



Accessibility Review Report – SSDA

Project Title: SSD-70283710
1 Crescent Street, Holroyd

Job Number: 22626

Date: 22 November 2024

Prepared For: Tiberius (Holroyd) Pty Ltd (ABN 61 061 131 959) atf the Holroyd Unit Trust (ABN 42 891 308 354)

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Report	Revision	Date	Details
Draft	1.0	29 October 2024	For Review and Comment
Final	1.1	22 November 2024	For Submission

ACCESSIBILITY DESIGN REVIEW

PROJECT: SSD-70283710

ADDRESS: 1 Crescent Street, Holroyd

Glossary and Abbreviations

Reference	Description
BCA	Building Code of Australia
Council	Cumberland City Council
EIS	Environmental Impact Statement
SSDA	State Significant Development Application
SEARs	Secretary's Environmental Assessment Requirements
LEP	Local Environmental Plan Cumberland Local Environmental Plan 2021(CLEP 2021)
DCP	Development Control Plan Cumberland Development Control Plan 2021 (CDCP 2021)

1.0 EXECUTIVE SUMMARY

This Accessibility Review report has been prepared by ABE Consulting Pty Ltd to accompany a State Significant Development Application (SSDA) for a proposed mixed-use precinct located at 1 Crescent Street, Holroyd (the site).

This report has also been prepared to address the relevant Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning, Housing, and Infrastructure (DPHI) for SSD-70283710 on 6 May 2024.

Accessibility has been identified as being provided throughout the site with a series of pedestrian links which connect all street the site to Crescent Street and Woodville Road as well as providing an accessway between the buildings. The internal portions of the subject buildings are capable of meeting the requirements of the BCA based on the subject design.

This report concludes that the proposed development is suitable and warrants approval subject to the implementation of the following mitigation measures.

External accessible pathways throughout the site and between buildings.

Application of Livable and adaptable apartment design.

Following the implementation of the above mitigation measures, the proposed mixed-use precinct development at 1 Crescent Street, Holroyd will be acceptable in relation to accessibility subject to the adoption of the recommendations, potential Performance Solutions and additional reviews during detail design stage of the project.

2.0 INTRODUCTION

This Accessibility report has been prepared by ABE Consulting Pty Ltd to accompany a State Significant Development Application (SSDA) for a proposed mixed-use precinct located at 1 Crescent Street, Holroyd (the site).

This report provides an Accessibility Design Review of the proposed SSD-70283710 located at 1 Crescent Street, Holroyd.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (**SEARs**) dated 6 May 2024 and issued for the SSDA (**SSD-70283710**). Specifically, this report has been prepared to respond to the SEARs requirement issued below. Table 1 SEARs requirements – SSD-70283710

Item	Description of Requirement	Response & Report Reference
4.	Built Form and Urban Design • Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach. • Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality. • Demonstrate how the building design will deliver a high-quality development, including consideration of façade design, articulation, activation, roof design, materials, finishes, colours, any signage and integration of services.	Refer to Sections 2 – 4 of this report for an assessment of the accessible requirements associated to the proposed development.

3.0 SITE CONTEXT

3.1 Site Description

The land to which this SSDA relates is located at 1 Crescent Street, Holroyd (**the site**). The site is legally described as Lot 700 in Deposited Plan 1241836.

The site comprises an irregularly shaped allotment with an area of 37,877m² and has a primary frontage to Crescent Street to the south and a frontage to Woodville Road to the east. The northern boundary of the site adjoins the Holroyd Sportsground with the M4 Motorway beyond.

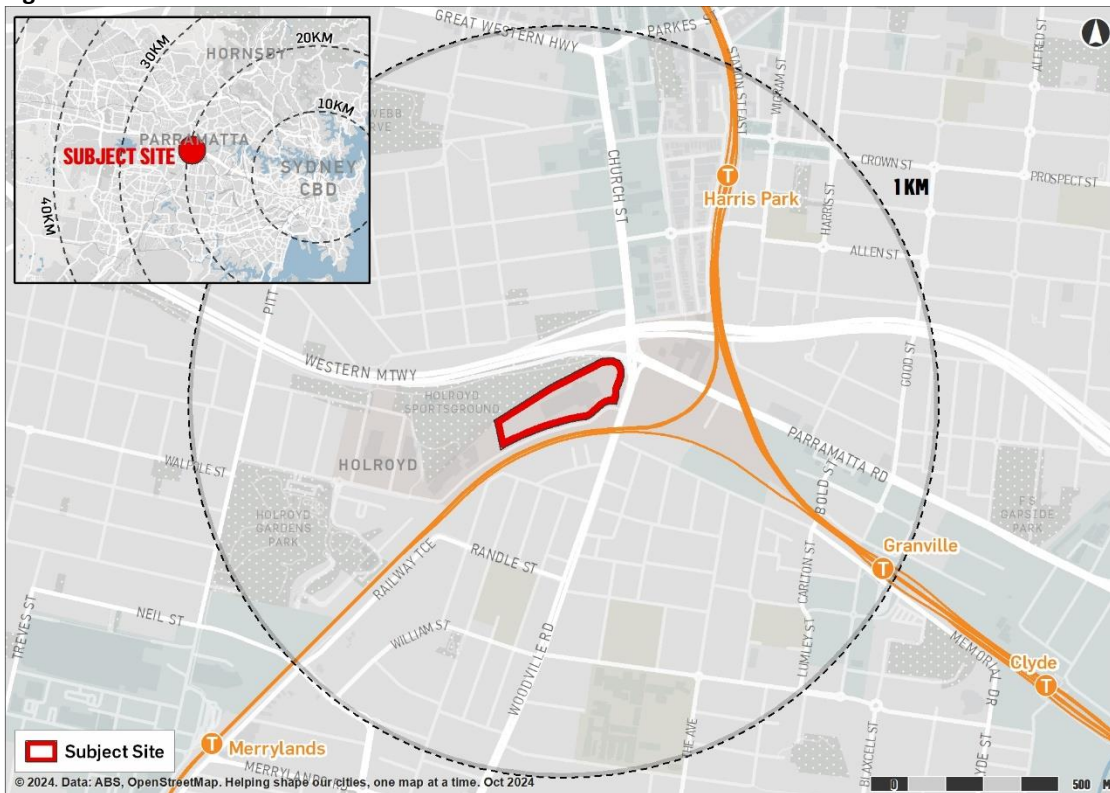
The site is located in the Cumberland Local Government Area (**LGA**) and is currently vacant and cleared after WesTrac ceased operations of an industrial facility at the site in early 2018. The site contains existing scattered pockets of landscaped vegetation, predominately located along the site's southern and eastern boundaries to Crescent Street and Woodville Road.

The site is bounded by Parramatta Road/Church Street/Woodville Road intersection to the north east, Woodville Road to the east and Crescent Street to the south. The northern frontage of the site faces the

Holroyd Sportsground and the M4 Motorway beyond. It is noted that the eastern portion of the site fronting Woodville Road has been identified for potential future acquisition by Transport of NSW for future planned intersection upgrades to Woodville/Parramatta Road/M4.

A Location Plan including the site is provided in **Figure 1** below.

Figure 1 Location Plan



Source: Urbis, 2024

4.0 METHODOLOGY

4.1 Classification

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) –

Buildings 1 – 3		
Level/Building Part	Building Classification	Use
Lower Ground	Class 7a	Carpark
Ground Floor	Class 6/ Class 7a	Retail/ Carpark
Level 1	Class 5/ Class 7a	Commercial/ Carpark
Level 2	Class 2/ Class 5/ Class 7a	Residential Apartments/ Commercial/ Carpark
Level 3 – 6	Class 2/ Class 7a	Residential Apartments / Carpark
Level 7	Class 2/ Class 10b	Residential Apartments/ Swimming Pool
Level 8 – 36	Class 2	Residential Apartments
Buildings 4 – 5		
Level/Building Part	Building Classification	Use
Lower Ground – Ground Floor	Class 2/ Class 5/ Class 7a	Residential Apartments/ Commercial/ Carpark
Level 1 – 5	Class 2/ Class 7a	Residential Apartments / Carpark
Level 6 – 20	Class 2	Residential Apartments
Buildings 6 – 7		
Lower Ground – Level 5	Class 2/ Class 7a	Residential Apartments / Carpark
Level 6 – 22	Class 2	Residential Apartments

4.2 Purpose of the Report

Tiberius (Holroyd) Pty Ltd (ABN 61 061 131 959) atf the Holroyd Unit Trust (ABN 42 891 308 354) 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 Principal Certifying Authority as part of the Development Application documentation.

4.3 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 Woods Bagot, Project No. 121784 as follow –

Dwg#	Title	Date – Issue
DA-0-1104	Proposed Site Plan	20/11/24 – B
DA -0-12LG	Overall Plan Lower Ground	20/11/24 – B
DA -0-1200	Overall Plan Ground floor	20/11/24 – B

DA -0-1201	Overall Plan Level 01	20/11/24 – B
DA -0-1202	Overall Plan Level 02	20/11/24 – B
DA -0-1203	Overall Plan Level 03	20/11/24 – B
DA -0-1206	Overall Plan Level 06	20/11/24 – B
DA -0-1207	Overall Plan Level 07	20/11/24 – B
DA -0-1210	Overall Plan Level 10	20/11/24 – B
DA -0-1218	Overall Plan Level 18	20/11/24 – B
DA -0-1219	Overall Plan Level 19	20/11/24 – B
DA -0-1221	Overall Plan Level 21	20/11/24 – B
DA -0-1224	Overall Plan Level 24	20/11/24 – B
DA -0-1233	Overall Plan Level 33	20/11/24 – B
DA -0-1236	Overall Plan Level 36	20/11/24 – B
BUILDINGS 1 – 3		
DA -1-22LG	Lower Ground Floor Plan	20/11/24 – B
DA -1-2200	Ground Floor Plan	20/11/24 – B
DA -1-2201	Level 1	20/11/24 – B
DA -1-2202	Level 2	20/11/24 – B
DA -1-2203	Level 3	20/11/24 – B
DA -1-2204	Level 4	20/11/24 – B
DA -1-2205	Level 5	20/11/24 – B
DA -1-2206	Level 6	20/11/24 – B
DA -1-2207	Level 7	20/11/24 – B
DA -1-2210	Level 10	20/11/24 – B
DA -1-2224	Level 24	20/11/24 – B
DA -1-2233	Level 33	20/11/24 – B
DA -1-2234	Level 34	20/11/24 – B
DA -1-2235	Level 35	20/11/24 – B
DA -1-2236	Level 36	20/11/24 – B
BUILDINGS 4 & 5		
DA -2-22LG	Lower Ground Floor Plan	20/11/24 – B
DA -2-2200	Ground Floor Plan	20/11/24 – B
DA -2-2201	Level 1	20/11/24 – B
DA -2-2202	Level 2	20/11/24 – B
DA -2-2203	Level 3	20/11/24 – B
DA -2-2204	Level 4	20/11/24 – B
DA -2-2205	Level 5	20/11/24 – B
DA -2-2206	Level 6	20/11/24 – B
DA -2-2210	Level 10	20/11/24 – B
DA -2-2213	Level 13	20/11/24 – B
DA -2-2218	Level 18	20/11/24 – B
DA -2-2219	Level 19	20/11/24 – B
DA -2-2220	Level 20	20/11/24 – B
BUILDINGS 6 & 7		
DA -3-22LG	Lower Ground Floor Plan	20/11/24 – B
DA -3-2200	Ground Floor Plan	20/11/24 – B
DA -3-2201	Level 1	20/11/24 – B

DA -3-2202	Level 2	20/11/24 – B
DA -3-2203	Level 3	20/11/24 – B
DA -3-2204	Level 4	20/11/24 – B
DA -3-2205	Level 5	20/11/24 – B
DA -3-2206	Level 6	20/11/24 – B
DA -3-2210	Level 10	20/11/24 – B
DA -3-2213	Level 13	20/11/24 – B
DA -3-2220	Level 20	20/11/24 – B
DA -2-2221	Level 21	20/11/24 – B
DA -3-2222	Level 22	20/11/24 – B
ADAPTABLE APARTMENTS		
DA -0-8112	Building 1 Unit Layouts 2 Bedrooms	20/11/24 – B
DA -0-8122	Building 2 Unit Layouts 2 Bedrooms	20/11/24 – B
DA -0-8132	Building 3 Unit Layouts 2 Bedrooms	20/11/24 – B
DA -0-8142	Building 4 Unit Layouts 2 Bedrooms	20/11/24 – B
DA -0-8152	Building 5 Unit Layouts 2 Bedrooms	20/11/24 – B
DA -0-8162	Building 6 Unit Layouts 2 Bedrooms	20/11/24 – B
DA -0-8172	Building 7 Unit Layouts 2 Bedrooms	20/11/24 – B

- 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.
- Livable Housing Australia – Livable Housing Design: Guidelines, Fourth Edition 2017.
- Cumberland Council DCP 2021 – Part B5 Adaptable Housing & Housing Mix – 2.1 Adaptable Housing.

4.4 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.

4.5 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:*
 - i. *The building work is carried out for or on behalf of the Crown;*
 - ii. *The building work commences on or after 1 May 2011;*
 - iii. *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.

5.0 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 –

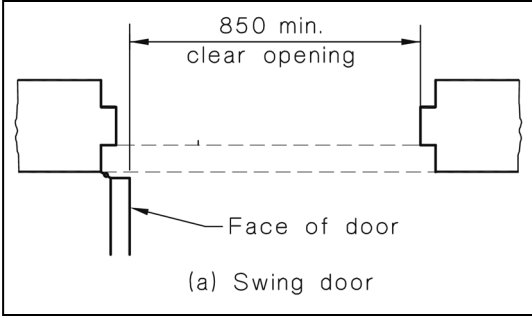
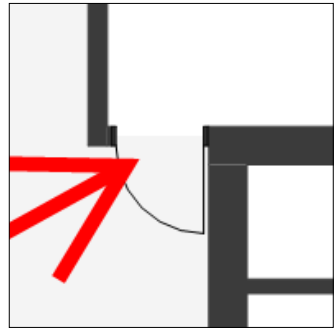
<u>Capable of Complying (CoC) –</u>	Spatial allowance has been made to accommodate compliance where the specification provided has been satisfied.
<u>Compliance Departure (CD) –</u>	A compliance departure with the DtS provisions of the BCA.
<u>Design Detail (DD) –</u>	A detail commentary/specification is offered within the report.
<u>Performance Solution (PS) –</u>	A Performance Solution Report is being pursued to justify the compliance departures
<u>Not Applicable (N/A) –</u>	Not applicable or not relevant to the project. Commentary provided.
<u>Informational (Info) –</u>	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.

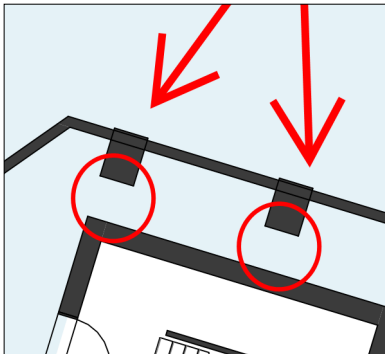
BCA Part D4 – ACCESS FOR PEOPLE WITH DISABILITIES

Cl. D4D2: General building access requirements

DtS Provision	Comment(s)/Recommendation(s)	Status
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 – <u>Class 2 –</u> - 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— 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. <u>Class 5 & 6 –</u> - To and within all areas normally used by the occupants. <u>Class 7a –</u> - To and within any level containing accessible carparking spaces. <u>Class 10b –</u> - 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 building.	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. <u>Doorways</u> 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.  Generally common use doorways are afforded with a minimum 850mm clear door opening width. <u>Detail Design:</u> Due to obstructions in front of doorways, circulation spaces are reduced. The following doorways are identified: Building 1-3: Levels 2-6: doorway between carpark and residential lobby. 	CD & DD

	• Building 4-5: Lower Ground Level doorway from the external pathway leading into carpark. • Building 4-5: Lower Ground Level doorway from the carpark into the lift lobby. • Building 6-7: Lower Ground Level doorway from the external pathway leading into carpark. • Building 6-7: Lower Ground Level doorway from the carpark into the lift lobby. Doorways are capable of being adjusted to achieve compliance with the requirement of AS1428.1-2009 during detail design stage. <u>Detail Design:</u> Generally, compliance has been observed, however in a few instances, doorways are provided with nil tolerance to doorway circulation spaces as prescribed in AS1428.1-2009. Examples of these doorways include: • Garbage rooms. • Building Managers Office Door Ground Floor. It is recommended that as the design progresses that tolerance is applied to door latch-side clearances. <u>Design Detail –</u> The following items shall be specified and installed to comply with AS1428.1-2009 – • All floor surface materials comply with the material, profile, abutment and design tolerances of AS1428.1-2009 including BCA Cl. D4D4(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.	
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	• The passenger lift within Building B providing an accessway between Pennant Hills Road and the site through link is required to be available for use by all occupants at any time. • 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 D4D4 of the BCA and AS1428.1-2009.	
	<u>Access between areas</u> 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). Access is indicated as being provided to and within all part of the buildings on the site. It is noted that the accessway between the internal pathway and Building 7 lobby is via the use of a doorway leading into the Lower Ground carparking area. This will provide an accessible path of travel to the lift lobby and an accessway to Building 7. An accessway is required to be provided to all areas of the development as required by the BCA.	CoC
	<u>Paths of travel</u> All pathways require a minimum unobstructed width of 1000mm. Pathways shall not include impediments such as steps or turnstiles without an accessible alternative provided. Circulation spaces prescribed by AS1428.1-2009 are required at changes in direction and other circumstances may require a greater width than 1000mm. The following summary of AS1428.1-2009 requirements for accessways is provided to	CoC & DD

	assist the project team during specification/construction. <u>Detail Design:</u> A number of locations throughout the development are identified with clearances along pathways/ corridors which have a clearance of <1000mm. These areas are identified below: • Building 1-3: Level 1: Columns located within the commercial lobby:  Pathways are capable of being adjusted to achieve compliance with the requirement of AS1428.1-2009 during detail design stage. <u>Design Detail:</u> 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.	
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Cl. D4D3: Access to Buildings

DtS Provision	Comment(s)/Recommendation(s)	Status
An accessway must be provided to a building required to be accessible – • 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.	<u>Allotment Boundary</u> The development is bound by 2x street frontages being: • Crescent Street; • Woodville Road; and • A link bridge across A'becketts Creek. The entrances off the street frontage has been identified in the below figure at the	CoC, PS & DD

In a building required to be accessible, an 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.

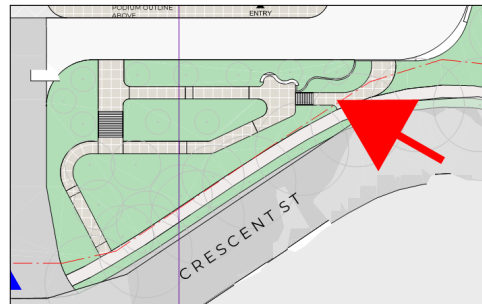
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Performance Solution:

BCA requires an accessway to be provided from the main points of pedestrian entry off the allotment boundary.

Numerous entrances off the Crescent Street frontage are not provided with an accessway, these include:

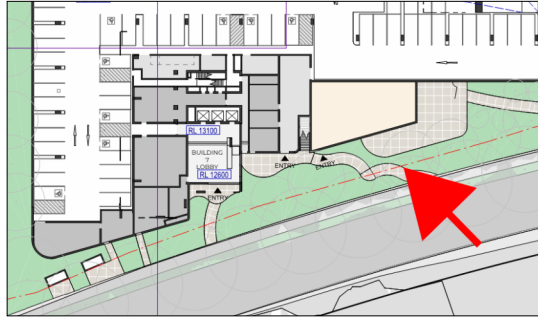
- Buildings 4 + 5 – Stairway Access only



- Buildings 4 + 5 –
 - Red arrows identifies stairway access to the raised podium area between Buildings 4 + 5; and identifies a series of stairs along the internal site pathway into the development.



- Buildings 6 + 7 – An accessway between the Crescent Street and Ground Floor external podium between Buildings 6 & 7.



The identified non-accessible entrances will need to be addressed via a Performance Solution report. Reliance will be played on an internal management system to enable wayfinding through the site.

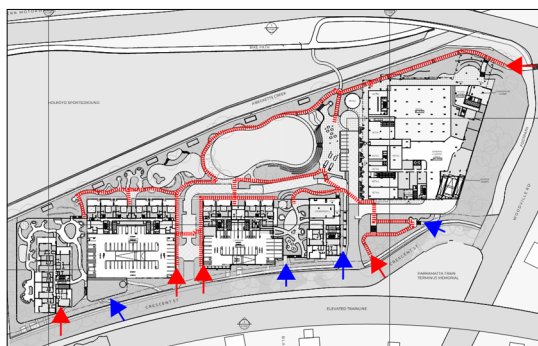
- A'becketts Creek bridge confirm whether this feature is part of the clients allotment or whether this is part of council's land.
If part of the clients allotment, these feature will be required to achieve compliance with AS1428.1-2009.

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

Other Accessible Buildings

A number of internal pathways are proposed throughout the site which link all buildings and all street frontages and external common use features.

Below extract identifies the internal accessible path of travel throughout the site which provided a link between all buildings and communal use spaces.



CoC

	The pedestrian links between buildings are required to be accessible is to achieve compliance with AS1428.1-2009. Further review of the detailed plans will be required to ensure full compliance with AS1428.1-2009 prior to the Construction Certificate.	
	<u>Accessible Parking</u> Accessible parking spaces are proposed within basement/ carparking areas of the development. Multiple passenger lifts are provided providing access between accessible parking spaces and buildings.	CoC
	<u>Principal Pedestrian Entrances (Building)</u> Pedestrian entrance to all building parts (residential lobby's, retail, commercial lobbies) are capable of achieving compliance with AS1428.1-2009. Further review of the detailed plans will be required to ensure full compliance with AS1428.1-2009 prior to the Construction Certificate in relation to entrances leading to residential lobbies and commercial/ retail areas	CoC & PS

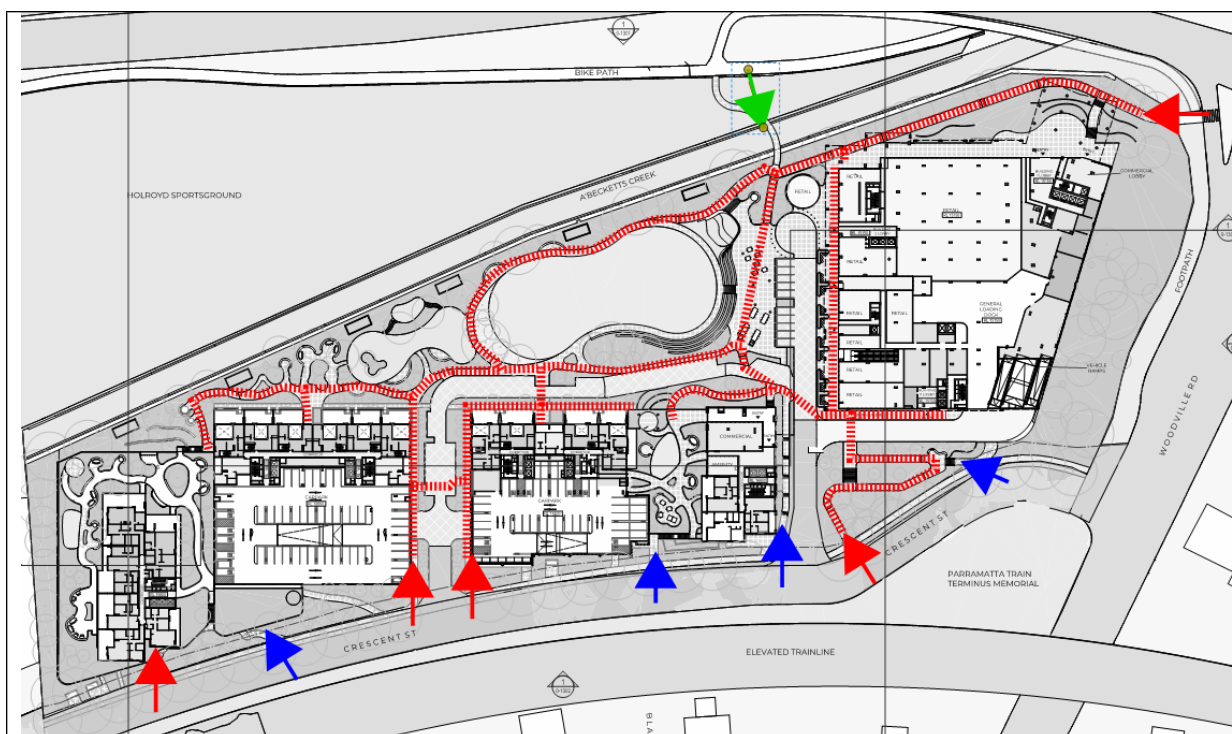


Figure 2 –

Red Arrows indicate locations of accessible entrances off the allotment boundary

Blue Arrows indicate location of non-accessible entrances from the allotment boundary

Green Arrow indicates location of link bridge to off-site bike path

Red lines throughout site indicate the accessible pathway between buildings and allotment boundary.

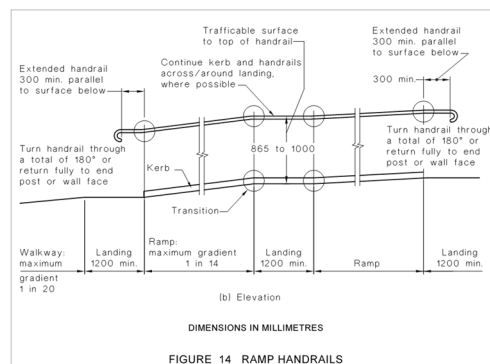
Cl. D4D4: Parts of buildings to be accessible

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 –		
for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and	All non-fire-isolated ramps are required to comply with AS1428.1-2009. A number of ramps and walkways are indicated throughout the development. <u>Design Detail:</u> - 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	CoC & DD

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 D3D15 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 D4D9 of the BCA and AS/NZS1428.4.1-2009.

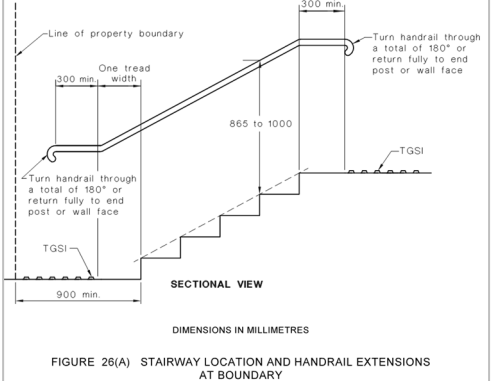
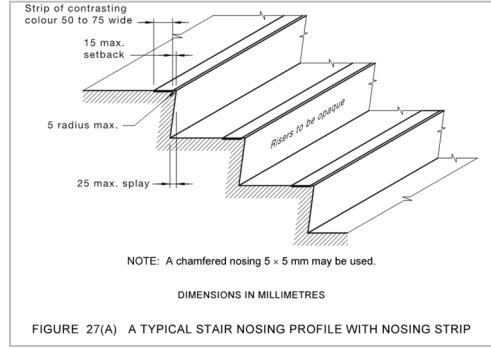
Refer to figure below from AS1428.1-2009 (Figure 14):



- 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 D4D4 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 walkway is 15m before a mid-landing is required; and ○ Compliant walkway abutment to be provided as prescribed in AS1428.1-2009. Further review of external and internal ramps/ walkways are to be developed as the design progresses.	
• for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1; and	All non-fire-isolated stairways are required to comply with AS1428.1-2009. The following stairways are identified as being subject to this requirement: • Open stairways external to the buildings. • Common area stairways within lift lobby's. Further design development and/or specification required at the Detailed Design Stage. <u>Detail Design:</u> Stairways throughout the development are indicated with a lack of setback at the upper	CoC & DD

	and lower landings. Depending on the location of the stairway will determine the setback required: • Allotment boundary – Setback a minimum 900mm between last riser and line of boundary. • Traverse pathways/ corridors – setback 400mm at upper landings and 650mm at lower landings to have handrails setback. <u>Design Detail:</u> • 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: ○ 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 D3D14 of the BCA; ○ Stairways must be setback a minimum 900mm from the boundary or 400mm from an intersection of a corridor – refer to markup below: ○ Risers must be opaque; ○ 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 D4D9 of the BCA and AS/NZS1428.4.1-2009. Refer to figures below from AS1428.1-2009 (Figures 26A and 27A):	
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	 FIGURE 26(A) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT BOUNDARY  FIGURE 27(A) A TYPICAL STAIR NOSING PROFILE WITH NOSING STRIP	
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. <i>N.B. – Cl. D3D22(f) 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.</i>	CoC
Accessways must have— - 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.	<u>Internal Corridors –</u> Internal corridors are generally provided with a clear width of 1600mm. However, there are a couple of location where a wheelchair circulation space is not provided. Note – circulation space is to be provided clear of any intrusions including skirting boards or the like. <u>Detail Design:</u> Ground Floor of Building 1-3 amenities corridor exceeds a length of 20m without a	CoC & DD

	wheelchair passing bay (2000mm x 1800mm). Corridor is to incorporate a wheelchair passing bay. <u>External Corridors/Pathways –</u> 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. <u>Bin Rooms, Mail Rooms and Storage Areas –</u> Bin rooms and Storage Areas require minor design development to ensure a 180° turning spaces (1,540mm X 2,070mm) and door circulation space are provided within the bin rooms. It is noted that storage areas within the basement are provided with wheelchair turning spaces. All bins rooms (other than identified below) are provided with wheelchair tuning spaces. Further review of external and internal pathways are to be developed as the design progresses.	
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Cl. D4D5: Exemptions

DtS Provision	Comment(s)/Recommendation(s)	Status
The following areas are not required to be accessible – • 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.	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) – - Plant & equipment room(s) - Loading Dock - Storage rooms - Fire Control	Info

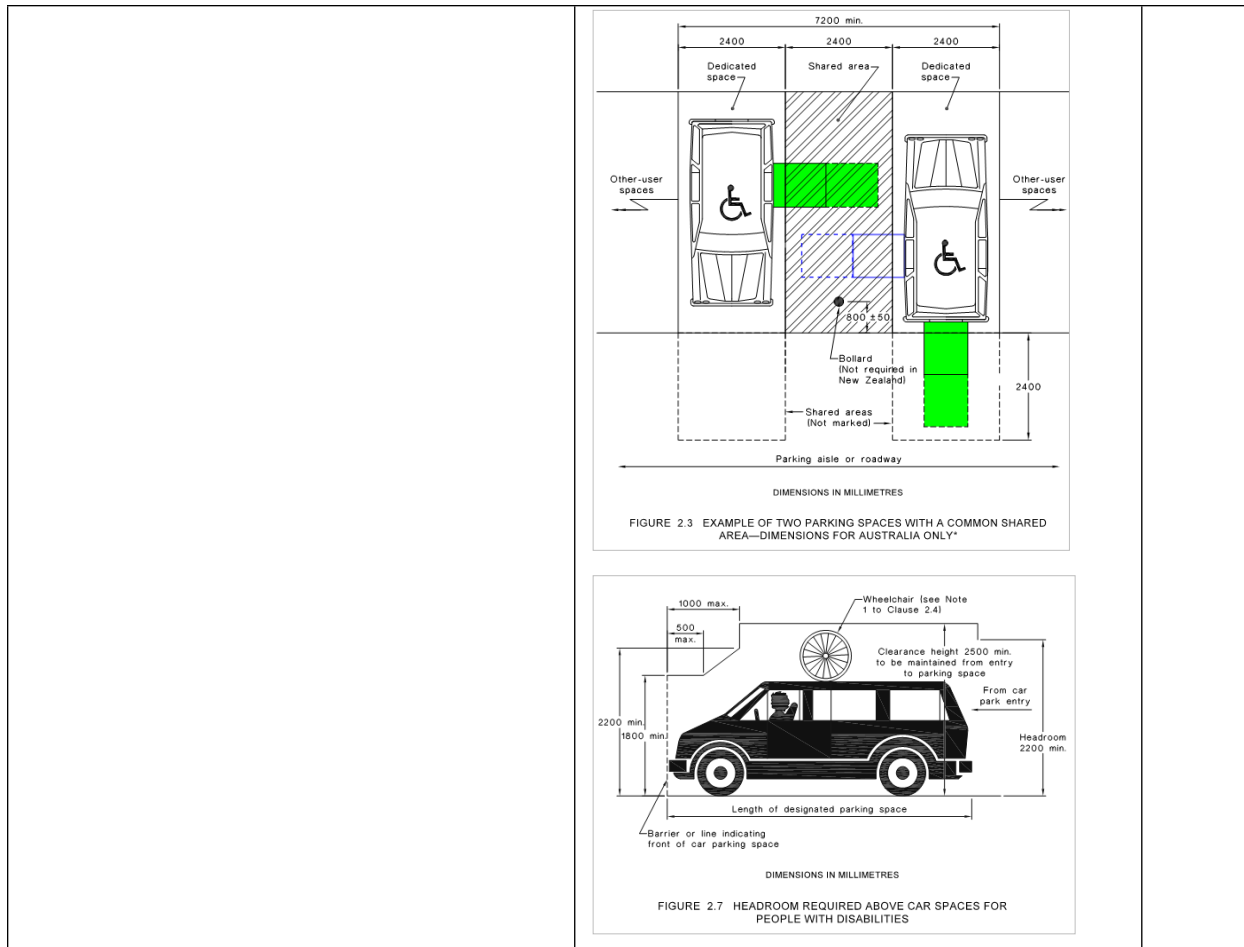
Any path of travel providing access only to an area exempted by (a) or (b).	- Sprinkler/ Hydrant Pump rooms	
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Cl. D4D6: Accessible carparking

DtS Provision	Comment(s)/Recommendation(s)	Status						
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. Accessible carparking spaces – - 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 <u>Class 5, 7, 8 or 9c –</u> 1x space for every 100 carparking spaces or part thereof. <u>Class 6 –</u> 1x space for every 50 carparking spaces or part thereof.	Accessible car spaces have been provided throughout the development within the designated parking areas. The following compliance parameters are noted: <u>Class 2 Buildings/Part –</u> 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). 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. Council DCP requires that each adaptable apartment is allocated with an accessible parking space. A minimum 245x adaptable apartments are to be provided throughout the site, each site is to be allocated an accessible parking space. The project parking matrix indicates each adaptable apartment is proposed with an accessible parking space. The adaptable parking spaces are broken up as per the below between the phases: <table border="1"> <thead> <tr> <th>Phase 1</th><th>Phase 2</th><th>Phase 3</th></tr> </thead> <tbody> <tr> <td>130</td><td>48</td><td>67</td></tr> </tbody> </table> Total = 245 <u>Detail Design:</u> Numerous adaptable parking spaces within Phase 1 are indicate with a number of	Phase 1	Phase 2	Phase 3	130	48	67	CoC, PS & DD
Phase 1	Phase 2	Phase 3						
130	48	67						

	parking spaces which are obstructed by a column. The column is currently located within the loading and unloading zone of a wheelchair occupant and the parking spaces will need to be re-adjusted. (i.e. located >1750mm into the space OR more than 1x column within the shared zone). <u>Performance Solution:</u> A Performance Solution will be prepared to address use of columns within the shared zones adjacent to the accessible parking space. Columns shall not impact loading and unloading zones. <u>Visitor Carparking –</u> 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. Within the development 5x visitor parking space are provided per phase. A total of 3x accessible car spaces have been allocated for visitors. <u>Detail Design:</u> Accessible visitor parking spaces shall be relocated to ensure nil obstruction is provided from a column within the shared zones. <u>Class 6 (Commercial/ Retail) Parking –</u> Within the development a total of - Phase 1: 118x car spaces - Phase 2: 3x car spaces	
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	have been nominated for the retail/ commercial (class 6) portions of the building. - Phase 1 = 3x Accessible parking spaces - Phase 2 = 1x Accessible parking spaces accessible car spaces are identified allocated to serve the Class 6 portion of the development to meet the minimum BCA requirement under Cl. D4D6. <u>Design Details –</u> • 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. • An accessway from any accessible car space must be provided to the building/passenger lift/lobby etc. Refer to key figures/extracts below from AS/NZS2890.6-2009:	
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Cl. D4D7: Signage

DtS Provision	Status
In a building required to be accessible signage complying with Spec. 15, AS1428.1-2009 and incorporating the appropriate recognised symbol (as appropriate) for persons with disability must be provided as follows — • braille and tactile signage must identify each sanitary facility and space with hearing augmentation; • braille and tactile signage must identify each door required by E4D5 to be provided with an exit sign and state “Exit” and “Level” followed by the floor level number; • 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.	DD

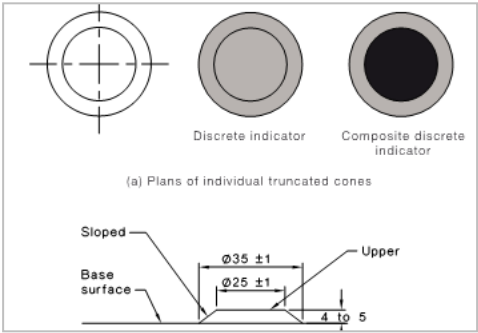
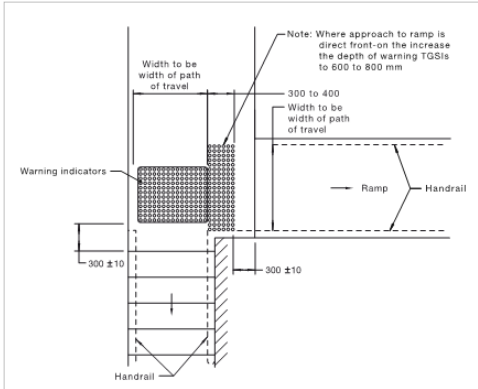
Signage shall be installed in accordance with and a design/install certificate is to be provided to confirm compliance with the relevant provisions of the BCA and Australian Standards.

Cl. D4D8: Hearing augmentation

DtS Provision	Comment(s)/Recommendation(s)	Status
A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed – • 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. 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.	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. It is unlikely that inbuilt amplification will be provided within this development. Further review of detailed building elements will be required as the design progresses.	DD

Cl. D4D9: Tactile indicators

DtS Provision	Comment(s)/Recommendation(s)	Status
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 – • 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.	TGSI's TGSIs are to be provided to – • 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; • Upper and lower landings of escalators; • where an accessway meeting a vehicular way adjacent to any pedestrian entrance to a building. Further review of detailed building elements will be required as the design progresses.	CoC & DD

	<u>Design Detail:</u> TGSIs shall be specified and installed to comply with AS/NZS1428.4.1-2009 including size, spacing, width, depth and luminance contrasting as follows – • 30% - Integrated TGSIs • 45% - Discrete TGSIs • 60% - Composite Discrete TGSIs  TGSIs are to be installed 300mm ±10mm from the hazard (i.e. nosing, ramp transition, vehicular way, etc.). 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. Refer to key extracts from AS/NZS1428.4.1-2009 below:  Suitable Barrier	
		CoC & DD

	A suitable barrier is required to be installed to the underside of stairways where there is a 2m or less head height clearance. Further review of the detailed plans will be completed during detail design stage.	
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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
- 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— - 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.	The perimeter of the pools in Buildings 1-3 is >40m but less than 70m; therefore, one of the following accessible pool entrances is required – - 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. Swimming pools are readily capable of being installed with an accessible pool entry as per Cl. D4D11 and Spec. 16. Drawings indicate a sling style lift to be installed at the pool. Further review of detailed building elements will be required as the design progresses.	CoC & DD

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.	A number a ramps are proposed throughout the development. <u>Detail Design:</u> Details of and RL's of ramps are to be provided on drawings to indicate the height difference between the series of connected	CoC & DD

	ramps throughout the site.	
	Step ramps are not proposed.	

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 – • 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 • not rely on a constant pressure device for its operation if the lift car is fully enclosed.	All passenger lifts are indicated as being electric/ electrohydraulic type passenger lifts. There is no limitation on the use of these passenger lifts. A total of 24x passenger lifts are proposed as part of the development. In addition to the building passenger lifts 3x platform lifts are proposed within residential lift lobby's.	CoC

Cl. E3D8: Accessible features required for passenger lifts

DtS Provision	Comment(s)/Recommendation(s)	Status
Passenger lifts shall have the following features – • 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,	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. <u>Design Detail:</u> Ensure lift landing controls are provided no less than 500mm from an internal corner.	CoC & DD

• 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.		
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BCA Part F4 – SANITARY AND OTHER FACILITIES

Cl. F4D5: Accessible sanitary facilities

DtS Provision	Comment(s)/Recommendation(s)	Status
In a building required to be accessible: • 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.	<u>Accessible sanitary compartments</u> Amenity banks are proposed a multiple locations throughout the development. Specific detail of bathroom spaces are yet to be indicated in these areas. It is considered that there is sufficient space for accessible bathrooms to be provided at these identified amenity areas. <u>Detail Design:</u> BCA requires an accessible sanitary facility to be provided at all accessible banks of toilets throughout the development. Further review of internal accessible bathroom layouts will occur as the design develops. <u>Ambulant sanitary compartments:</u> Amenity banks are proposed a multiple locations throughout the development. Specific detail of bathroom spaces are yet to be indicated in these areas.	CoC & DD

	<u>Detail Design:</u> Ambulant cubicles are required where male and female toilets are provided in addition to an accessible bathroom. Further review of internal accessible bathroom layouts will occur as the design develops.	
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Cl. F4D12: Accessible adult change facilities

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

6.0 RELEVANT DCP CONDITIONS & ADAPTABLE HOUSING REVIEW

The following is an extract of the relevant adaptable housing provisions of the Local Council DCP being – Cumberland DCP - PART B5 – 2.1 Adaptable Housing.

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)								
C1.	Adaptable housing complying with AS 4299 is to be provided in multi-dwelling housing, residential flat buildings, and the residential component of mixed use developments in accordance with the following:	The development proposes a total of 1227x Class 2 apartments.								
		Based on the DCP requiring 20% of apartments being allocated as adaptable, a minimum of 245x apartments are to be design as adaptable.								
		The apartment project matrix indicates a total of 245x apartments being allocated as adaptable.								
		Pre & post adaptable apartment layouts have been provided for assessment.								
	<table><tr><th>Total number of dwellings</th><th>No. of adaptable dwellings required</th></tr><tr><td>Less than 10</td><td>1</td></tr><tr><td>10 – 20</td><td>2</td></tr><tr><td>More than 20</td><td>20% (unless justification provided for consideration by Council)</td></tr></table>	Total number of dwellings	No. of adaptable dwellings required	Less than 10	1	10 – 20	2	More than 20	20% (unless justification provided for consideration by Council)	
Total number of dwellings	No. of adaptable dwellings required									
Less than 10	1									
10 – 20	2									
More than 20	20% (unless justification provided for consideration by Council)									

Drawing No.	Layout No.	Building	Apartment Type
DA -0-8112	2B_1_01	Building 1	2 Bed
DA -0-8112	2B_1_04	Building 1	2 Bed
DA -0-8122	2B_2_03	Building 2	2 Bed
DA -0-8122	2B_2_04	Building 2	2 Bed
DA -0-8132	2B_3_01	Building 3	2 Bed
DA -0-8132	2B_3_04	Building 3	2 Bed
DA -0-8142	2B_4_02	Building 4	2 Bed
DA -0-8142	2B_4_03	Building 4	2 Bed
DA -0-8152	2B_5_01	Building 5	2 Bed
DA -0-8162	2B_6_03	Building 6	2 Bed
DA -0-8172	2B_7_02	Building 7	2 Bed
DA -0-8172	2B_7_03	Building 7	2 Bed

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–

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	Pre & Post Adaptation plans have been provided for a minimum of 245x adaptable apartments. Refer to the project matrix regarding the number of adaptable apartments spread throughout the buidings. 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 C adaptable housing units. Capped services are to be provided where required in order to provide a suitable adaptation process. The key elements which cannot be adapted are the location of service risers, any change to structural building members or common property. The number of bedrooms/bathrooms is to remain consistent pre and post adaptation.	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

SECURITY				
LETTERBOXES IN ESTATE DEVELOPMENTS				
11	Letterboxes to be on hard standing area connected to accessible pathway	3.8	Complies. Building lobbies are provided with mail rooms within Lower Ground/ Ground Floor Lobby areas.	ESS
PRIVATE CAR ACCOMODATION				
14	Carparking space or garage min. area 6.0m x 3.8m.	3.7.2	Refer to Table Cl. D4D6 of this report. A minimum of 245x adaptable parking spaces are to be allocated to adaptable apartments within basement/ parking areas/ levels. Drawings indicate the following compliance departure to the adaptable parking spaces: Accessible Parking spaces are indicated with a minor obstruction to the shared zone via a column. This compliance departure is capable of being addressed via a Performance Solution report at CC stage of the project.	ESS
ACCESSIBLE ENTRY				
20	Accessible entry	4.3.1	Entry doorways to adaptable units are to achieve compliance with AS1428.1-2009 from the pre-adaptation phase. Drawings indicate compliance is readily achievable. <u>Detail Design:</u> Drawing apartment layout of 2B_1_01 & 2B_2_04 indicates changes to the base building between the pre & post adaptation stage. Changes to the base building features cannot be undertaken. Compliance with the base building design	ESS

			is to be shown from the Pre-adaptation phase.	
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	Drawings indicate a minimum 850mm clear open doorway.	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. Internal doors to areas required to be adaptable are required to comply including – Adaptable bedroom;	ESS

			- Sanitary facility; - Kitchen (where a doorway is provided); and - Laundry (where a doorway is provided). Internal doorways are capable of being provided with a 850mm clear door opening.	
33	Internal corridors min. Width of 1000mm	4.3.7	Drawings indicate compliance is readily achievable.	ESS
34	Provision for compliance with AS1428.1 for door approaches	4.3.7	Drawings indicate compliance is readily achievable. <u>Detail Design:</u> A number of commentary has been provided on current drawings in relation to reductions to door circulation spaces. Internal doorways are to be provided with circulation spaces complying with AS1428.1-2009.	ESS
LIVING ROOM & DINING ROOM				
36	Provision for circulation space of min. 2250 mm diameter	4.7.1	Compliance is readily achievable with appropriate specification at CC Stage.	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	Compliance is readily achievable with appropriate specification at CC Stage. Floor & wall surface finishes which extend under the cabinets will allow benches to be relocated/replaced in the future. Capped services are to be provided and confirmed at the Construction Certificate Stage.	ESS
43	Provision for circulation at doors to comply with AS1428.1	4.5.1	N/A – Kitchens are open areas (no doorways are provided)	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	Further review of workspace at kitchen benches. A minimum 800mm work space is required to be provided adjacent to the cooktop.	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	AS1428.2 requires a 1000mm clearance to either side of the bed and a 1540mm x 2070mm circulation space provided at the foot of the bed. Detail Design: A number of bedrooms are indicated with pinch points located between the bed and opposite wall of less than 1000mm. A minimum 1000mm clearance is required. This is to be designed out.	ESS
OTHER BEDROOMS				
BATHROOM				
75	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: - toilet paper dispenser (see Clause 10.2.7AS1428.1) - Flushing control (see Clause 10.2.6AS1428.1)	4.4.1	The minimum sized of an adaptable compartment is to be 2650mm (l) X 2300mm (w) based on the orientation of fixtures and fittings within the adaptable bathroom. The layout proposed within the bathrooms are capable of meeting AS1428.1-2009. Capped services, wall reinforcement and the like are to be provided to allow future adaptation of the sanitary facility. Further review of the pre and post-adaption bathroom layouts is required to ensure the intent of the adaptable housing code is satisfied (major refurbishments are not permitted). Pre-adoption bathroom layout is to be modified to allow for simplistic adaption of future fittings and fixtures (as required).	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. Drawings indicate compliance is readily achievable.	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	Doorways are not proposed to laundry.	ESS
99	Provision for adequate circulation space in front of or beside appliances (min. 1550 mm depth)	4.8	Generally, compliance is achieved. <u>Detail Design:</u> Apartment 2B_3_01 is not indicated with a 1550mm circulation space in front of the laundry area.	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				

7.0 LIVABLE HOUSING REVIEW

Livable Housing Design – Silver Level

The following is an extract of the relevant adaptable housing provisions of the NSW Department of Planning & Environment being – Apartment Design Guide 2015.

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

No.	Condition	Comment
4Q-1	Developments achieve a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features	A total of 1227x residential units are proposed within the development. Subsequently, a minimum of 245x livable housing units are required to be provided. Livable housing apartment layout drawings are to be provided for assessment which indicate that a minimum of 245x apartments are designed to achieve silver level Livable Housing Design.

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.

Element 1: Dwelling access

Requirement/Specification	Comment(s)/Recommendation(s)
a. Provide a safe and continuous pathway from: 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. This provision does not apply where the average slope of the ground where the path would feature is steeper than 1:14. b. The path of travel as referred to in (a) should have a minimum clear width of 1000mm and –	An accessway complying with AS1428.1-2009 has been provided from the allotment boundary leading to each Livable Apartment. <i>Refer to Section 3.0 of this report of the base building access from the allotment boundary to the livable apartment entry door.</i>

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 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: 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 Level landings no less than 1200mm in length, exclusive of the swing of the door or gate than opens onto them, must be provided at the head and foot of the ramp. <i>Note – The width of the landing will be determined by the adjoining pathway.</i> <i>If the landing directly adjoins the doorway please refer to Element 2 for dimensional requirements.</i>	
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Element 2: Dwelling entrance

Requirement/Specification	Comment(s)/Recommendation(s)
a. The dwelling should provide an entrance door with - 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. b. A level landing area of at least 1200mm x 1200mm should be provided at the level (step free) entrance door. A level landing area at the entrance door should be provided on the arrival side of the door (i.e.	Clear door opening widths are indicated with clear openings exceeding 850mm, exceeding the below –

the external side of the door) to allow a person to safely stand and then open the door. Where the threshold at the entrance exceeds 5mm and is less than 56mm, a ramped threshold may be provided (see Figure 1(b)).

- c. The level (step-free) entrance should be connected to the safe and continuous pathway as specified in Element 1.

Note – The entrance must incorporate waterproofing and termite management requirements as specified in the NCC.

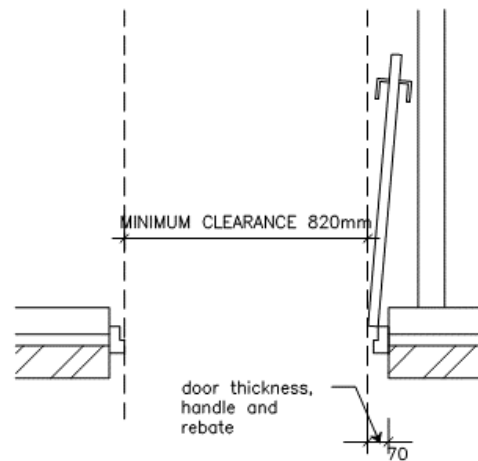


Figure 2(a) Silver level clear door opening

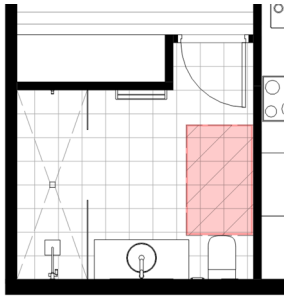
It is assumed that a level transition is provided at the livable apartment entrances as they are accessed via in internal corridor.

Element 3: Internal doors & corridors

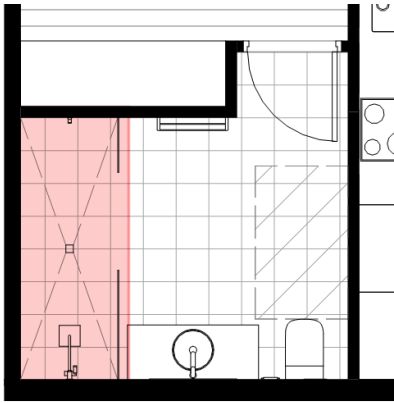
Requirement/Specification	Comment(s)/Recommendation(s)
a. Doorways to rooms on the entry level used for living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment purposes should provide: i. a minimum clear opening width of 820mm (see Figure 2(a)); and ii. a level transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or beveled). b. Internal corridors/passageways to the doorways referred to in (a) should provide a minimum clear width of 1000mm. <i>* Corridor widths should be measured as described in Clause 6.3 of AS 1428.1 – 2009</i>	Generally corridor are provided with a minimum 1000mm clear width. Allow for skirting board thickness to be added to corridors. Ensure 5mm vertical tolerance at abutting surfaces (i.e. bathrooms and the like). Internal doorways are capable of being provided with an 820mm clear opening. Further review of adaptable doorways will occur at detail design stage.

Element 4: Toilet

Requirement/Specification	Comment(s)/Recommendation(s)
a. Dwellings should have a toilet on the ground (or entry) level that provides:	Drawings indicate compliance as toilets are located in corner of sanitary compartment with a 900mm x 1200mm clearance space in front of

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.	WC Pan. (Typical bathroom design is indicated below).  Detail Design: The following apartment designs indicate a door swing within the WC Pan circulation space, these include: - 2B_3_01 - 2B_4_03 - 2B_7_02 - 2B_7_03
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Element 5: Shower

Requirement/Specification	Comment(s)/Recommendation(s)
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. b. The shower recess should be located in the corner of the room to enable the installation of grabrails at a future date.	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). 

Element 6: Reinforcement of bathroom & toilet walls

Requirement/Specification

The following is provided as a specification to be followed during construction –

- 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.
- b. The walls around the toilet are to be reinforced by installing:
 - 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).
- c. The walls around the bath are to be reinforced by installing:
 - 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).
- d. The walls around the hobless shower recess are to be reinforced by installing:
 - 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).

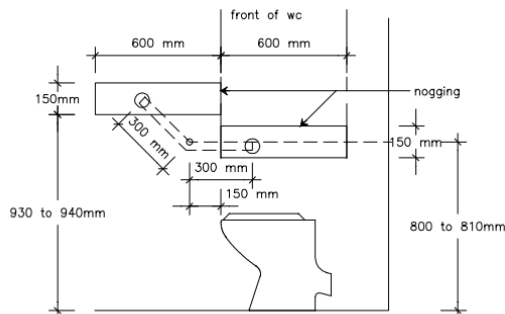


Figure 6(a) Toilet – Location of reinforcement

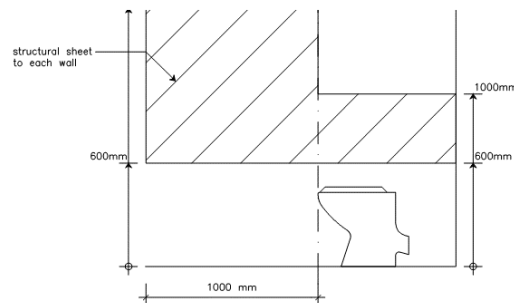


Figure 6(b) Toilet – Location of sheeting

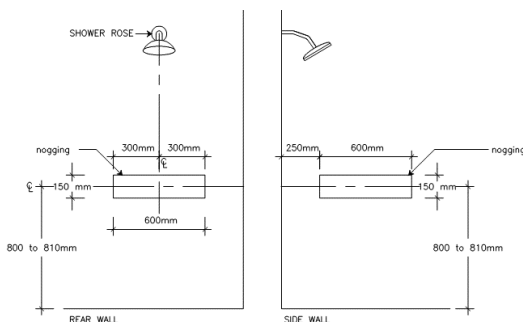
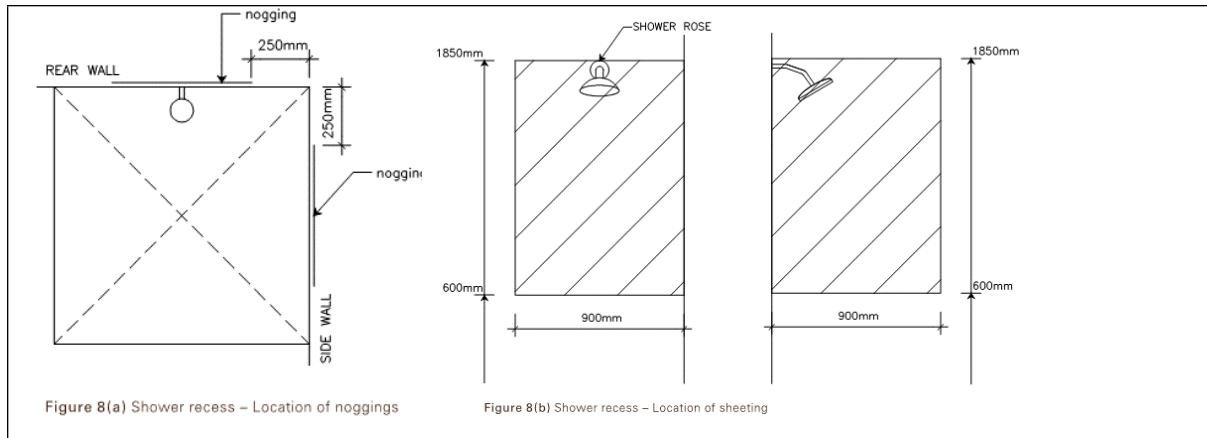


Figure 8(a) Shower recess – Location of noggings



Element 7: Internal stairways

N/A – No internal stairways are proposed.

8.0 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 and assessment of 'Silver Level' livable apartments against the Livable Housing Design Guidelines 2017.

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.

9.0 REVIEW PROVIDED BY

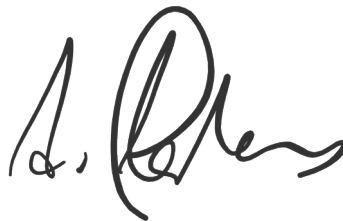
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