS1428.1	4.8	The laundry within the adaptable units are located within a cupboard and compliance is readily achievable.	ESS
99	Provision for adequate circulation space in front of or beside appliances (min. 1550 mm depth)	4.8	Drawings indicate a 1550mm circulation space in front of all laundry's.	ESS
100	Provision for automatic washing machine	4.8(e)	To be provided/specified at the Construction Certificate Stage.	ESS
102	Where clothes line is provided, an accessible path of travel to this	4.8(a)	N/A – No clothes line is proposed.	ESS
105	Double GPO	4.8(g)	To be provided/specified at the Construction Certificate Stage.	ESS
108	Slip-resistant floor surface	4.9.1	To be provided/specified at the Construction Certificate Stage.	ESS
Storage				

Door Locks				
110	Door hardware operable with one hand, located 900-1100 mm above floor	4.3.4	To be provided/specified at the Construction Certificate Stage.	ESS
FLOOR COVERINGS				
ANCILLARY ITEMS				
GARBAGE				

5.0 Livable Housing Review

Livable Housing Design – Silver Level

The following tables provide an assessment of the proposed Livable Housing Units against the ‘Silver Level’ of the Livable Housing Design – Fourth Edition and provide comments/recommendations where required.

The project proposes 100% of all apartments to be designed to the Silver level under Livable Housing Design Guidelines 2017.

Element 1: Dwelling access

Requirement/Specification	Comment(s)/Recommendation(s)
<p>a. Provide a safe and continuous pathway from:</p> <ul style="list-style-type: none"> i. the front boundary of the allotment; or ii. a car parking space, where provided, which may include the driveway on the allotment, to an entrance that is level (step- free) as specified in Element 2. <p>This provision does not apply where the average slope of the ground where the path would feature is steeper than 1:14.</p> <p>b. The path of travel as referred to in (a) should have a minimum clear width of 1000mm and –</p> <ul style="list-style-type: none"> i. an even, firm, slip resistant surface; ii. a crossfall of not more than 1:40; iii. a maximum pathway slope of 1:14, with landings provided at no greater than 9m for a 1:14 ramp and no greater than 15m for ramps steeper than 1:20. Landings should be no less than 1200mm in length; and iv. be step-free <p>c. A step ramp may be incorporated at an entrance doorway where there is a change in height of 190mm or less. The step ramp should provide:</p> <ul style="list-style-type: none"> i. a maximum gradient of 1:10 ii. a minimum clear width of 1000mm (please note: width should reflect the pathway width) iii. a maximum length of 1900mm <p>Level landings no less than 1200mm in length, exclusive of the swing of the door or</p>	<p>An accessway complying with AS1428.1-2009 has been provided from the allotment boundary leading to each Livable Apartment.</p> <p><i>Refer to Section 2.0 of this report of the base building access from the allotment boundary to the livable apartment entry door.</i></p>

<p>gate than opens onto them, must be provided at the head and foot of the ramp.</p> <p><i>Note – The width of the landing will be determined by the adjoining pathway.</i></p> <p><i>If the landing directly adjoins the doorway please refer to Element 2 for dimensional requirements.</i></p>	
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Element 2: Dwelling entrance

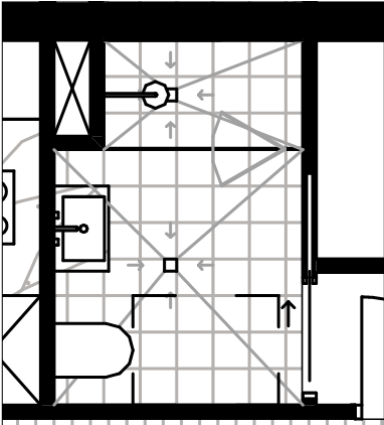
Requirement/Specification	Comment(s)/Recommendation(s)
<p>a. The dwelling should provide an entrance door with -</p> <ul style="list-style-type: none"> i. a minimum clear opening width of 820mm (see Figure 2(a)); ii. a level (step-free) transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or beveled); and iii. reasonable shelter from the weather. <p>b. A level landing area of at least 1200mm x 1200mm should be provided at the level (step free) entrance door.</p> <p>c. Where the threshold at the entrance exceeds 5mm and is less than 56mm, a ramped threshold may be provided (see Figure 1(b)).</p> <p>d. The level (step-free) entrance should be connected to the safe and continuous pathway as specified in Element 1.</p> <p><i>Note – The entrance must incorporate waterproofing and termite management requirements as specified in the NCC.</i></p>	<p>Compliance is readily achievable.</p> <p>Entry to apartments indicate a 850mm clear door opening.</p> <p>Clear door opening widths are to be provided as per the below –</p> <div data-bbox="808 884 1321 1419" data-label="Image"> </div> <p>Figure 2(a) Silver level clear door opening</p> <p>Further review of livable apartment design will occur at detailed design stage.</p> <p>At detail design stage it is required that all livable apartment designs are provided with detailed drawings for review.</p>

Element 3: Internal doors & corridors

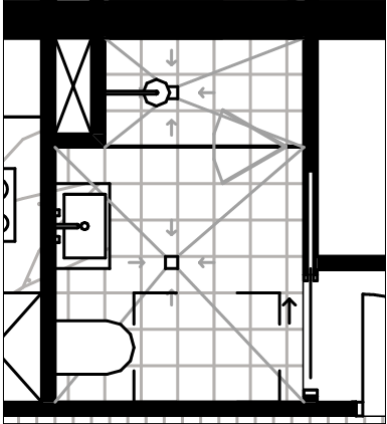
Requirement/Specification	Comment(s)/Recommendation(s)
<p>a. Doorways to rooms on the entry level used for living, dining, bedroom, bathroom,</p>	<p>Compliance is readily achievable. Generally corridors are provided with a minimum 1000mm clear width.</p>

<p>kitchen, laundry and sanitary compartment purposes should provide:</p> <ul style="list-style-type: none"> i. a minimum clear opening width of 820mm (see Figure 2(a)); and ii. a level transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or beveled). <p>b. Internal corridors/passageways to the doorways referred to in (a) should provide a minimum clear width of 1000mm.</p> <p><i>* Corridor widths should be measured as described in Clause 6.3 of AS 1428.1 – 2009</i></p>	<p>Allow for skirting board thickness to be added to corridors.</p> <p>Ensure 5mm vertical tolerance at abutting surfaces (i.e. bathrooms and the like).</p> <p>Further review of livable apartment design will occur at detailed design stage.</p> <p>At detail design stage it is required that all livable apartment designs are provided with detailed drawings for review.</p>
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Element 4: Toilet

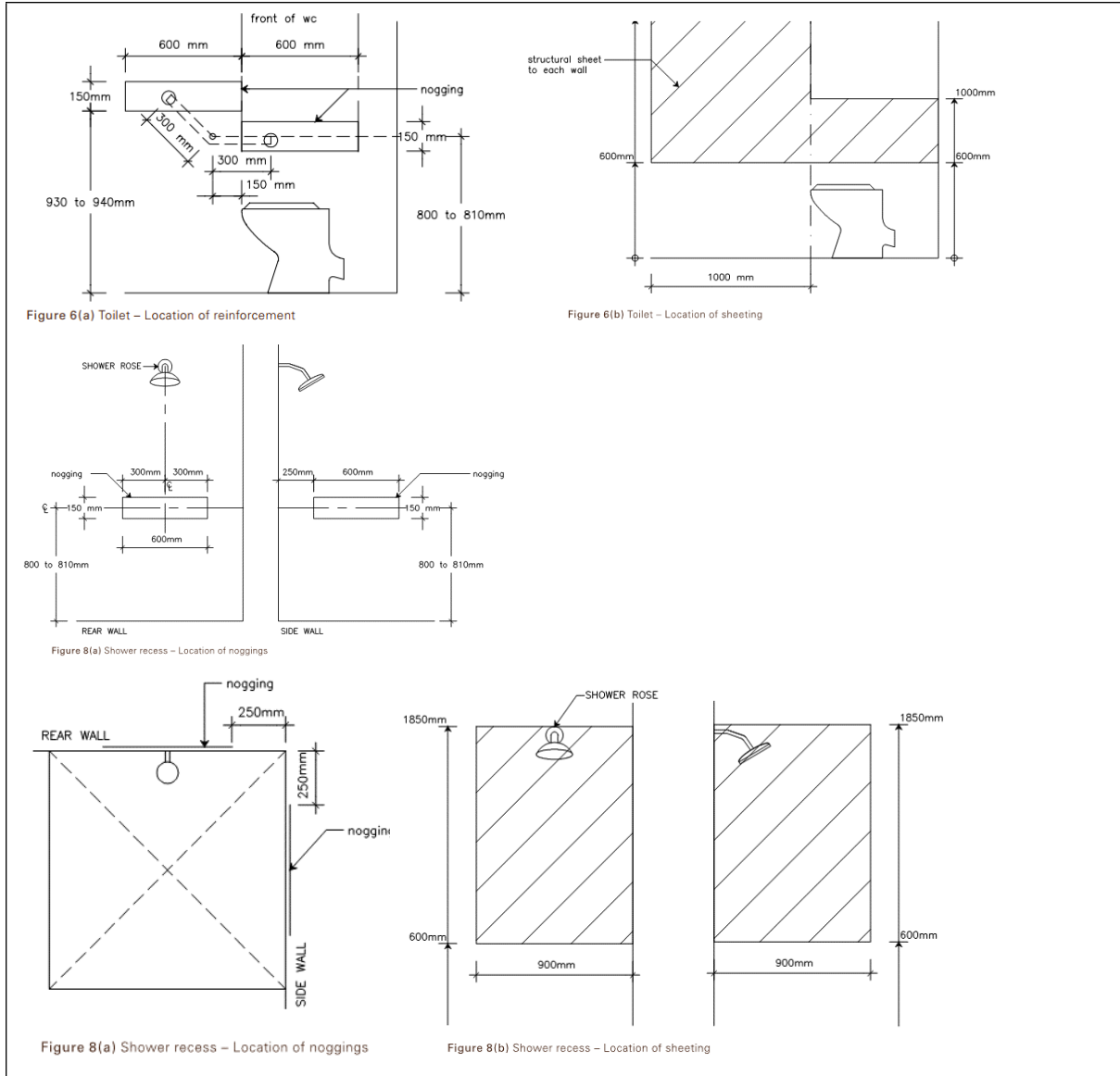
Requirement/Specification	Comment(s)/Recommendation(s)
<p>a. Dwellings should have a toilet on the ground (or entry) level that provides:</p> <ul style="list-style-type: none"> i. a minimum clear width of 900mm between the walls of the bathroom if located in a separate room; and ii. a minimum 1200mm clear circulation space forward of the toilet pan exclusive of the swing of the door in accordance with Figure 3(a). iii. The toilet pan should be located in the corner of the room to enable installation of grabrails at a future date. Reinforcement guidelines for walls in bathrooms and toilets are found in element 6. 	<p>Drawings indicate compliance as toilets are located in corner of sanitary compartment with a 900mm x 1200mm clearance space in front of WC Pan. (Typical bathroom design is indicated below).</p>  <p>Further review of livable apartment design will occur at detailed design stage.</p> <p>At detail design stage it is required that all livable apartment designs are provided with detailed drawings for review.</p>

Element 5: Shower

Requirement/Specification	Comment(s)/Recommendation(s)
<p>a. One bathroom should feature a slip resistant, hobless (step- free) shower recess. Shower screens are permitted provided they can be easily removed at a later date.</p> <p>b. The shower recess should be located in the corner of the room to enable the installation of grabrails at a future date.</p>	<p>Compliance is readily achievable showers are indicated as being located in the corner of the room and capable of being hobless. (Typical bathroom design is indicated below).</p>  <p>Further review of livable apartment design will occur at detailed design stage.</p> <p>At detail design stage it is required that all livable apartment designs are provided with detailed drawings for review.</p>

Element 6: Reinforcement of bathroom & toilet walls

Requirement/Specification
<p>The following is provided as a specification to be followed during construction –</p> <p>a. Except for walls constructed of solid masonry or concrete, the walls around the shower, bath (if provided) and toilet should be reinforced to provide a fixing surface for the safe installation of grabrails.</p> <p>b. The walls around the toilet are to be reinforced by installing:</p> <ol style="list-style-type: none"> i. noggings with a thickness of at least 25mm in accordance with Figure 6(a); or ii. sheeting with a thickness of at least 12mm in accordance with Figure 6(b). <p>c. The walls around the bath are to be reinforced by installing:</p> <ol style="list-style-type: none"> i. noggings with a thickness of at least 25mm in accordance with Figure 7(a); or ii. sheeting with a thickness of at least 12mm in accordance with Figure 7(b). <p>d. The walls around the hobless shower recess are to be reinforced by installing:</p> <ol style="list-style-type: none"> i. noggings with a thickness of at least 25mm in accordance with Figure 8(a); or ii. sheeting with a thickness of at least 12mm in accordance with Figure 8(b).



Element 7: Internal stairways

N/A – No internal stairways are proposed.

6.0 ACCESSIBILITY COMPLIANCE STATEMENT

This report has provided a review of the relevant project design documentation to determine the compliance status of the proposed development against Part D4, Clause E3D7, E3D8, F4D5, F4D6, F4D7 & F4D12 'deemed-to-satisfy' (DtS) requirements of the Building Code of Australia 2022 (BCA), The Disability (Access to Premises - Buildings) Standards 2010 and the pertinent Australian Standards.

Furthermore, this report has provided an assessment of the proposed adaptable housing units against the relevant adaptable housing provisions of the relevant Council DCP requirements and AS4299-1995 Class C adaptable housing unit checklist.

Following this review and with the adoption of the recommendations/Performance Solutions proposed, ABE Consulting are able to confirm that at the Development Application stage of design, the development can readily achieve compliance with the aforementioned BCA provisions.

7.0 REVIEW PROVIDED BY

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Reviewed by:



Abe Strbik

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