



**BUILDING
INNOVATIONS
AUSTRALIA**

ADAPTABLE HOUSING & LHDG INDICATIVE COMPLIANCE REPORT FOR DA LODGEMENT

**Lot 1, 1 Veno Street,
Heathcote NSW 2233**



Prepared for: DK Heathcote Pty Ltd
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Document History

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1.0. INTRODUCTION

1.1. Location and Description

This report is prepared in preparation of a Development Application (DA) lodgement and is for assessment purposes, it comprises a National Building Code of Australia 2022 (NBCA) assessment of the proposed residential flat building as required under Section 19 of the Environmental Planning and Assessment Regulations.

The development incorporates the demolition of existing structures and construction of a new seven (7) storey building comprising of sixty (60) residential apartments and associated car parking spaces located in the Basement and Ground Floor levels.



Figure 2 *Figure 1 Site location and topography*

1.2. Report Purpose

The purpose of this report is to provide an adaptable housing assessment as required by Condition 8.2 of Sutherland Shire Development Control Plan 2015, which requires 20% of dwellings to be adaptable within the subject development.

Furthermore, this report provides a liveable housing assessment as required by Condition 8.2 of Sutherland Shire Development Control Plan 2015, which requires 10% of dwellings in the development to be provided with Silver Level LHDG universal design elements.

This assessment will be undertaken to pre-empt the Certifying Authority's role under Section 19 of the Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021.



1.3. AS4299-1995 Adaptable Housing

As listed under AS4299-1995 Adaptable Housing the objectives for adaptable housing are as follows:

OBJECTIVES

1. That housing be designed and constructed or altered in a way which satisfies the performance requirements for adaptable housing enumerated in Clause below.
2. That housing is designed in such a way that later alterations to suit individual requirements will be achievable at minimal extra initial cost.
3. That housing be designed in such a way that it will easily adapt to suit the widest possible range of lifetime needs. This will include the needs of people with physical disabilities (including people who use wheelchairs, people with disabilities who are ambulant, and people with manipulatory disabilities); people with sensory disability (vision, hearing) and people with intellectual disability.
4. The initial design will allow for visibility through an accessible path of travel to the living room and toilet.

PERFORMANCE REQUIREMENTS

1. Adaptable housing units shall be designed and
2. constructed to meet the following requirements:
 - (a) **Visitability** To be visitable by people who use wheelchairs, in that there must be at least one wheelchair accessible entry and path of travel to the living area and to a toilet that is either accessible or visitable.
 - (b) **Avoidance of level changes** To have no steps and to avoid level changes where possible.
 - (c) **Manoeuvrability** This shall include the following:
 - i. To provide space sufficient to manoeuvre a wheelchair within a living area, the kitchen and an accessible path of travel linking these areas.
NOTE: Although not required for visibility, the kitchen is included as an initial spatial requirement for manoeuvrability, as there is significant expense involved in changing the kitchen layout at a later date.
 - ii. To provide space sufficient to manoeuvre a wheelchair within a bedroom, a bathroom and a toilet or to provide a design and details whereby after adaptation there will be sufficient space to manoeuvre a wheelchair within these facilities and an accessible path of travel linking these facilities to the entry, living and kitchen areas.
 - (d) **Ease of adaptation** If the design for adaptation requires further demolition of walls then these walls shall be non load-bearing and free of electrical and plumbing services.
 - (e) **Ease of reach** To provide electrical controls, taps, and some shelves and cupboards at levels to suit people who use wheelchairs.
 - (f) **Future laundry facilities** To provide laundry facilities that after adaptation will be accessible to people who use wheelchairs. Those laundry facilities may be external to the adaptable housing unit, providing a wheelchair accessible path of travel is available from the adaptable housing unit to the laundry facilities.

NOTES: There are no set design solutions, but a huge variety of ways of adapting a design to meet these criteria is possible. Designers are encouraged to use imaginative design within these broad parameters. An example of an adaptable house design is shown in Appendix C of the Standard.



1.4. Livable Housing Design Guidelines

STRUCTURE OF THE LHD GUIDELINES

Three levels of performance are detailed in the LHD Guidelines. These voluntary performance levels can be applied to all new dwellings.

It is noted that common areas for Class 1b, 2, and 3 buildings are covered by the Disability (Access to Premises - Buildings) Standards 2010 and the National Construction Code (NCC), Building Code of Australia (BCA) Volumes 1 and 2 which take precedence over the LHD Guidelines.

Note: LHA Design Guidelines apply to at least one toilet, bathroom. Where there is more than one bathroom or toilet in a dwelling, the LHA Guidelines should apply to the ground floor (entry) facilities. In the case LHA gold or platinum requirements for kitchens, laundry and bedroom then the design guidelines apply to at least one of these areas of a dwelling.

The performance levels are as follows:



Silver Level

Seven core livable housing design elements

Focuses on the key structural and spatial elements that are critical to ensure future flexibility and adaptability of the home.

Incorporating these features will avoid more costly home modification if required at a later date.



Gold Level

Enhanced requirements for most of the core livable housing design elements plus additional elements.

The gold level provides for more generous dimensions for most of the core livable housing design elements and introduces additional elements in areas such as the kitchen and bedroom.



Platinum Level

Some further enhanced requirements for the core livable housing design elements plus all remaining elements.

All 15 elements are featured in the platinum level. This level describes design elements that would better accommodate ageing in place and people with higher mobility needs. This level requires more generous dimensions for most of the core livable design elements and introduces additional elements for features such as the living room and flooring.



1.5. Basis of Report

This report is based upon and limited to:

- An assessment of design documentation referenced in Appendix A of this report;
- Australian Standard AS 4299-1995, Adaptable Housing, referred to as 'the Standard';
- The Deemed-to-Satisfy provisions of the National Building Code of Australia 2022 including the NSW variations where applicable.
- Livable Housing Design Guidelines, Fourth Edition, referred to as 'the Guidelines'.

1.6. Referenced Documents

The following documentation was relied upon when preparing this report:

- Assessment of design documentation referenced in Appendix A of this report.
- The performance and deemed-to-satisfy provisions of the National Building Code of Australia 2022 incorporating the NSW Appendices where applicable.
- Guide to the National Building Code of Australia.
- Australian Standard AS1428.1-2009, Design for Access and Mobility.
- Australian Standard AS1428.2-1992, Design for Access and Mobility.
- Disability (Access to Premises — Buildings) Standards 2010.
- Environmental Planning & Assessment Act 1979.
- Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021.
- The Apartment Design Guideline 2015.
- Sutherland Shire Development Control Plan 2015.

1.7. Limitations and Exclusions

The limitations and exclusions of this report are as follows:

- The plans are assessed indicatively to the extent necessary to proceed to construction certificate stage whereby assessment will be undertaken pursuant to Part 4A of the Environmental Planning and Assessment Act 1979. This means that the design has been assessed to be able to comply with the BCA (i.e. the submitted plans are consistent with the BCA but certain design details may not be specified at this stage due to the plans and specifications being at pre DA stage).
- This Report does not address issues in relation to the following:
 - a) The structural adequacy of the building including the Fire Resistance Levels (FRL's) of any building elements (unless specifically referred to).
 - b) The design, maintenance or operation electrical, mechanical, hydraulic or fire protection services.
 - c) Environmental Planning and Assessment Act and Regulations (unless specifically referred to).
 - d) Local Government Act and Regulations.
 - e) Occupational Health and Safety Act and Regulations.
 - f) WorkCover Authority requirements.



- g) Requirements of other Regulatory Authorities including, but not limited to, Telstra, Sydney Water, Electricity Supply Authority, RTA, Council and the like.
- h) Disability Discrimination Act (DDA) other than minimum requirements under the Disability (Access to Premises — Buildings) Standards 2010. DDA is a Case by Case Assessment, this building will comply with the set items under the Premises Standards.
- i) Construction Safety Act.
- j) Conditions of Development Consent issued by the relevant Local Council.
- This assessment does not incorporate the detailed requirements of the Australian Standards.
- Building Innovations Australia Pty Ltd cannot guarantee acceptance of this report by the Local Council, NSW Fire Brigades or other approval authorities.
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1.8. Legislative Framework

Section 4.15 (formally Section 79C) of the Environmental Planning and Assessment Act provides the matters of consideration that the consent authority must take into account in the determination of a development application.

Once development consent is granted, and pursuant to Section 19 of the Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021, a certifying authority must not issue a construction certificate for building work unless:

- (a) *the relevant building work plans and specifications include the matters required by a relevant BASIX certificate, if any, and*
- (b) *the design and construction of the building, as described in the relevant building work plans and specifications and in other information given to the certifier under section 12, is consistent with the development consent, and*
- (c) *the building will comply with the relevant requirements of the Building Code of Australia as in force at the time the application for the construction certificate was made.*

Compliance with the National Building Code of Australia

The BCA is a performance based document whereby compliance can be achieved by satisfying the deemed to satisfy requirements or by formulating an alternative solution to address the relevant performance requirements.

As indicated above, the requirements of the Environmental Planning and Assessment Regulations requires all new building works to comply with the relevant requirements of the BCA (as in force at the time the application for the construction certificate was made).

This means that the plans and documentation submitted with the *construction certificate* (CC) application must demonstrate full compliance with the relevant provisions of the Building Code of Australia.



Fulfilment of BASIX Commitments (Residential only)

Section 43 of the Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021 requires a certifying authority to monitor fulfilment of any commitments listed on the BASIX certificate, where the BASIX requires the certifying authority to monitor those commitments.

A certifying authority must not issue an occupation certificate (whether interim or final) for any building resulting from, or any building that becomes a BASIX affected building because of, BASIX affected development or BASIX optional development to which this clause applies, or for any part of such a building, unless each of the commitments whose fulfilment it is required to monitor in relation to the building or part has been fulfilled.

For the purpose of satisfying itself as to the fulfilment of any such commitment, a certifying authority may rely on the advice of any properly qualified person (i.e. Energy Efficiency Consultant).

Special Requirements for Residential Flat Developments

Section 15 (formally Cl. 143A) of the Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021 requires a qualified designer to provide a statement that verifies that the plans and specifications that form part of construction certificate application achieve or improve the design quality of the development having regard to the design quality principles set out in Part 2 of the State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development prior to the issue of a Construction Certificate.

Section 43 (formally Cl. 154A) of the Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021 requires a qualified designer to provide a statement that verifies that the residential flat development achieves the design quality of the development as shown in the plans and specifications having regard to the design quality principles set out in Part 2 of the State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development prior to the issue of an Occupation Certificate.

Disability (Access to Premises — Buildings) Standards 2010

Disability (Access to Premises — Buildings) Standards 2010 has been introduced and is applicable to this building. It is noted that unless Part D4, Clauses E3D7, E3D8, F4D5, F4D6 & F4D7 are included in the below assessment, an access consultant may need to be engaged to provide specific comments as to compliance with this standard. Note that except for slight variations, particularly for Class 1b buildings, available verification methods and adult change facilities, as this is a new building to BCA 2022, compliance with the Disability (Access to Premises — Buildings) Standards 2010 would inherently comply.



1.9. Terminology

- *Accessible* - complying with the floor space requirements described in AS 1428.1 and able to be approached, entered and used by people with a disability, including those who rely upon a wheelchair.
- *Accessible housing unit* - Housing unit with features already in place to facilitate use by a person with a disability or progressive frailty.
 - NOTE: Accessible housing would typically incorporate features such as grabrails and fittings adequate for people with limited mobility. Some of these features which enhance independent living are described in AS 1428.1 and AS 1428.2.
- *Adaptable housing unit* - housing unit which is designed and constructed to meet the performance requirements stated in Clause 2.2 and to include the essential features listed in Appendix A. An adaptable housing unit is designed in such a way that it can be modified easily in the future to become accessible to both occupants and visitors with disabilities or progressive frailties.
- *Building Code of Australia* - Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and is adopted in NSW under the provisions of the Environmental Planning & Assessment Act & Regulation.
- *Circulation space* - contains the net unobstructed area for a minimum height of 2000 mm above the finished floor or ground surface (unless otherwise specified in this Standard), which is that space surrounding built elements, landscape elements, and fixtures and fittings required for movement into and within buildings.
- *Fire Resistance Level (FRL)* - means the grading periods in minutes tested in accordance with AS 1530.4 for the following criteria -
 - (a) structural adequacy; and
 - (b) integrity; and
 - (c) insulation,and expressed in that order.
- *Fire Source Feature (FSF)* - the far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.
- *General Purpose Outlet (GPO)* - electrical socket for general use.
- *Housing unit* - a single residence or a part of a residence, containing living area and sleeping space, kitchen, toilet and bath or shower room. The term includes bed-sitter flats, detached and semi-detached houses, villa homes, townhouses and apartments in multi-storey blocks.
- *Open space* - means a space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.
- *Performance Requirements of the BCA* - A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance requirement states the level of performance that a Building Solution must achieve.

Compliance with the Performance Requirements can only be achieved by-

 - (a) complying with the Deemed-to-Satisfy Provisions; or
 - (b) formulating a Performance Solution which-
 - (i) complies with the Performance Requirements; or
 - (ii) is shown to be at least equivalent to the Deemed-to-Satisfy Provisions; or



(c) a combination of (a) and (b).

- *Ramp* - an inclined accessway with a gradient steeper than 1 in 20 but not steeper than 1 in 14.
- *Shall* - refers to an essential requirement.
- *Should* - refers to a desirable requirement.
- *Sole occupancy unit* - means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier.
- *The Act* – refers to NSW Environmental Planning and Assessment Act 1979.
- *The Regulation* – refers to NSW Environmental Planning and Assessment Regulation 2000.
- *The Standard* – refers to Australian Standard AS 4299-1995.
- *Threshold* - the sill of a doorway at the entrance to a house gradient not steeper than 1 in 8, located in, or instead of, a step other than a kerb.
- *Visitable housing unit* - housing unit which has at least one wheelchair accessible entry with an accessible path of travel to the living area and to a toilet that is either accessible or visitable.
- *Visitable toilet* - a toilet which has a space of minimum 1250 mm in front of the toilet 900 mm wide clear of door swings and fixtures.
- *Walkway* - any accessway with a gradient not steeper than 1



2.0. ADAPTABLE HOUSING ASSESSMENT

2.1. Planned Building Description

STOREYS IN BUILDING	7
RISE IN STOREYS (RIS)	6
EFFECTIVE HEIGHT (EH)	Greater than 12m, less than 25m
TYPE OF CONSTRUCTION	Type A
NUMBER OF UNITS	60
NO. OF ADAPTABLE UNITS	12 Class C Units
NO. DCP REQUIRED ADAPTABLE UNITS	12 Class C Units

2.2. Building Classifications (Clause A3.2)

The proposed building is assumed to be classified as follows.

BUILDING LEVELS	PLAN LEVELS	CLASSIFICATION	USE	RIS
Basement Level	Basement Building A	Class 7a	Carpark	-
Ground Floor	Ground Level Building A	Class 2 & 7a	Residential & Carpark	1
First to Fifth Floors	Level 1-5	Class 2	Residential	3-6
Roof	Roof Plan	-	-	-



2.3. Adaptable Housing Consent Authority Requirements

This development proposes **twelve (12) Class C adaptable units** as required by Condition 8.2 of Sutherland Shire Development Control Plan 2015, which requires 20% of dwellings to be adaptable within the subject development., as pictured in Figure 3 below:

8.2 Controls for Adaptable Housing

1. All new residential flat buildings must provide dwellings designed in accordance with the Australian *Adaptable Housing Standard (AS4299)* to Class C Certification at the following rates:
 - Development containing 3- 5 dwellings – none.
 - Developments of 6 or more dwellings – 20% adaptable.

Figure 3 Condition 8.2 of Sutherland Shire DCP 2015,

2.4. Adaptable Unit(s) Under Review

The following units have been designated as adaptable units, forming the basis of the review that follows:

- Unit AG04-D;
- Unit AG05-C;
- Unit A105-F;
- Unit A111-F;
- Unit A205-F;
- Unit A211-F;
- Unit A305-F;
- Unit A311-F;
- Unit A405-F;
- Unit A411-F;
- Unit A501-J; and
- Unit A502-J.

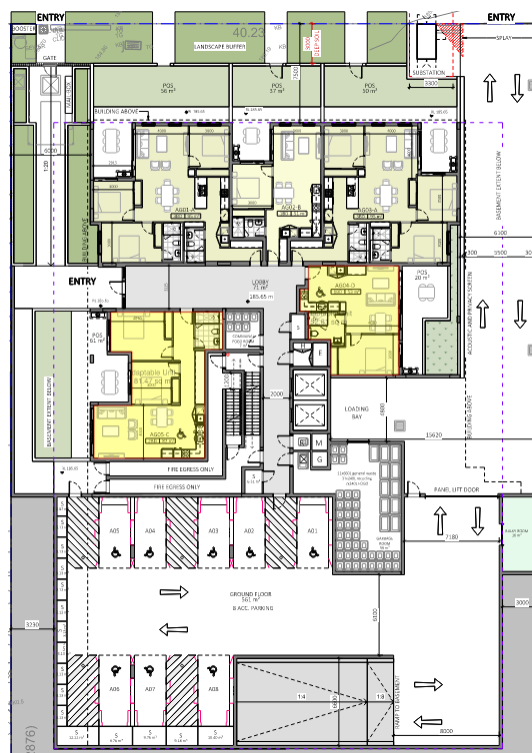


Figure 4 Ground Floor Adaptable Units Location on Architectural Plans

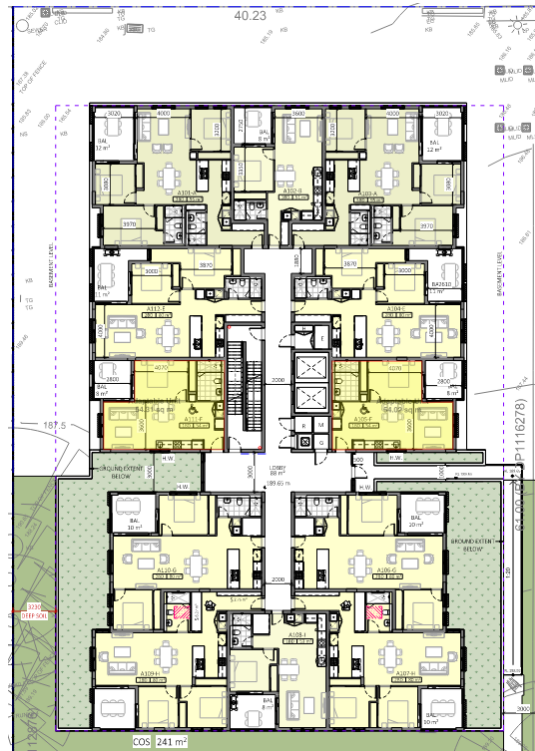


Figure 5 *First to Fourth Floor Adaptable Units Location on Architectural Plans*

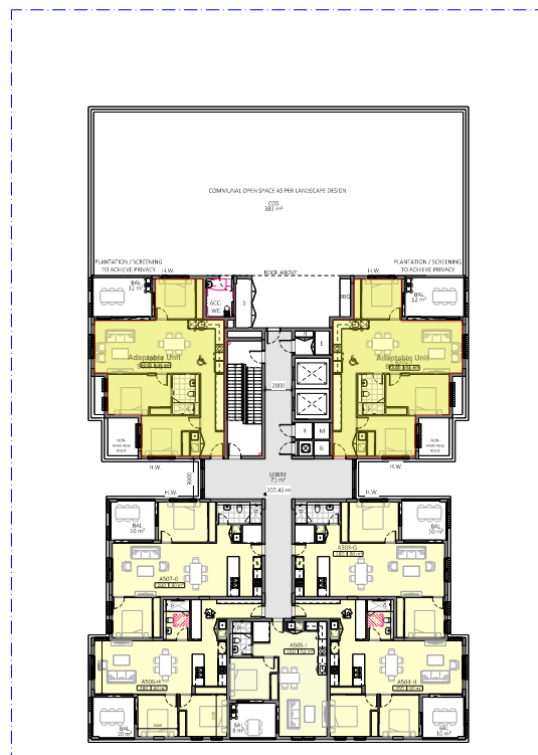


Figure 6 *Fifth Floor Adaptable Units Location on Architectural Plans*



3.0. ADAPTABLE HOUSING REQUIREMENTS

Noting that the level of documentation at this stage is for a Development Application (DA) assessment purposes, an indicative compliance assessment of the referenced documents identified in Appendix A of this report has been undertaken against AS 4299-1995.


Outlined below is a summary of the essential items required in a Class C Adaptable House. All essential items and relevant clauses to the subject building have been referred to below, including a comment to each item of the proposal's ability to satisfy the requirements of the item and/or the Objectives/Performance Requirements of the Standard.

The abbreviations outlined below have been used in the following tables:


N/A	The item does not apply to the subject Building.
Complies	The relevant clauses of the Standard appear to have been demonstrated by the proposed design and/or evidence during onsite inspection.
CRA	'Compliance Readily Achievable'. Subject to noting the requirements of each item, it is considered item compliance can be readily demonstrated without significant implication to the approved design or has been constructed to comply with approved design. When a DCP Clause and/or DA Condition requires compliance with Appendix A of the Standard and a development has been constructed to an approved design which has not strictly complied with these requirements, a recommendation is provided which appears to comply with the Objectives and Performance Requirements defined in Clause 2.2 of the Standard.
FI	Further information is necessary to determine the compliance potential of the building design and/or element.
PS	Performance (Alternative) Solution with respect to the subject item of Appendix A is potentially possible to satisfy the relevant BCA Performance Requirements when NCC or Access-to-Premises Standards compliance is required. When a DCP Clause and/or DA Condition requires compliance with Appendix A of the Standard, a detailed assessment is required to determine compliance with the Objectives and Performance Requirements of the Standard.
DNC	'Does Not Comply' with either the item and/or the relevant Standard performance requirement(s), and no clear path to compliance is evident.



SECTION 2: OBJECTIVES AND PERFORMANCE REQUIREMENTS

Drawings			
Item	Status	Item Description	References
1	CRA	<p>Provisions of the drawings showing the housing unit in its pre-adaptation and post-adaptation stages.</p> <p><i>To obtain certification as an adaptable housing unit, 'as built' drawings showing the housing unit in its pre-adaptation and post-adaptation stages shall be provided. A description of how the adaptation is to be achieved shall also be provided.</i></p> <p>Pre-adaptation stage layout has been provided for the designated units in architectural plans as illustrated below:</p> 	Clause 2.3 - Potential for Adaptation



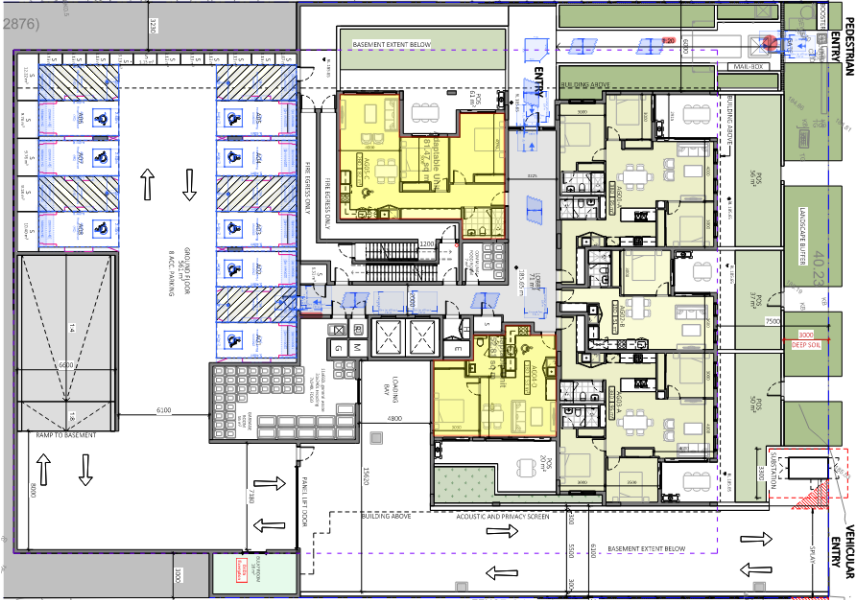
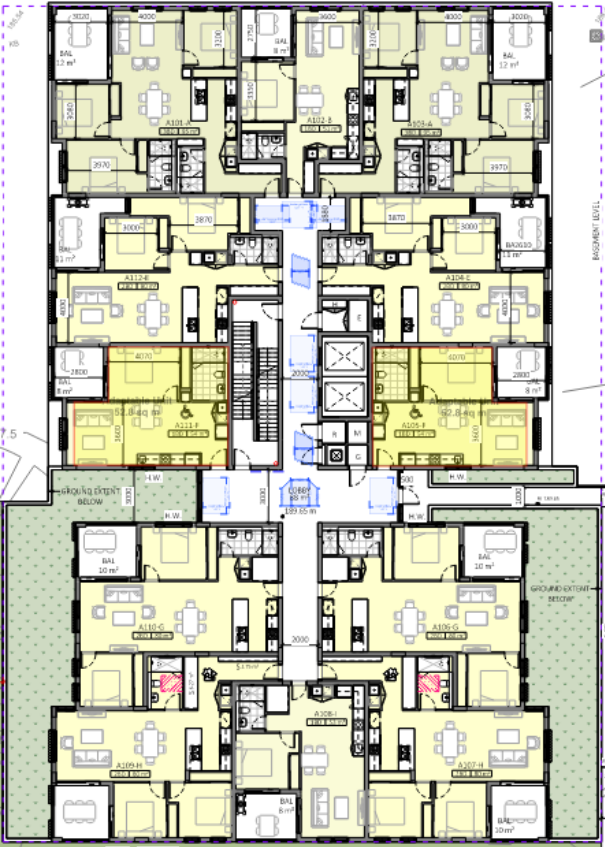
Drawings			
Item	Status	Item Description	References
		<p>Post-adaptation stage layout has been provided for the designated units in architectural plans as illustrated below:</p>  <p>Both pre and post adaptation plans have been provided to satisfy this item.</p>	



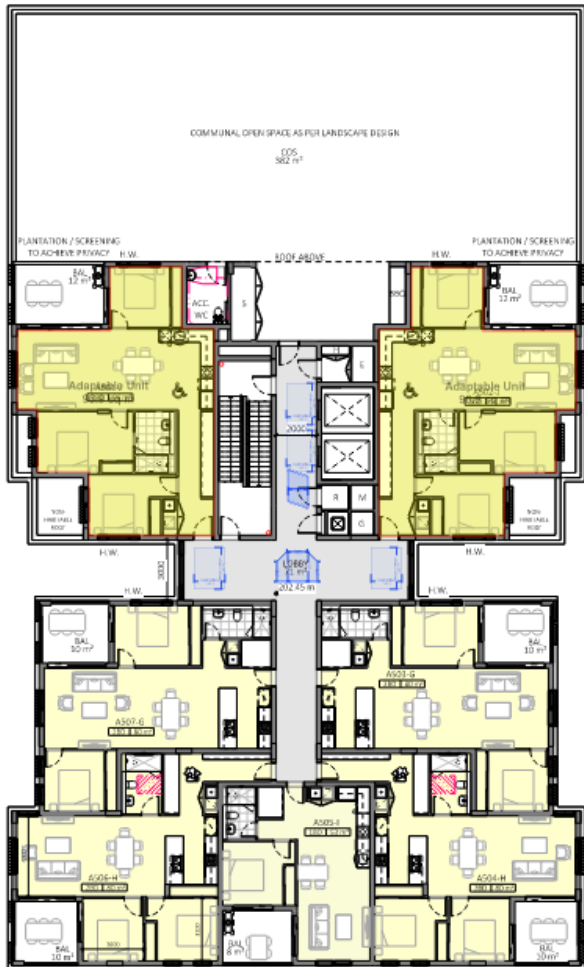
SECTION 3: SITING

Siting			
Item	Status	Item Description	References
3	CRA	<p>A continuous path of travel from the street frontage and vehicle parking to entry complying with AS1428.1</p> <p><i>An accessible path of travel from the street frontage carparking area or drop-off point shall be provided to all adaptable housing units. As a minimum, this accessible path shall comply with AS 1428.1 and shall be continuous, slip-resistant, hard-surfaced and shall not incorporate any step, stairway or other impediment which would prevent it from being safely negotiated by people with disabilities. It is advisable for walkways to be provided with passing areas, as specified in AS 1428.2.</i></p> <p>A continuous path of travel from the vehicle parking and street frontage to entry complying with AS 1428.1 does not appear to be provided through the provision of a Clause E3D7 & E3D8 compliant lift, as illustrated below:</p> <p style="text-align: center;">Basement Carpark Accessible Path of Travel</p>	<p>Clause 3.3.2 - Accessible Pathway</p>



Siting		
Item Status	Item Description	References
	 <p>Ground Floor Access from Street Frontage</p>  <p>First to Fourth Floor Accessible Path of Travel</p>	



Siting			
Item	Status	Item Description	References
		 <p>Fifth Floor Accessible Path of Travel</p> <p>Recommendation: Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.</p>	



Letterboxes			
Item	Status	Item Description	References
11	CRA	<p>Letterboxes to be on hard standing area connected to accessible pathway</p> <p><i>Where letterboxes are centrally located in residential estate developments they should be adjacent to the street entry. Letterboxes and parcel racks should be lockable. The letterbox area should allow for a future roof to be constructed and be in a well-lit location. External letterboxes shall be located on a hard-standing area connected to an accessible pathway to the adaptable housing unit.</i></p> <p>External letterbox does not to be provided in an area connected to an accessible pathway as required, and is provided with sufficient turning space as illustrated below:</p> <div style="text-align: center;"> <p>The diagram is a site plan titled 'PEDESTRIAN ENTRY'. It shows a central area with a 'GATE' and a 'MAIL-BOX'. To the left is a 'SEWER BOOSTER' and to the right is a 'MAIL-BOX'. A 'Dead-end Zone' of 1.54m is indicated in red. Other labels include 'CLID', 'IG', and 'BI'. A blue arrow indicates a turning path in front of the mailbox.</p> </div> <p>Action: Designer to confirm gradient of main entry area as the main entry gateway and turning space in front of the mailbox may be located on a gradient greater than 1 in 40. Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.</p>	<p>Clause 3.8 - Letterboxes</p>



Private Car Accommodation			
Item	Status	Item Description	References
14	CRA	<p>Car parking space or garage min. area 6.0m x 3.8m</p> <p><i>Garages and carports shall have minimum internal dimensions of 6.0 m ´ 3.8 m. A 2.5 m internal vertical clearance is desirable. A garage may be reduced if a hard surfaced level outside space of minimum dimensions 5.4 m ´ 3.8 m is provided as a sheltered carpark, or can be provided in the future. Provision for a power- operated roller door is desirable. For Residential estate developments, one car parking space per adaptable unit shall have minimum dimensions specified in Clause 3.7.2 and should otherwise comply with the requirements of AS 2890.1 for parking for people with disabilities.</i></p> <p>Twelve (12) AS2890.6-2009 compliant 5.5m x 3.2m accessible car spaces appear to be provided as required, with one assigned to an adaptable unit as pictured below:</p> <p style="text-align: center;">Basement Floor Accessible Parking</p> <p style="text-align: center;">Ground Floor Accessible Parking</p>	<p>Clause 3.7.2 - Garages and Carports</p>



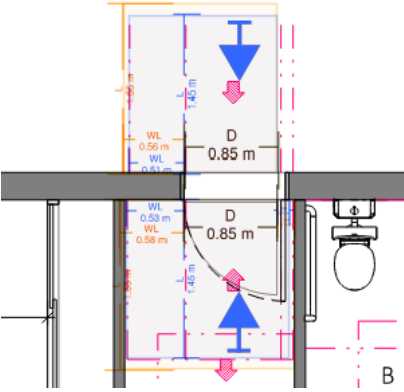
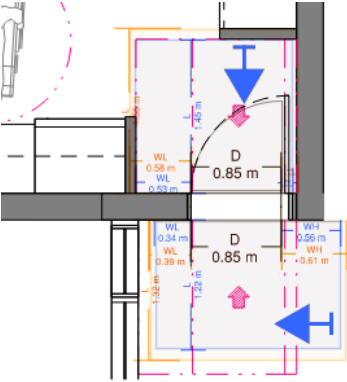
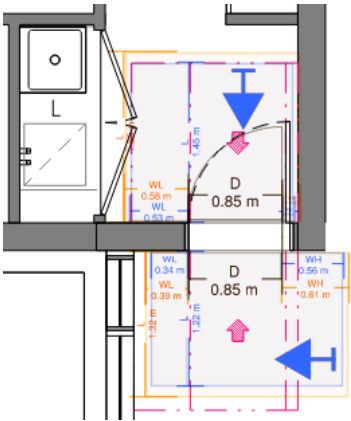
SECTION 4: DESIGN OF THE HOUSING UNIT

Accessible Entry			
Item	Status	Item Description	References
20	CRA	<p>Accessible Entry</p> <p><i>At least one accessible entry door complying with AS 1428.2 shall be provided.</i></p> <ol style="list-style-type: none"> 1. <i>Entry doors should preferably have a porch or some other form of protection from the weather (see AS 1428.2).</i> 2. <i>Consideration should be given to features like a shelf on which to rest parcels while opening the door.</i> <p>Covered accessible entry SOU doorways provided with circulation spaces at doorway appearing to comply with AS1428.1-2009 as a minimum, with the additional dimensions requested by AS1428.2-1992 provided where possible.</p> <p>In relation to the entrance doorways of the subject units, Clause 3.7.8 of Standards Australia's "Standardisation Guide 003: Standards and other publications" (2016) clarifies references to other standards can be dated or undated. Undated references can only be made if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document, or for informative references. Furthermore, the applicability of subsequent editions or amendments of referenced Standards is a matter of determination by the users of the Standard, employing their professional judgement.</p> <p>This item of the essential features in Appendix A of the Adaptable Housing standard AS4299-1995 implies compliance with AS1428.2. This is an undated referenced standard, as is AS1428.1 for which AS1428.2 internally references.</p> <p>At the time of release of AS4299, the following versions were in force:</p> <ul style="list-style-type: none"> • AS 1428.1 Design for access and mobility Part 1: General requirements for access - Buildings – 1993 (<i>superseded in 2009</i>); • AS 1428.2 Design for access and mobility Part 2: Enhanced and additional requirements – Buildings and facilities – 1992 (<i>reviewed in 2015</i>); • AS 1680.1 Interior lighting Part 1: General principles and recommendations – 1990 Amdt 1 1993 (<i>superseded in 2006</i>); • AS 2890.1 Parking Facilities Part 1: Off-street car parking – 1993 (<i>superseded in 2004</i>); • AS 3727 Guide to residential pavements – 1993 (<i>current</i>); • AS 3740 Waterproofing for wet areas within residential buildings – 1994 (<i>superseded in 2010</i>); • AS 3661.1 Slip resistance of pedestrian surfaces Part 1: Requirements 1993 (<i>superseded by AS 4586 in 2013</i>); and • HB 46 Guide to residential fire safety – 1993 (<i>superseded in 2010</i>). <p>As identified above, the version of AS 1428.1 in force at the time of the release of the current AS4299 standard was the 1993 edition.</p>	<p>Clause 4.3.1 - Accessible Entrance</p>

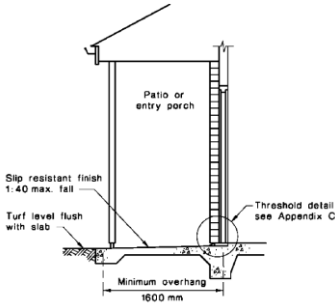


Accessible Entry			
Item	Status	Item Description	References
		<p>As the requirement for the subject accessible entries to comply with AS 1428.2 is set by AS4299 and not by the Building Code of Australia (BCA) 2016, compliance with the requirements of the 1993 edition can be considered as sufficient.</p> <p>Below is a direct comparison of frontal-approach, swing-towards door circulation of 2001-edition dimension and 2009-edition dimensions, illustrating AS1428.1-2009 provides the same length as AS1428.2 based on 2001-edition, with greater latch-side circulation space, which is more important for independent access than hinge-side circulation space:</p> <p>Although compliance with AS1428.1-1992 & AS1428.1-1993 is the minimum requirement for compliance with AS4299-1995, based on the above, this office considers compliance with AS1428.1-2009 required, and AS1428.2-1992 dimensions added to AS1428.1-2009 as highly desirable.</p> <p>The subject SOU entry doorways appear to comply with AS1428.1-2009 (blue) and AS1428.2-1992 (orange) at post adaptation, as illustrated below:</p> <p>Unit AG04:</p>	



Accessible Entry			
Item	Status	Item Description	References
		<p>Unit AG05:</p>  <p>Units A105, A111, A205, A211, A305, A311, A405&* A411:</p>  <p>Units A501 & A502.</p> 	




Accessible Entry			
Item	Status	Item Description	References
22	CRA	<p>Accessible Entry to be level (i.e 1:40 slope)</p> <p>Where the accessible entry door is exposed to the weather, it shall be provided with a landing outside the door with a maximum fall of 1:40 and a low threshold at the entry door to exclude water. The threshold shall allow for the smooth transition of a wheelchair (see Figure 4.1). The landing shall be of sufficient area to enable wheelchair manoeuvrability.</p>  <p>FIGURE 4.1 ENTRY LANDING</p> <p>RLs on plans indicate level accessible entry SOU doorways.</p>	Clause 4.3.2 - Landing
23	CRA	<p>Threshold to be low level</p> <p>Where the accessible entry door is exposed to the weather, it shall be provided with a landing outside the door with a maximum fall of 1:40 and a low threshold at the entry door to exclude water. The threshold shall allow for the smooth transition of a wheelchair (see Figure 4.1). The landing shall be of sufficient area to enable wheelchair manoeuvrability.</p> <p>Covered, level accessible entry SOU doorways with low or no threshold ramp within each unit entry doorway threshold as illustrated in Item 20.</p>	Clause 4.3.2 - Landing
24	CRA	<p>Landing to enable wheelchair manoeuvrability</p> <p>Where the accessible entry door is exposed to the weather, it shall be provided with a landing outside the door with a maximum fall of 1:40 and a low threshold at the entry door to exclude water. The threshold shall allow for the smooth transition of a wheelchair (see Figure 4.1). The landing shall be of sufficient area to enable wheelchair manoeuvrability.</p> <p>Covered, level accessible entry SOU doorways with sufficient space for a 180 degree turn as defined by AS1428.1-2009 at each landing of the subject unit entries as illustrated in Item 20.</p>	Clause 4.3.2 - Landing
25	CRA	<p>Accessible entry door to have min 850mm clearance</p> <p>At least one accessible entry door complying with AS 1428.2 shall be provided. 1. Entry doors should preferably have a porch or some other form of protection from the weather (see AS 1428.2). 2. Consideration should be given to features like a shelf on which to rest parcels while opening the door.</p> <p>850mm unobstructed width for the SOU entry doorway appears to be provided for the subject unit, as illustrated in Item 20.</p>	Clause 4.3.1 - Accessible Entrance

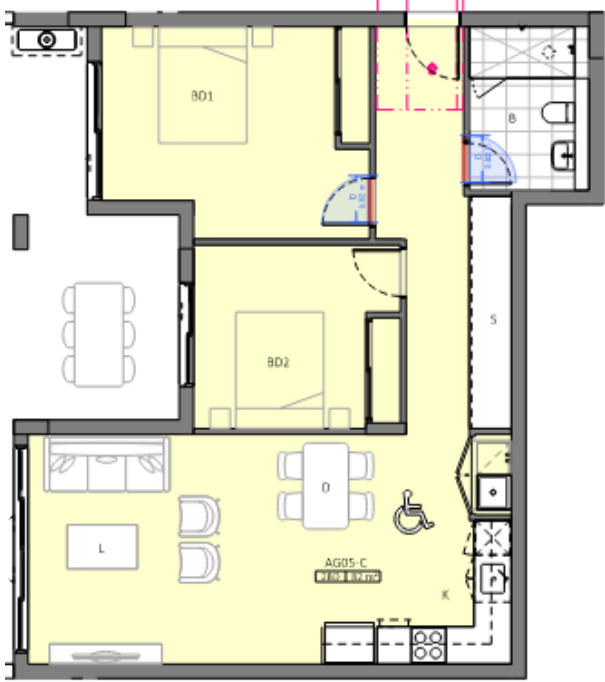
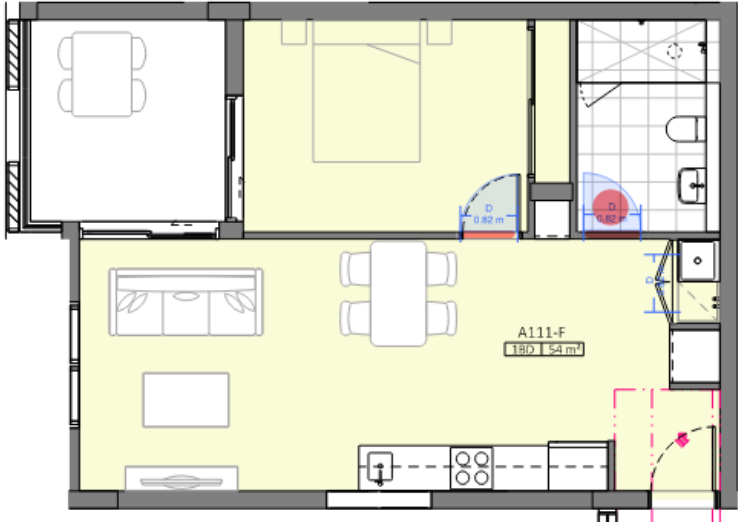


Accessible Entry			
Item	Status	Item Description	References
27	CRA	<p>Door lever handles and hardware to AS 1428.1</p> <p>FIGURE 35(A) EXAMPLE OF ACCEPTABLE DOOR HARDWARE FOR HINGED DOORS</p> <p>FIGURE 35(B) EXAMPLE OF ACCEPTABLE DOOR HARDWARE FOR SLIDING DOORS</p> <p>The door handle and related hardware shall be of the type that allows the door to be unlocked and opened with one hand. Door lever handles and hardware shall be not less than 900 mm nor more than 1100 mm above the plane of the finished floor and shall be in accordance with AS 1428.1. All lockable external doors in the housing unit should be keyed alike, including any garage doors, storeroom door and the like.</p> <p>Note on plans indicate that door level handles and hardware are to comply with this item.</p>	<p>Clause 4.3.4 - Door Handles and Hardware</p>

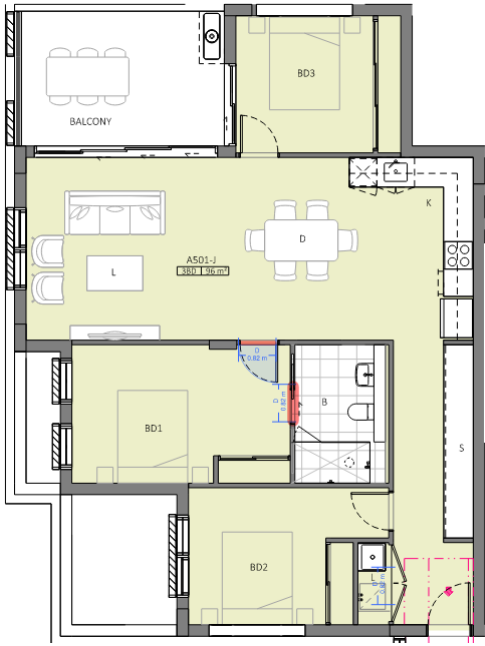



Interior: General			
Item	Status	Item Description	References
32	CRA	<p>Internal doors to have min 820mm clearance</p> <p><i>Doors throughout shall have a minimum clear opening of 820 mm, except where otherwise described. 1 A hinged door leaf of 870 mm width will satisfy this requirement and will accommodate over 80% of people who use wheelchairs. 2 Consideration may be given to using a door leaf of 920 mm width.</i></p> <p>All internal doors to main bedroom, visitable bathroom and shared space are required to be provided with minimum 820mm clearance in post-adaptation as illustrated in the figure below. As such numerous doorways throughout all tenancies require review:</p> <p>Unit AG04:</p> 	Clause 4.3.3 - Doors



Interior: General			
Item	Status	Item Description	References
		<p>Unit AG05:</p>  <p>Units A105, A111, A205, A211, A305, A311, A405 & A411:</p> 	



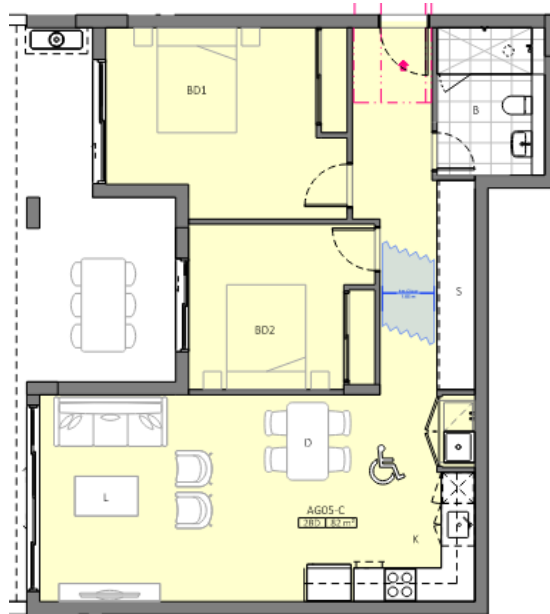
Interior: General			
Item	Status	Item Description	References
		<p>Units A501 & A502.</p>  <p>Recommendation: Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.</p>	
33	CRA	<p>Internal Corridors to have min 1000mm width</p> <p><i>Internal corridors shall have a minimum width of 1000 mm. After adaptation, circulation spaces at doorways shall comply with AS 1428.1.</i></p> <p>Internal corridors of the subject units appear to comply with the required minimum 1000mm width throughout, as illustrated below:</p> <p>Unit AG04:</p> 	<p>Clause 4.3.7 - Internal Corridors</p>



Interior: General

Item	Status	Item Description	References
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Unit AG05:



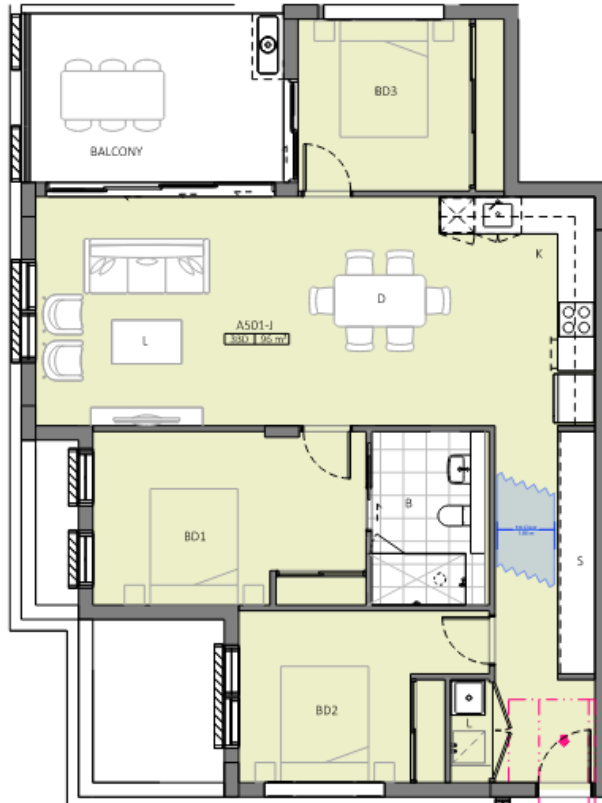
Units A105, A111, A205, A211, A305, A311, A405&* A411:





Interior: General

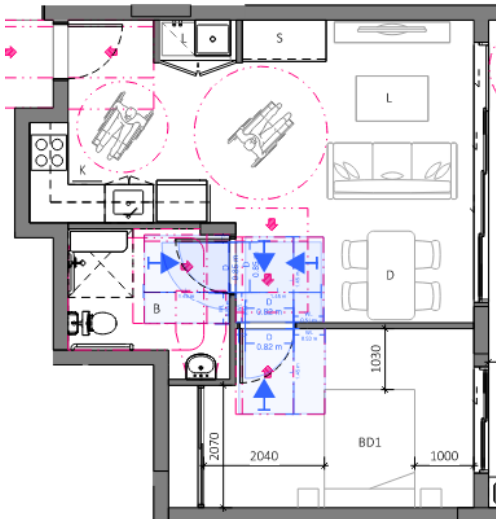
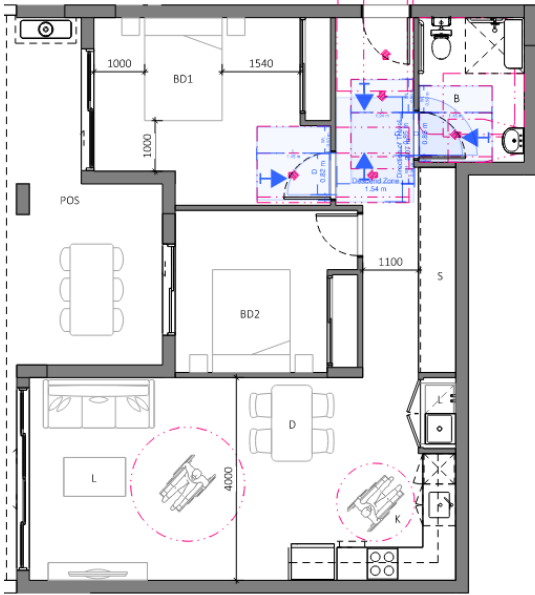
Item	Status	Item Description	References
		Units A501 & A502.	



34	Complies	<p>Provision for compliance with AS 1428.1 for door approaches</p> <p>AS 1428.1-2009 58</p> <table border="1"> <thead> <tr> <th>Dimension D</th> <th>Dimension L</th> <th>Dimension WH</th> <th>Dimension WL</th> </tr> </thead> <tbody> <tr> <td>850</td> <td>1220</td> <td>560</td> <td>340</td> </tr> <tr> <td>900</td> <td>1185</td> <td>510</td> <td>340</td> </tr> <tr> <td>950</td> <td>1150</td> <td>460</td> <td>340</td> </tr> <tr> <td>1000</td> <td>1115</td> <td>410</td> <td>340</td> </tr> </tbody> </table> <p>(a) Hinge-side approach, door opens away from user</p> <table border="1"> <thead> <tr> <th>Dimension D</th> <th>Dimension L</th> <th>Dimension WH</th> <th>Dimension WL</th> </tr> </thead> <tbody> <tr> <td>850</td> <td>1240</td> <td>240</td> <td>660</td> </tr> <tr> <td>900</td> <td>1210</td> <td>190</td> <td>660</td> </tr> <tr> <td>950</td> <td>1175</td> <td>140</td> <td>660</td> </tr> <tr> <td>1000</td> <td>1145</td> <td>90</td> <td>660</td> </tr> </tbody> </table> <p>(b) Latch-side approach, door opens away from user</p> <p>AS 1428.1-2009 59</p> <table border="1"> <thead> <tr> <th>Dimension D</th> <th>Dimension L</th> <th>Dimension WH</th> <th>Dimension WL</th> </tr> </thead> <tbody> <tr> <td>850</td> <td>1670</td> <td>680</td> <td>900</td> </tr> <tr> <td>900</td> <td>1670</td> <td>610</td> <td>900</td> </tr> <tr> <td>950</td> <td>1670</td> <td>560</td> <td>900</td> </tr> <tr> <td>1000</td> <td>1670</td> <td>510</td> <td>900</td> </tr> </tbody> </table> <p>(c) Hinge-side approach, door opens towards user</p> <table border="1"> <thead> <tr> <th>Dimension D</th> <th>Dimension L</th> <th>Dimension WH</th> <th>Dimension WL</th> </tr> </thead> <tbody> <tr> <td>850</td> <td>1670</td> <td>110</td> <td>900</td> </tr> <tr> <td>900</td> <td>1670</td> <td>110</td> <td>900</td> </tr> <tr> <td>950</td> <td>1670</td> <td>110</td> <td>900</td> </tr> <tr> <td>1000</td> <td>1670</td> <td>110</td> <td>900</td> </tr> </tbody> </table> <p>(d) Latch-side approach, door opens towards user</p> <table border="1"> <thead> <tr> <th>Dimension D</th> <th>Dimension L</th> <th>Dimension WH</th> <th>Dimension WL</th> </tr> </thead> <tbody> <tr> <td>850</td> <td>1240</td> <td>560</td> <td>310</td> </tr> <tr> <td>900</td> <td>1210</td> <td>510</td> <td>310</td> </tr> <tr> <td>950</td> <td>1175</td> <td>460</td> <td>310</td> </tr> <tr> <td>1000</td> <td>1145</td> <td>410</td> <td>310</td> </tr> </tbody> </table> <p>(e) Either side approach, door opens away from user</p> <table border="1"> <thead> <tr> <th>Dimension D</th> <th>Dimension L</th> <th>Dimension WH</th> <th>Dimension WL</th> </tr> </thead> <tbody> <tr> <td>850</td> <td>1450</td> <td>110</td> <td>530</td> </tr> <tr> <td>900</td> <td>1450</td> <td>110</td> <td>530</td> </tr> <tr> <td>950</td> <td>1450</td> <td>110</td> <td>530</td> </tr> <tr> <td>1000</td> <td>1450</td> <td>110</td> <td>530</td> </tr> </tbody> </table> <p>(f) Front approach, door opens towards user</p> <p>LEGEND: D = Clear opening of width of doorway L = Length WH = Width—Hinge side WL = Width—Latch side → = Direction of approach ↔ = Direction of approach --- = Circulation space</p> <p>DIMENSIONS IN MILLIMETRES</p> <p>FIGURE 31 (in part) CIRCULATION SPACES AT DOORWAYS WITH SWINGING DOORS</p>	Dimension D	Dimension L	Dimension WH	Dimension WL	850	1220	560	340	900	1185	510	340	950	1150	460	340	1000	1115	410	340	Dimension D	Dimension L	Dimension WH	Dimension WL	850	1240	240	660	900	1210	190	660	950	1175	140	660	1000	1145	90	660	Dimension D	Dimension L	Dimension WH	Dimension WL	850	1670	680	900	900	1670	610	900	950	1670	560	900	1000	1670	510	900	Dimension D	Dimension L	Dimension WH	Dimension WL	850	1670	110	900	900	1670	110	900	950	1670	110	900	1000	1670	110	900	Dimension D	Dimension L	Dimension WH	Dimension WL	850	1240	560	310	900	1210	510	310	950	1175	460	310	1000	1145	410	310	Dimension D	Dimension L	Dimension WH	Dimension WL	850	1450	110	530	900	1450	110	530	950	1450	110	530	1000	1450	110	530	Clause 4.3.7 - Internal Corridors
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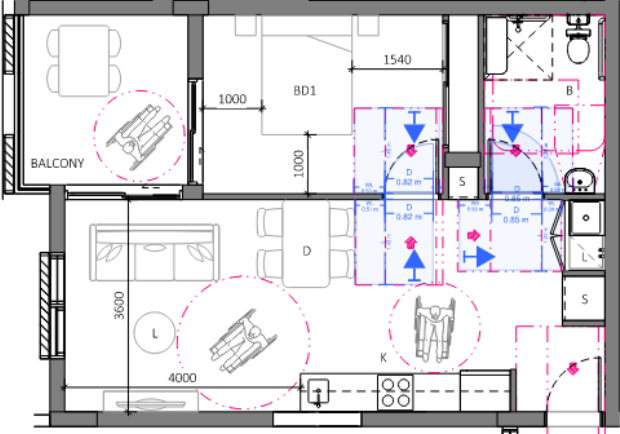
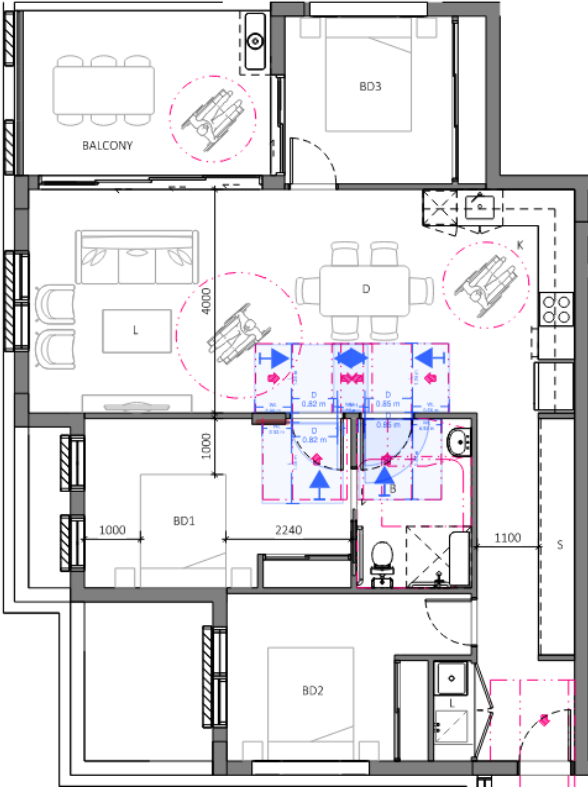


Interior: General


Item	Status	Item Description	References
		<p data-bbox="288 414 1257 481"><i>Internal corridors shall have a minimum width of 1000 mm. After adaptation, circulation spaces at doorways shall comply with AS 1428.1.</i></p> <p data-bbox="288 537 1257 660">Provision for doorway approach circulation spaces for the main toilet and common facilities to comply with AS 1428.1-2009 with minimum 820mm clear door width as allowed by Item 32 for the subject units appear to be provided at post-adaptation as illustrated below:</p> <p data-bbox="288 716 430 750">Unit AG04:</p>  <p data-bbox="288 1355 430 1388">Unit AG05:</p> 	



Interior: General

Item	Status	Item Description	References
		<p>Units A105, A111, A205, A211, A305, A311, A405&* A411:</p>  <p>Units A501 & A502.</p>  <p>Recommendation: The column within Units A501 & A502 bedroom may potentially obstruct the latch-side circulation space depending on the door frame and latch location. Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.</p>	



Living Room & Dining Room			
Item	Status	Item Description	References
36	CRA	<p>Provision for circulation space of min. 2250mm diameter</p> <p>Provision shall be made for circulation space to enable a 360° wheelchair turn after the furniture has been placed.</p> <p>Circulation space within the living and dining room areas appear to allow a 360-degree wheelchair turn after furniture has been placed in the subject areas. An example is provided below:</p>  <p>Note: Only one 360-degree wheelchair circulation space within the living and dining room is required according to Clause 4.7.1 of AS4299-1995s</p>	Clause 4.7.1 - Circulation Space
38	CRA	<p>Telephone adjacent to GPO</p> <p>A telephone outlet shall be provided in the living-dining area. This should be adjacent to a GPO.</p> <p>Note on plans indicate that the telephone is to be adjacent to GPO.</p>	Clause 4.7.4 - Telephone
41	Complies	<p>Potential illumination level min 300 lux</p> <p>An even degree of light particularly along paths of travel shall be available throughout the building (i.e. more than one single light bulb may be required in each room). Provide a level of maintenance illuminance to comply with AS 1680.1.</p> <p>NOTE: A level of illumination of 150 lux would be suitable in most instances. This level allows for lip reading by people with impaired hearing. (See AS 1428.2).</p> <p>The lighting and power reticulation shall be such that recommended lux levels for people with visual impairment may be achieved without rewiring. Provision shall be made for the recommended illumination levels for different rooms for people with visual impairment are shown in Table 4.1.</p>	Clause 4.10 - Lighting



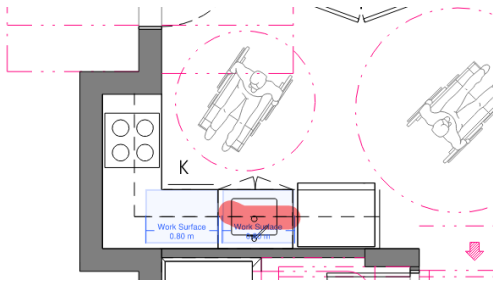
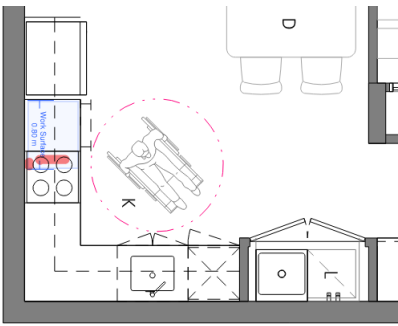
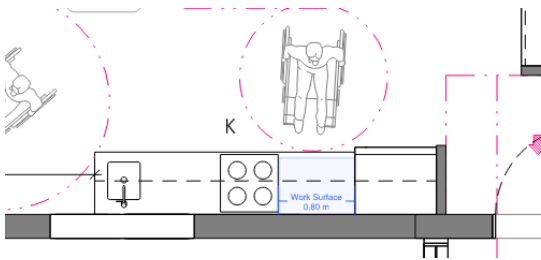
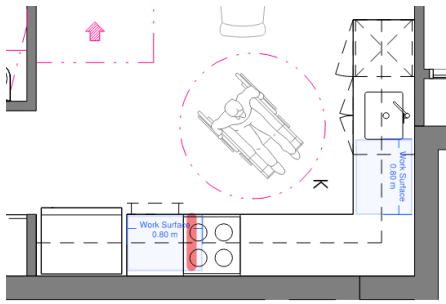
Living Room & Dining Room			
Item	Status	Item Description	References
		<p>Where illumination levels in a given area need to be varied from time to time, a dimmer switch should be installed. Lighting should be designed for non-glare, with an easy-to-change or long-life light source. Wherever possible, natural lighting should be provided in laundries and hallways.</p> <p>Note on plans indicate that potential illumination level shall be min 300 lux.</p>	

Kitchen			
Item	Status	Item Description	References
42	CRA	<p>Minimum width of 2.7m (1550mm between benches)</p> <p>Minimum clearances in front of appliances and between opposing base cabinets shall be provided at the outset. A minimum clear floor space of 1500 mm x 820 mm that allows either a forward or parallel approach by a person in a wheelchair shall be provided at the sink and all appliances in the kitchen. In addition, a minimum clearance of 1550 mm shall be maintained between all opposing base cabinets, appliances and walls to allow for a 180° turn by a person in a wheelchair. For further guidance see AS 1428.2.</p> <p>NOTE: A 2.7 m width between walls will enable 1550 mm clearance between cupboards to both walls.</p> <p>Circulation spaces identified in post-adaptation plans appear to comply with the minimum clearance requirements of this item, as illustrated below:</p>	<p>Clause 4.5.2 - Circulation Prior to Adaptation</p>



Kitchen			
Item	Status	Item Description	References
43	CRA	<p>Provision for circulation at doors to comply with AS 1428.1</p> <p><i>The potential configuration of the kitchen area after adaptation shall be demonstrated prior to certification. The final configuration of the kitchen after adaptation shall be shown to comply with Clause 4.5.3.</i></p> <p>No kitchen doors are provided, therefore provisions for door circulation space and dead-end circulation spaces comply with AS 1428.1 within the kitchen area.</p>	Clause 4.5.1 - General
44	CRA	<p>Provision for benches planned to include at least one work surface of 800mm length, adjustable in height from 750mm to 850mm or replaceable (Figure 4.8 from AS 4299-1995)</p> <p>(a) Before removal of cabinets</p> <p>(b) After removal of cabinets</p> <p>(c) Clear floor space under work surface</p> <p>DIMENSIONS IN MILLIMETRES FIGURE 4.8 WORK SURFACES</p> <p>At least one section of the work surface, not less than 800 mm in length, should comply with the following:</p> <p>(a) The work surface should be adjustable or replaceable as a unit at variable heights within the range 750 mm to 850 mm above the finished floor surface. (See Figure 4.8(b).)</p> <p>(b) Base cabinets, if provided, should be removable over the full 800 mm length of the work surface. The finished floor shall extend under the work surface to the wall.</p> <p>(c) The required clear floor space of 1500 mm x 820 mm should allow a forward approach to the work surface. No more than 500 mm of this clear floor space should extend beneath the work surface. (See Figure 4.8(c).)</p> <p>As illustrated below, the subject units require provision for not less than one worksurface:</p>	Clause 4.5.5 - Work Surfaces



Kitchen			
Item	Status	Item Description	References
		<p>Unit AG04:</p>  <p>Unit AG05:</p>  <p>Units A105, A111, A205, A211, A305, A311, A405&* A411:</p>  <p>Units A501 & A502.</p> 	
		<p>Action: Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate. Recommend position fridge 800mm from cooktop/oven combo to provide all 4 items in one workspace location.</p>	



Kitchen			
Item	Status	Item Description	References
45	CRA	<p>Refrigerator adjacent to work surface</p> <p><i>At least one section of the work surface, not less than 800 mm in length, should comply with the following:</i></p> <p>(a) <i>The work surface should be adjustable or replaceable as a unit at variable heights within the range 750 mm to 850 mm above the finished floor surface. (See Figure 4.8(b).)</i></p> <p>(b) <i>Base cabinets, if provided, should be removable over the full 800 mm length of the work surface. The finished floor shall extend under the work surface to the wall.</i></p> <p>(c) <i>The required clear floor space of 1500 mm x 820 mm should allow a forward approach to the work surface. No more than 500 mm of this clear floor space should extend beneath the work surface. (See Figure 4.8(c).)</i></p> <p>The subject units require provision for a designated 800mm work surface adjacent the refrigerator; as indicated in Item 44. Refer to Item 44 for further details.</p> <p>Action: Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.</p>	Clause 4.5.5 - Work Surfaces
46	CRA	<p>Kitchen sink adjustable heights from 750 to 850mm or replaceable</p> <p><i>The sink and an adjacent work surface which shall be a minimum of 800 mm in length, and may be the work surface referred to under Clause 4.5.5, shall comply with (a) to (f)</i></p> <p>Note to be added prior to issue of the Construction Certificate</p>	Clause 4.5.6 - Sinks
47	CRA	<p>Kitchen sink bowl max. 150mm deep</p> <p><i>The sink and an adjacent work surface which shall be a minimum of 800 mm in length, and may be the work surface referred to under Clause 4.5.5, shall comply with (a) to (f)</i></p> <p>Note to be added prior to issue of the Construction Certificate</p>	Clause 4.5.6 - Sinks
48	CRA	<p>Tapset capstan or level handles or level mixer</p> <p><i>Taps shall comply with AS 1428.1 (see also AS 1428.2). See Figure 4.4 of this Standard. Taps or their operating handles shall be within 300 mm of the front of the sink to allow for ease of operation.</i></p> <p>Note to be added prior to issue of the Construction Certificate</p>	Clause 4.5.6(e) - Taps
49	CRA	<p>Tapset located within 300mm of front of sink</p> <p><i>Taps shall comply with AS 1428.1 (see also AS 1428.2). See Figure 4.4 of this Standard. Taps or their operating handles shall be within 300 mm of the front of the sink to allow for ease of operation.</i></p> <p>Note to be added prior to issue of the Construction Certificate</p>	Clause 4.5.6(e) - Taps



Kitchen			
Item	Status	Item Description	References
51	CRA	<p>Cooktops to include either front or side controls with raised cross bars</p> <p><i>Circulation spaces and clearances shall be as for sinks (see Clause 4.5.6). Cooktops shall have controls which do not require reaching over the hotplates to adjust them. Controls shall have raised cross-bars for ease of grip. Cooktops shall have an adjacent work surface of 800 mm minimum length at the same height. Cooktops should be provided with isolating switches or gas stop valves which can be easily and safely operated while the cooktop is in use.</i></p> <p>Note to be added prior to issue of the Construction Certificate</p>	Clause 4.5.7 - Cooktops
52	CRA	<p>Cooktops to include isolating switch</p> <p><i>Circulation spaces and clearances shall be as for sinks (see Clause 4.5.6). Cooktops shall have controls which do not require reaching over the hotplates to adjust them. Controls shall have raised cross-bars for ease of grip. Cooktops shall have an adjacent work surface of 800 mm minimum length at the same height. Cooktops should be provided with isolating switches or gas stop valves which can be easily and safely operated while the cooktop is in use.</i></p> <p>Note on plans indicate compliance.</p>	Clause 4.5.7 - Cooktops
53	CRA	<p>Worksurface min. 800mm length adjacent to cooktop at same height</p> <p><i>Circulation spaces and clearances shall be as for sinks (see Clause 4.5.6). Cooktops shall have controls which do not require reaching over the hotplates to adjust them. Controls shall have raised cross-bars for ease of grip. Cooktops shall have an adjacent work surface of 800 mm minimum length at the same height. Cooktops should be provided with isolating switches or gas stop valves which can be easily and safely operated while the cooktop is in use.</i></p> <p>Cooktop required to be adjacent an 800mm workspace as illustrated in Item 44. Refer to Item 44 for further details.</p> <p>Action: Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.</p>	Clause 4.5.7 - Cooktops
54	CRA	<p>Oven located adjacent to an adjustable height or replaceable work surface</p> <p><i>Ovens shall be located adjacent to a work surface in accordance with Clause 4.5.5 (see Figure 4.10). Where the oven door is hinged, the clear work surface shall be on the opposite side to the hinge</i></p> <p>Oven required to be adjacent to an 800mm workspace as illustrated in Item 44. Refer to Item 44 for further details.</p> <p>Action: Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.</p>	Clause 4.5.8 - Ovens



Kitchen			
Item	Status	Item Description	References
59	CRA	<p>GPO's to comply with AS 1428.1. At least one double GPO within 300mm of front of work surface</p> <p><i>General purpose outlets shall be located to comply with AS 1428.1. At least one double general purpose outlet shall be located with a horizontally accessible reach over a work surface at a maximum of 300 mm from the front of the work surface. The GPO for the refrigerator shall be easily reachable when the refrigerator is in its operating position.</i></p> <p>Note on plans indicate that GPO's are to comply with AS1428.1.</p>	Clause 4.5.11 - Power Outlets
60	CRA	<p>GPO for refrigerator to be easily reachable when the refrigerator is in its operating position</p> <p><i>General purpose outlets shall be located to comply with AS 1428.1. At least one double general purpose outlet shall be located with a horizontally accessible reach over a work surface at a maximum of 300 mm from the front of the work surface. The GPO for the refrigerator shall be easily reachable when the refrigerator is in its operating position.</i></p> <p>Note on plans indicate that the GPO for refrigerator is to comply with this item.</p>	Clause 4.5.11 - Power Outlets
61	CRA	<p>Slip-resistant floor surface</p> <p><i>The floor surface shall be slip-resistant to comply with AS/NZS 3661.1.</i></p> <p>Note on plans indicate slip resistant floor surface to be provided.</p>	Clause 4.5.4 - Floor Surfaces



Main Bedroom			
Item	Status	Item Description	References
62	CRA	<p>At least one bedroom of area sufficient to accommodate queen size bed and wardrobe and circulation space requirements of AS 1428.2</p> <p><i>At least one bedroom shall be capable of accommodating a queen size bed and a wardrobe and the circulation space requirements of AS 1428.2 clear of wardrobe fixtures.</i></p> <p>Provision of a queen size bed, not less than 1000mm circulation space on both sides and foot of bed, and provision of a wardrobe and space for a 180° turn in front of the wardrobe circulation spaces are provided for the subject units at post-adaptation, with the exception of Units A501 & A502, as illustrated below:</p> <p>Unit AG04:</p> <p>Unit AG05:</p>	<p>Clause 4.6.1 - Bedroom Areas</p>

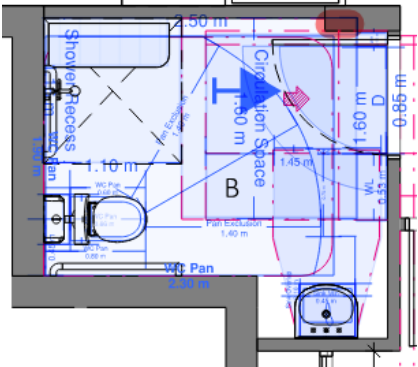
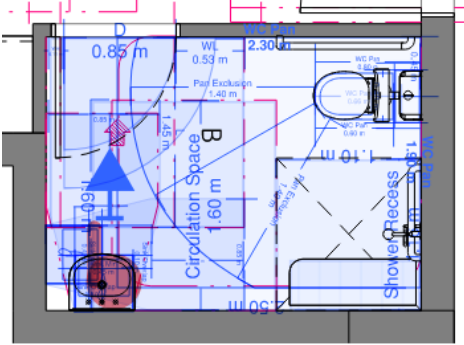
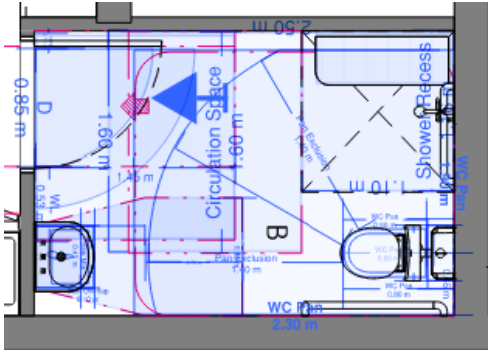


Main Bedroom			
Item	Status	Item Description	References
		<p>Units A105, A111, A205, A211, A305, A311, A405&* A411:</p> <p>Units A501 & A502.</p>	
		<p>Action: Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.</p>	



Bathroom			
Item	Status	Item Description	References
75	CRA or PS	<p>Provision for bathroom area to comply with AS 1428.1</p> <p>All sanitary facilities and components shall be adaptable, at minimum cost, to potentially comply with AS 1428.1 as a minimum, and preferably with AS 1428.2.</p> <p><i>NOTE: The required circulation spaces at doors and around WC pans, washbasins and showers shall be able to be provided without major plumbing changes. The WC pan should either be located in the after-adaptation location initially or be fitted with a P trap. In addition, items like toilet paper dispensers and WC flushing controls shall comply with AS 1428.1. Because of the difficulty in moving some of these items after they have been initially installed, it is desirable that they should comply with AS 1428.1 from the outset.</i></p> <p>The drawings include: 1) Overall bathroom layout with dimensions (2300, 1900, 1450, 920, 110, 850 min., 1490, 530, 425 min., 450, 700, 800, 2300, 100). 2) Shower area layout with dimensions (2350, 1100, 110, 1600, 850 min., 1480, 1900, 450 to 460, 2300, 100 max., 1500). 3) Toilet and washbasin area with dimensions (1900 min., 430 min., 450 to 480, 600 max., 400 max., 50 to 80, 300 min., 50 to 60, 450 min., 600 min., 800 ±10, 200 to 250, 2300 min., 1400 min., 1400 min., 330 min., 100 max. permitted encroachment zone, 430 min., 450 min., 800 to 830, 720 min., 300 min., 240 min., 440 min., 425 min., 450 min., 800, 700, 850 min.). 4) Hinged door circulation space diagrams with dimensions (350 min., 1850 min., 800, 800 to 830, 900 max., 425 min., 700, 800, 110, 850 min., 850 min., 450, 1450, 300 min., 110, 850 min., 850 min., 300 max., 530, 450, 800, 700, 1670, 850, 700, 1450, 300 min., 110, 850 min., 850 min., 450, 1670, 850, 700). 5) Sliding door circulation space diagrams with dimensions (700, 800, 395, 850 min., 660, 1280, 1450, 530, 850 min., 150, 450, 800, 700, 850).</p>	Clause 4.4.1 - General



Bathroom		References	
Item	Status	Item Description	References
		<p>Post adaptive fixtures and circulation spaces are required to comply with the dimensions of AS1428.1-2009 or element(s) requiring review (highlighted red) for the designated units:</p> <p>Unit AG04:</p>  <p>Unit AG05:</p>  <p>Units A105, A111, A205, A211, A305, A311, A405&* A411:</p> 	

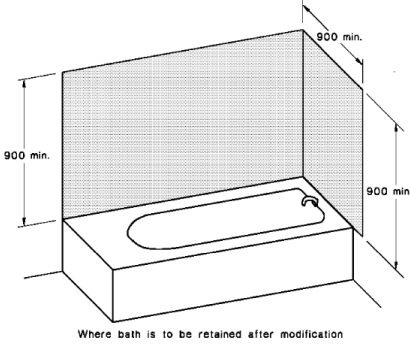


Bathroom			
Item	Status	Item Description	References
		<p>Units A501 & A502.</p> <p>Action: Compliance can be achieved via slight redesign or in some cases an Access performance solution can be undertaken prior to the issue of the Construction Certificate.</p>	
76	CRA	<p>Slip-resistant floor surface</p> <p><i>Floor surfaces shall be slip-resistant to comply with AS/NZS 3661.1.</i></p> <p>Note on plans indicate slip resistant floor surface shall be provided.</p>	Clause 4.4.2 - Floor Surface
77	CRA	<p>Shower recess-no hob. Minimum size 1160 x 1100mm to comply with AS 1428.1 (Refer to Figures 4.6 and 4.7 of AS 4299-1995)</p> <p>FIGURE 4.6 REINFORCED AREAS FOR SUBSEQUENT INSTALLATION OF GRABRAILS IN SHOWER COMPARTMENTS</p> <p>FIGURE 4.7 REINFORCED AREAS FOR SUBSEQUENT INSTALLATION OF GRABRAILS AT BATHS</p> <p><i>Shower compartment A shower shall be provided. The shower compartment shall be a minimum size of 1160 x 1100 mm. The soap holder shall be recessed. The position of the shower head and taps shall be such that the clearances and heights required by AS 1428.1 are achieved.</i></p> <p>Provision for this item appears to be indicated on the post-adaption plans as illustrated in Item 75.</p>	Clause 4.4.4(f) - Shower Compartment



Bathroom			
Item	Status	Item Description	References
78	CRA	<p>Shower area waterproofed to AS 3740 with floor to fall to waste</p> <p><i>Shower compartment A shower shall be provided. The shower compartment shall be a minimum size of 1160 ´ 1100 mm. The soap holder shall be recessed. The position of the shower head and taps shall be such that the clearances and heights required by AS 1428.1 are achieved.</i></p> <p>Provision for this item appears to be indicated on the post-adaption plans as illustrated in Item 75.</p>	<p>Clause 4.4.4(f) - Shower Compartment</p>
79	CRA	<p>Recessed soap holder</p> <p><i>Shower compartment A shower shall be provided. The shower compartment shall be a minimum size of 1160 ´ 1100 mm. The soap holder shall be recessed. The position of the shower head and taps shall be such that the clearances and heights required by AS 1428.1 are achieved.</i></p> <p>Note to be added prior to issue of the Construction Certificate</p>	<p>Clause 4.4.4(f) - Shower Compartment</p>
80	CRA	<p>Shower taps positioned for easy reach to access side of shower sliding track</p> <p><i>Shower compartment A shower shall be provided. The shower compartment shall be a minimum size of 1160 ´ 1100 mm. The soap holder shall be recessed. The position of the shower head and taps shall be such that the clearances and heights required by AS 1428.1 are achieved.</i></p> <p>Note to be added prior to issue of the Construction Certificate</p>	<p>Clause 4.4.4(f) - Shower Compartment</p>
82	CRA	<p>Provision for adjustable, detachable hand held shower rose mounted on a slider grabrail or fixed hook (plumbing and wall-strengthening provision)</p> <p><i>Grabrails If grabrails or shower seats are required by the initial occupant of the housing unit they shall be installed in accordance with AS 1428.1 or to suit the occupant. Grabrails for baths if required by the initial occupant, shall be installed in accordance with AS 1428.2, or to suit the occupant. If grabrails or a shower seat are not initially required, provision for grabrails shall be made in the modified configurations as required by AS 1428.1.</i></p> <p>Provision for this item appears to be indicated on the post-adaption plans as illustrated in Item 75.</p>	<p>Clause 4.4.4(h) - Grabrails</p>

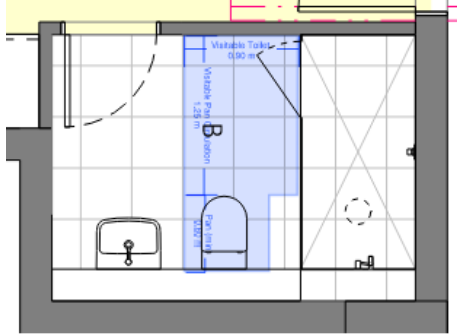
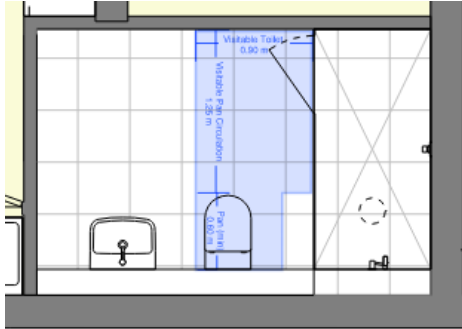
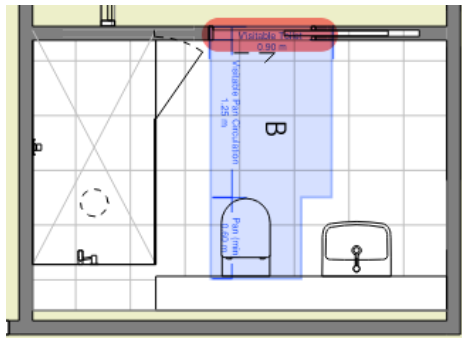


Bathroom			
Item	Status	Item Description	References
83	CRA	<p>Provision for grabrail in shower (Refer to Figure 4.7) to comply with AS 1428.1</p>  <p>Where bath is to be retained after modification</p> <p>DIMENSIONS IN MILLIMETRES</p> <p>FIGURE 4.7 REINFORCED AREAS FOR SUBSEQUENT INSTALLATION OF GRABRAILS AT BATHS</p> <p><i>Grabrails If grabrails or shower seats are required by the initial occupant of the housing unit they shall be installed in accordance with AS 1428.1 or to suit the occupant. Grabrails for baths if required by the initial occupant, shall be installed in accordance with AS 1428.2, or to suit the occupant. If grabrails or a shower seat are not initially required, provision for grabrails shall be made in the modified configurations as required by AS 1428.1.</i></p> <p>Note on plans indicate walls around shower and toilet are to be reinforced to provide a fixing surface for the safe installation of grabrails.</p>	Clause 4.4.4(h) - Grabrails
86	CRA	<p>Tap sets to be capstan or level handles with single outlet</p> <p><i>Tap sets throughout shall have capstan or lever handles.</i></p> <p>Note on plans indicate that tap set is to be capstan or level handle with single outlet.</p>	Clause 4.4.4 (c) - Tap sets
88	CRA	<p>Provision for washbasin with clearances to comply with AS 1428.1</p> <p><i>Washbasin The washbasin shall be located such that circulation spaces to adjacent doors, WC pans and other components, and knee clearances are either provided in accordance with AS 1428.1 or will be able to be provided at adaptation.</i></p> <p>Provision for this item appears to be indicated on the post-adaption plans as illustrated in Item 75.</p>	Clause 4.4.4(g) - Washbasin
90	CRA	<p>Double GPO beside mirror</p> <p><i>Wall cabinet in the bathroom should include a wall cabinet with a light above. A double GPO shall be located adjacent to the mirror.</i></p> <p>Note on plans indicate that double GPO is to be provided beside the mirror.</p>	Clause 4.4.4(d) - Wall Cabinet



Toilet			
Item	Status	Item Description	References
92	CRA	<p>Provision of either 'visitable toilet' or accessible toilet</p> <p><i>Each housing unit shall be provided with either a visitable toilet or an accessible toilet. Where a separate toilet and bathroom are used with the intention of future unification, the WC pan shall initially be positioned at the correct distance from any fixed walls. Refer to Figure 4.3.</i></p> <div style="text-align: center;"> <p>(a) Side view (b) Front view</p> </div> <p>NOTES:</p> <ol style="list-style-type: none"> For the purpose of dimensioning, the front of the WC pan has been taken as the datum plane. The dimension of 800 mm from the front of the WC pan to the wall is a critical dimension. A back support at 600 mm from the front of the pan is important. This supports people who are paralysed from the chest down. The back support may be a cistern or a continuous grab rail and toilet lid. <p style="text-align: center;">DIMENSIONS IN MILLIMETRES FIGURE 4.3 LOCATION OF WC PAN</p>	Clause 4.4.3 - Toilet
		<p>Provision for this item appears to be indicated on the post-adaption plans as illustrated in Item 75.</p> <p>In addition, provision for a visitable toilet pre-adaptation also appears to be made for the subject units as illustrated below, with the exception of Units A501 & A502:</p> <p>Unit AG04:</p> <div style="text-align: center;"> </div>	

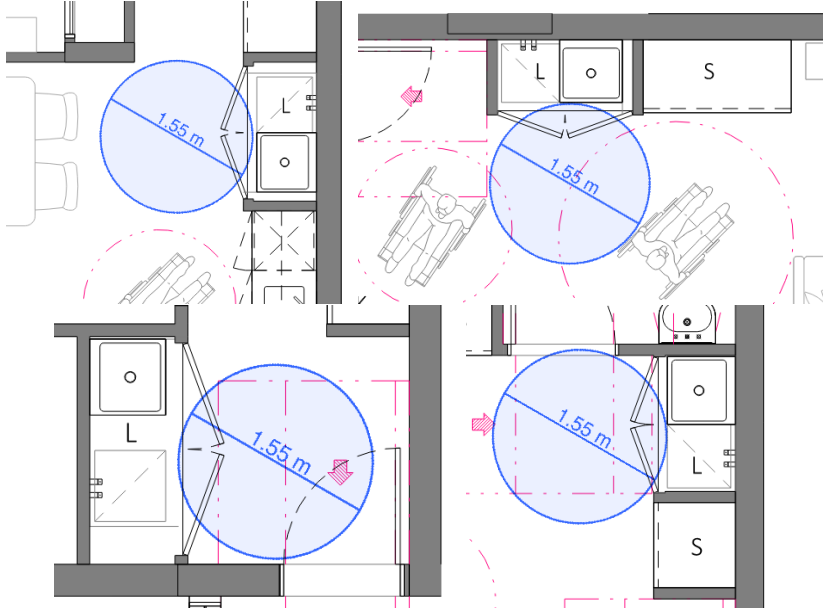


Toilet			
Item	Status	Item Description	References
		<p>Unit AG05:</p> 	
		<p>Units A105, A111, A205, A211, A305, A311, A405 &* A411:</p> 	
		<p>Units A501 & A502.</p> 	
		<p>Action: Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.</p>	



Toilet			
Item	Status	Item Description	References
93	CRA	<p>Provision to comply with AS 1428.1</p> <p><i>All sanitary facilities and components shall be adaptable, at minimum cost, to potentially comply with AS 1428.1 as a minimum, and preferably with AS 1428.2.</i></p> <p><i>NOTE: The required circulation spaces at doors and around WC pans, washbasins and showers shall be able to be provided without major plumbing changes. The WC pan should either be located in the after-adaptation location initially or be fitted with a P trap. In addition, items like toilet paper dispensers and WC flushing controls shall comply with AS 1428.1. Because of the difficulty in moving some of these items after they have been initially installed, it is desirable that they should comply with AS 1428.1 from the outset.</i></p> <p>Not less than one sanitary compartment is accessible and has provision to comply with AS1428.1-2009 as indicated in Item 75 above.</p>	<p>Clause 4.4.1 - General</p>
94	CRA	<p>Location of WC pan at correct distance from fixed walls</p> <p><i>Each housing unit shall be provided with either a visitable toilet or an accessible toilet. Where a separate toilet and bathroom are used with the intention of future unification, the WC pan shall initially be positioned at the correct distance from any fixed walls. Refer to Figure 4.3.</i></p> <p>Provision for this item appears to be indicated on the post-adaption plans as illustrated in Item 75.</p>	<p>Clause 4.4.3 - Toilet</p>
95	CRA	<p>Provision for grab rail zone. (Refer Figure 4.6)</p> <p><i>If grabrails or shower seats are required by the initial occupant of the housing unit they shall be installed in accordance with AS 1428.1 or to suit the occupant. Grabrails for baths if required by the initial occupant, shall be installed in accordance with AS 1428.2, or to suit the occupant. If grabrails or a shower seat are not initially required, provision for grabrails shall be made in the modified configurations as required by AS 1428.1.</i></p> <p>Note on plans indicate that the walls around the shower and toilet should be reinforced to provide a fixing surface for the installation of grabrails if required.</p>	<p>Clause 4.4.4(h) - Grabrails</p>
96	CRA	<p>Slip-resistant floor surface (Viterous tiles or similar)</p> <p><i>Floor surfaces shall be slip-resistant to comply with AS/NZS 3661.1.</i></p> <p>Note on plans indicate that slip resistant floor shall be provided.</p>	<p>Clause 4.4.2 - Floor Surface</p>



Laundry			
Item	Status	Item Description	References
98	CRA	<p>Circulation at doors to comply with 1428.1</p> <p><i>If a separate room is used for a laundry, circulation spaces at doors shall be in accordance with AS 1428.1. Provision for adequate circulation space shall be made in front of or beside appliances and under or adjacent to the tub to enable people who use wheelchairs to use all the facilities.</i></p> <p>Sufficient circulation does not appear to be provided at laundry doorways in post-adaptation, as illustrated below in Item 99.</p>	Clause 4.8 - Laundry Areas
99	CRA	<p>Provision for adequate circulation space in front of or beside appliances (min 1550mm depth)</p> <p><i>If a separate room is used for a laundry, circulation spaces at doors shall be in accordance with AS 1428.1. Provision for adequate circulation space shall be made in front of or beside appliances and under or adjacent to the tub to enable people who use wheelchairs to use all the facilities.</i></p> <p>Greater than 1550mm circulation space appears to be provided in front of appliances as required by this item, with the exception of Units 308, 406 & 508, as illustrated below:</p> 	Clause 4.8 - Laundry Areas
100	CRA	<p>Provision for automatic washing machine</p> <p><i>Provision shall be made for an automatic washing machine.</i></p> <p>Provision for this item is indicated on the post-adaption plans as required.</p>	Clause 4.8(e) - Automatic Washing Machine



Laundry			
Item	Status	Item Description	References
102	CRA	<p>Where clothes line is provided, an accessible path of travel to this</p> <p><i>There shall be a clothes drying facility. Where a clothes line is provided, an accessible path of travel shall be provided to the clothes line.</i></p> <p>No clothes lines indicated on the plans due to the provision of a drying machine in the subject laundry.</p>	Clause 4.8(a) - Clothes Dry Facility
105	CRA	<p>Double GPO</p> <p><i>A double GPO shall be provided as a minimum.</i></p> <p>Note on plans indicate that a double GPO is to be provided.</p>	Clause 4.8(g) - Double GPO
108	CRA	<p>Slip-resistant floor surface</p> <p><i>Floor surfaces including bathrooms, laundries, toilets and all external paved surfaces shall be slip-resistant to comply with AS/NZS 3661.1.</i></p> <p>Note on plans indicate slip resistant floor shall be provided.</p>	Clause 4.9.1 - Floor Surfaces

Door Locks			
Item	Status	Item Description	References
110	CRA	<p>Door hardware operable with one hand, located 900-1100mm above floor</p> <p><i>The door handle and related hardware shall be of the type that allows the door to be unlocked and opened with one hand. Door lever handles and hardware shall be not less than 900 mm nor more than 1100 mm above the plane of the finished floor and shall be in accordance with AS 1428.1. All lockable external doors in the housing unit should be keyed alike, including any garage doors, storeroom door and the like.</i></p> <p>Note to be added prior to issue of the Construction Certificate</p>	Clause 4.3.4 - Door Handles and Hardware



4.0. LIVABLE HOUSING ASSESSMENT

4.1. Livable Housing Consent Authority Requirements

This development proposes **six (6) Silver Level Livable Housing units** as required by Condition 8.2 of Sutherland Shire Development Control Plan 2015, which requires 10% of dwellings to be designed to Silver Level under the Liveable Housing Design Guidelines.

Figure 2 outlines the requirements for livable adaptable housing within the Sutherland Shire Development Control Plan.

8.3 Controls for Livable Housing

1. In addition to complying with the adaptable housing rates in clause 1 above, all new residential flat buildings must provide 'livable dwellings (i.e., dwellings designed to Silver Standard *Livable Housing Design Guidelines*) at the following rates:
 - Developments containing 3- 5 dwellings – 1 dwelling.
 - Developments of 6 or more dwellings –10% of dwellings.

Figure 2 *Condition 8.2 of Sutherland Shire DCP 2015*



4.2. Livable Housing Dwelling(s) Under Review

The following units within the development have been designated as Silver level Livable units, forming the basis of the review that follows:

- Unit 107-H;
- Unit 109-H;
- Unit 207-H;
- Unit 209-H;
- Unit 307-H;
- Unit 309-H;
- Unit 407-H;
- Unit 409-H;
- Unit 504-H; and
- Unit 506-H.

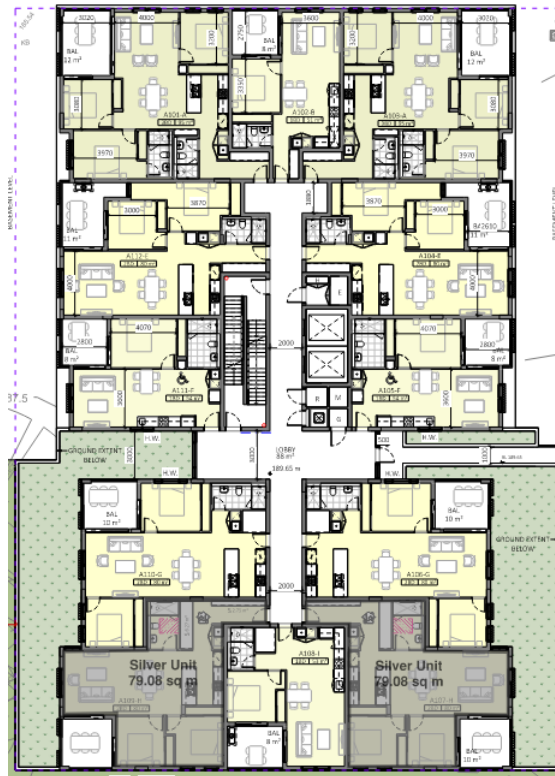


Figure 3 First to Fourth Floor Livable Unit Location(s) on Architectural Plans



Figure 4 Fifth Floor Livable Unit Location(s) on Architectural Plans



5.0. LIVABLE HOUSING DESIGN GUIDELINES

Noting that the level of documentation at this stage is for a Development Application (DA) assessment purposes, an indicative compliance assessment of the referenced documents identified in Appendix A of this report has been undertaken against the Livable Housing Design Guidelines 4th Edition 2017, which will be referred to as 'The Guideline'.

The abbreviations outlined below have been used in the following tables:

N/A	The item does not apply to the subject Building.
Complies	The relevant clauses of the Guideline appear to have been demonstrated by the proposed design and/or evidence during onsite inspection.
CRA	'Compliance Readily Achievable'. Subject to noting the requirements of each clause, it is considered BCA compliance can be readily demonstrated without significant implication to the approved design. This will occur through progression of documentation to the Construction Certificate stage of the development.
FI	Further information is necessary to determine the compliance potential of the building design and/or element.
PS	Performance (Alternative) Solution with respect to the subject element is potentially possible to satisfy the relevant BCA Performance Requirements when NCC or Access-to-Premises Standards compliance is required. When a SEPP, DCP Clause and/or DA Condition requires compliance with particular performance level of the Guideline (silver, gold or platinum), a detailed assessment is required to determine compliance with the Performance Statement of that element.
DNC	'Does Not Comply' with either the element and/or the relevant Guideline Performance Statement(s), and no clear path to compliance is evident.



ELEMENT 1: DWELLING ACCESS

Silver Level	
Status	Element Description
CRA	<p>Performance Statement: There is a safe, continuous, step-free pathway from the street entrance and/or parking area to a dwelling entrance that is level.</p> <p>a. Provide a safe, continuous step-free pathway from the front boundary of the property to an entry door to the dwelling. 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 referred to in (a) should have a minimum clear width of 1000mm and have:</p> <ul style="list-style-type: none"> i. no steps; ii. an even, firm, slip resistant surface; iii. a crossfall of not more than 1:40; iv. a maximum pathway slope of 1:14 <p>Where ramps are required they should have 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.</p> <p>c. The path of travel referred to in (a) may be provided via an associated car parking space for the dwelling. Where a car parking space is relied upon as the safe and continuous pathway to the dwelling entrance, the space should incorporate:</p> <ul style="list-style-type: none"> i. minimum dimensions of at least 3200mm (width) x 5400mm (length); ii. an even, firm and slip resistant surface; and iii. a level surface (1:40 maximum gradient, 1:33 maximum gradient for bitumen). <p>d. 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>e. Where a ramp is part of the pathway, level landings no less than 1200mm in length, exclusive of the swing of the door or gate that opens onto them, must be provided at the head and foot of the ramp.</p> <p>Note: The width of the landing will be determined by the adjoining pathway. If the landing directly adjoins the doorway please refer to Element 2 for dimensional requirements.</p>



Silver Level

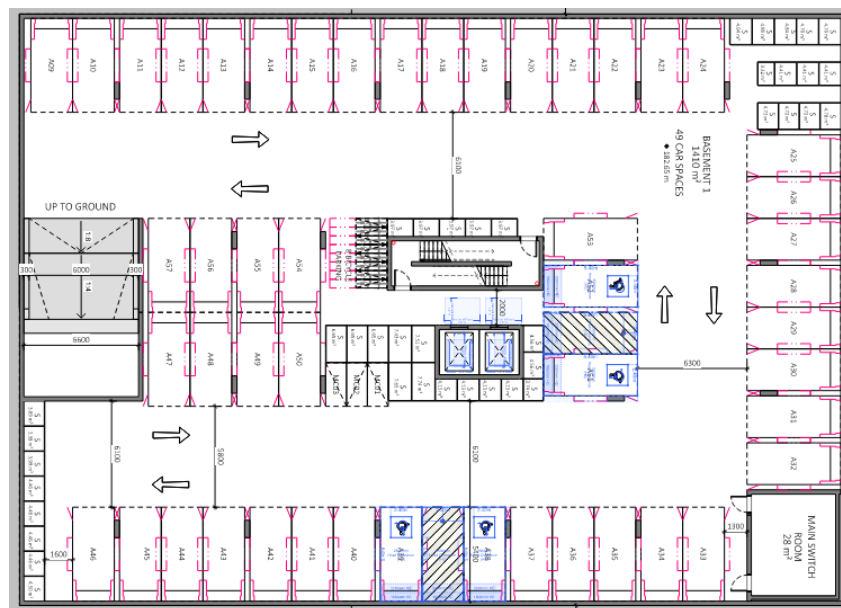
Status Element Description



Examples of safe, continuous, step-free pathway access to a dwelling entrance:

1. Continuous step-free path of travel to a side entrance
2. Easy access from the front pathway and driveway
3. Continuous step-free pathway with varied surface finishes
4. Direct entrance via the street frontage and parking space.

A continuous accessible path of travel from the carpark and street frontage to the subject units is required to be provided as illustrated below:

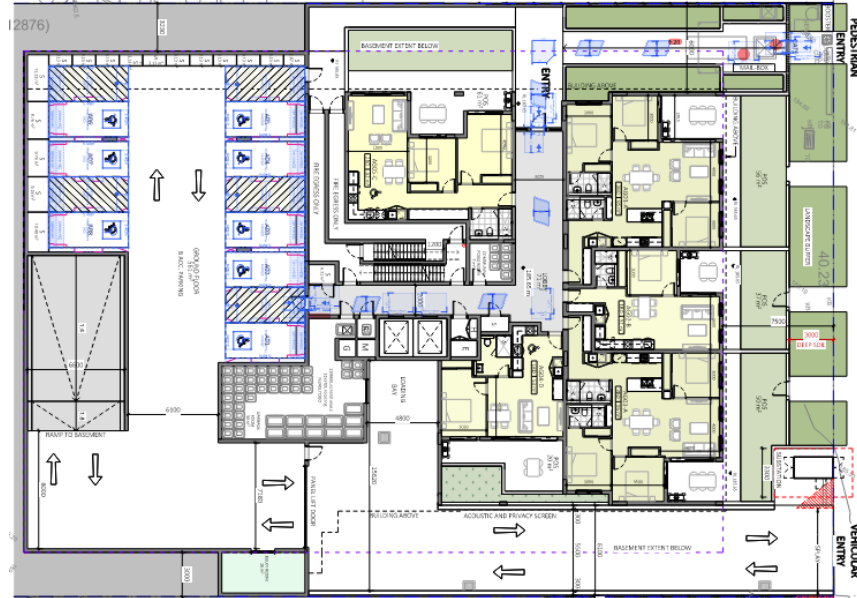


Basement Floor Accessible Path of Travel

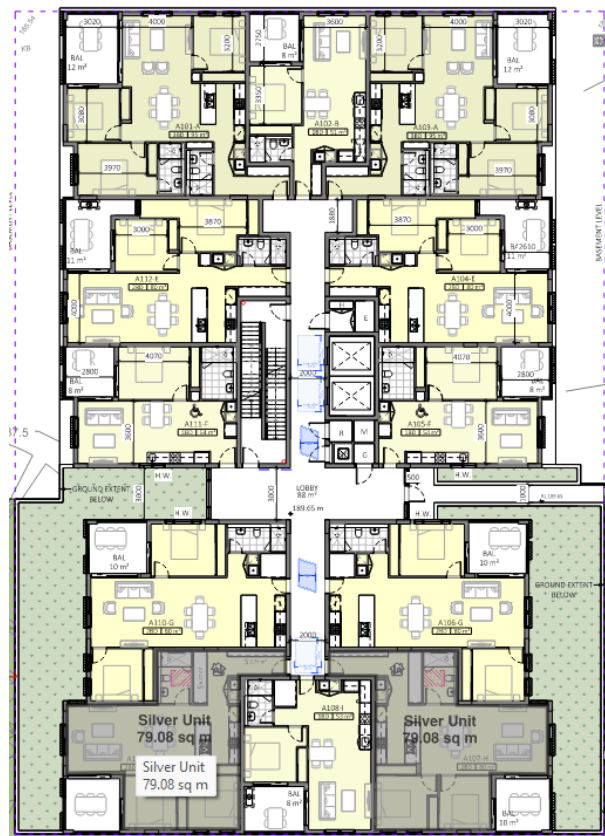


Silver Level

Status Element Description



Ground Floor Level Access from Street Frontage

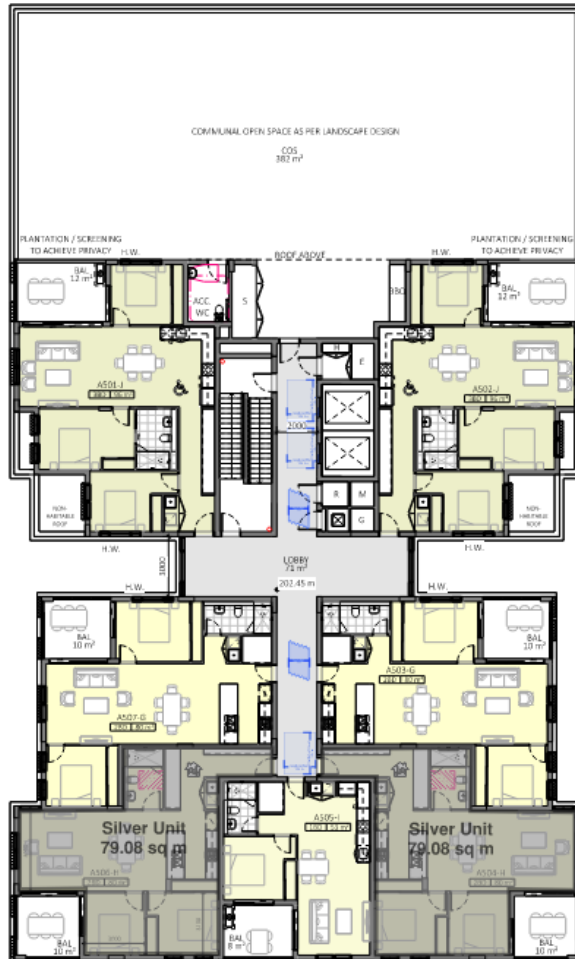


First to Fourth Floor Level Accessible Path of Travel



Silver Level

Status Element Description



Fifth Floor Accessible Path of Travel

Action: Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.



ELEMENT 2: DWELLING ACCESS

Silver Level

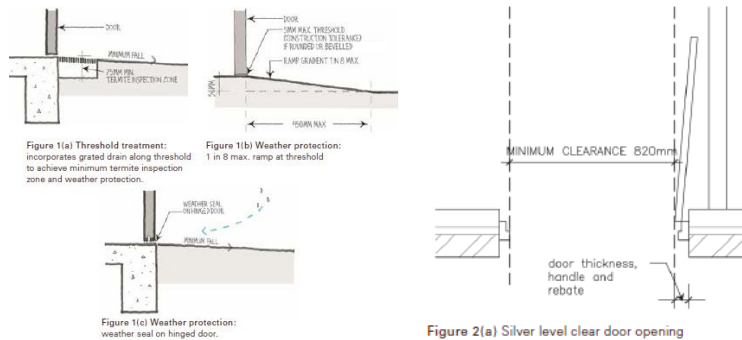
Status Item Description

CRA

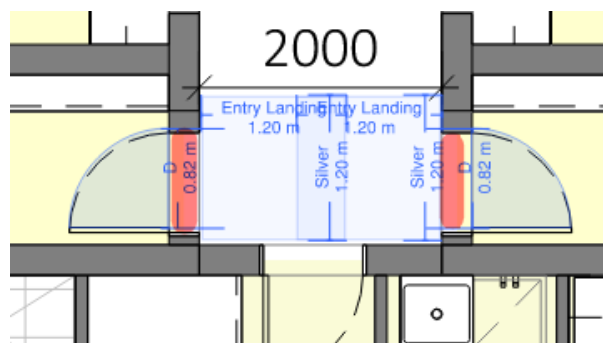
Performance Statement: There is at least one level (step-free) entrance into the dwelling to enable home occupants to easily enter and exit the dwelling.

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



SOU entry doorways with not less than 820mm clearance, with a level 1200mm x 1200mm space at the landing of the subject unit entry are required to be provided. 820mm door clearances do not appear to be provided as illustrated below:



Action: Compliance can be achieved via slight redesign prior to the issue of the Construction Certificate.



ELEMENT 3: INTERNAL DOORS & CORRIDORS

Silver Level

Status

Item Description

CRA

Performance Statement: Internal doors and corridors facilitate comfortable and unimpeded movement between spaces.

- 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.

* Corridor widths should be measured as described in Clause 6.3 of AS 1428.1 – 2009

Minimum internal corridors of 1000mm dimensioned throughout subject units appear to be provided.

Minimum internal doorway clearance of 820mm provided to doorways leading to living, dining, main bedroom, kitchen and laundry within subject units as illustrated below:



Recommendation: Ensure minimum 1000mm width is provided in corridor/passageways prior to issue of the Construction Certificate.



ELEMENT 4: TOILET

Silver Level

Status	Item Description
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CRA

Performance Statement: The ground (or entry) level has a toilet to support easy access for home occupants and visitors.

- a. Dwellings should have a toilet on the ground (or entry) level that provides:
- 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 (if the toilet is located in a combined toilet bathroom) to enable installation of grabrails at a future date. Reinforcement guidelines for walls in bathrooms and toilets are found in element 6.

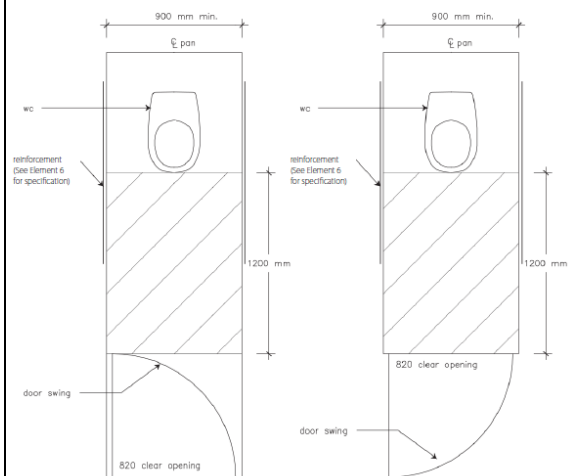


Figure 3(a) Silver level ground (or entry) level toilet layout and space requirements in a separate room.

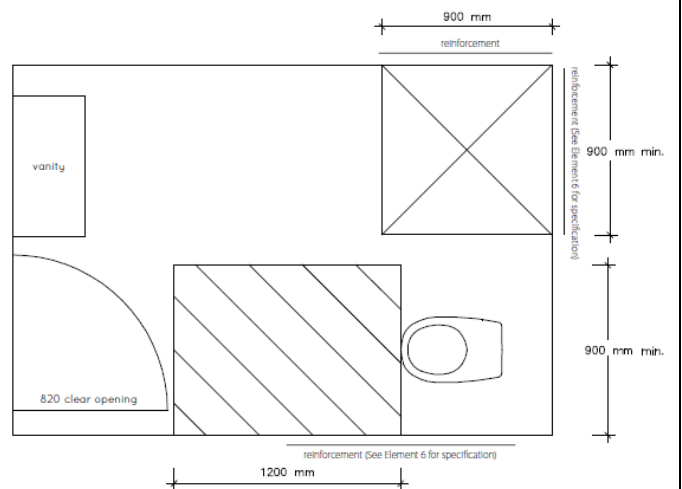
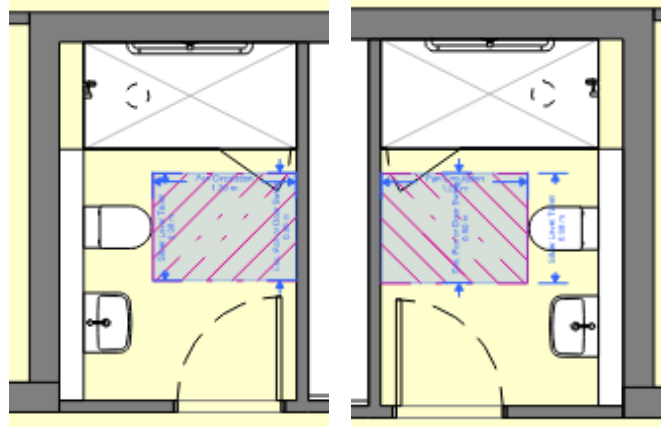


Figure 3(b) Silver level ground (or entry) level toilet layout and space requirements in a combined bathroom.



Toilet circulation space of 900mm x 1200mm in front of toilet pan, clear of obstacles or door swings has been provided, as illustrated below:



Recommendation: Highly preferable for toilet to be located in corner to enable installation of grabrails at a future date. The current design can be supported if necessary, however rear wall between toilet and shower screen must be reinforced to support drop down grabrail. Design verification to be provided prior to the issue of the Construction Certificate.



ELEMENT 5: SHOWER

Silver Level

Status

Item Description

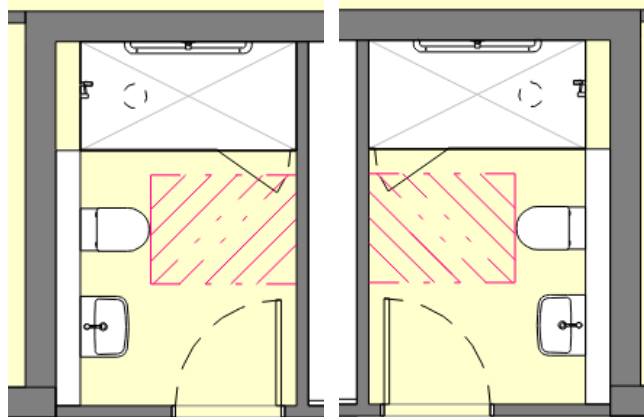
CRA

Performance Statement: The bathroom and shower is designed for easy and independent access for all home occupants.

- a. One bathroom should feature a slip resistant, hobless 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. For hobless specification please see Australian Standard AS3740-3.6. Reinforcement guidelines for walls in bathrooms and toilets are found in element 6.



At least one hobless shower recess appears to be provided in the subject units, as required by this section.





ELEMENT 6: REINFORCEMENT OF BATHROOM & TOILET WALLS

Silver Level

Status

Item Description

CRA

Performance Statement: The bathroom and toilet walls are built to enable grabrails to be safely and economically installed.

- 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).

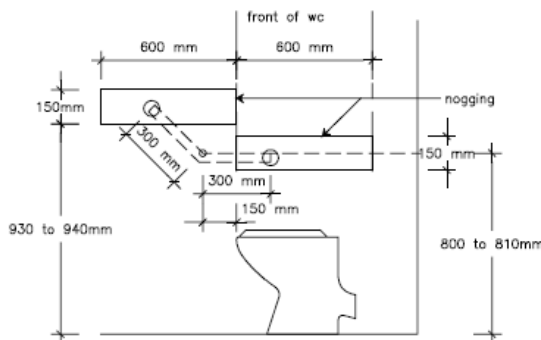


Figure 6(a) Toilet – Location of reinforcement

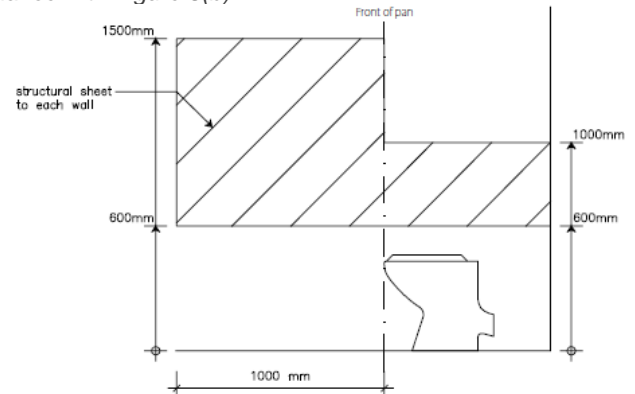


Figure 6(b) Toilet – Location of sheeting

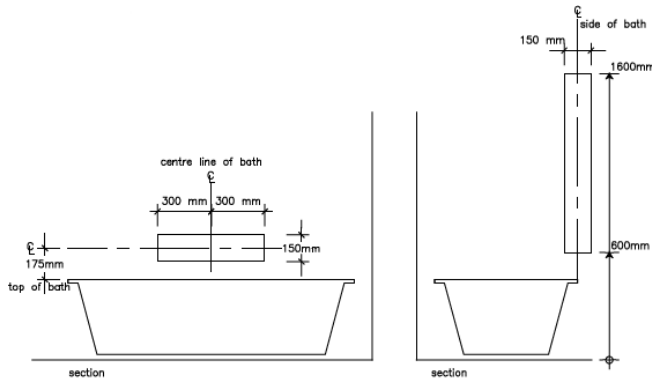
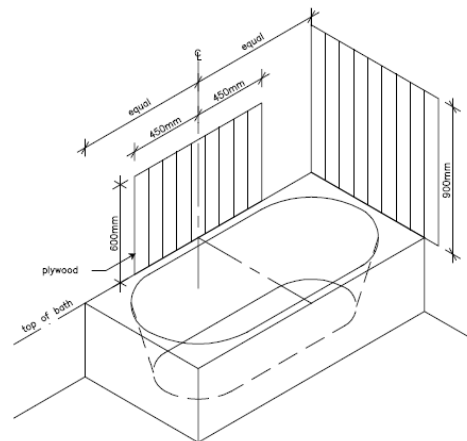


Figure 7(a) Bath – Location of reinforcement





Silver Level

Status Item Description

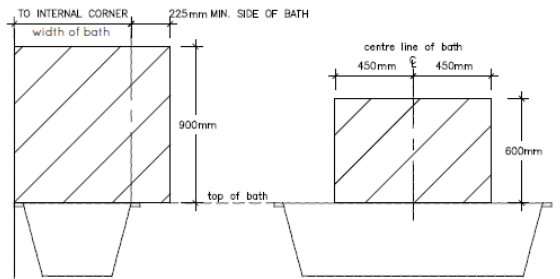


Figure 7(b) Bath - Location of sheeting

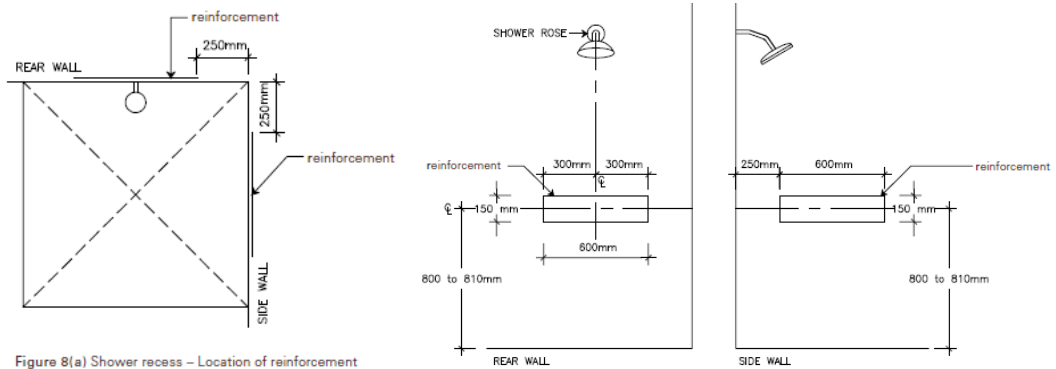


Figure 8(a) Shower recess - Location of reinforcement

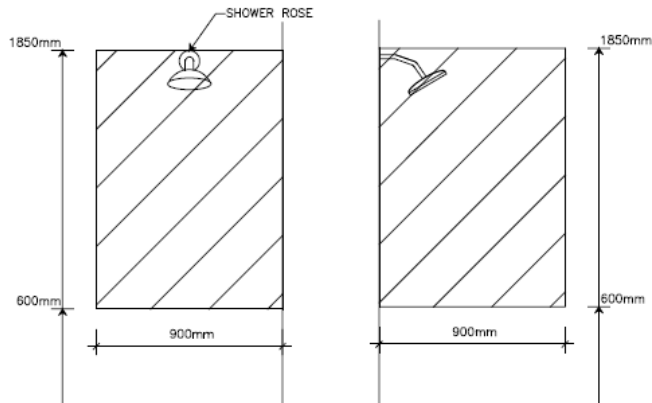


Figure 8(b) Shower recess - Location of sheeting

The subject units appear to have provisions for the reinforcement of bathroom & toilet walls in at least one sanitary compartment, as required by this section.

Note to be added to plans prior to the issue of the Construction Certificate.



ELEMENT 7: INTERNAL STAIRWAYS

Silver Level

Status

Item Description

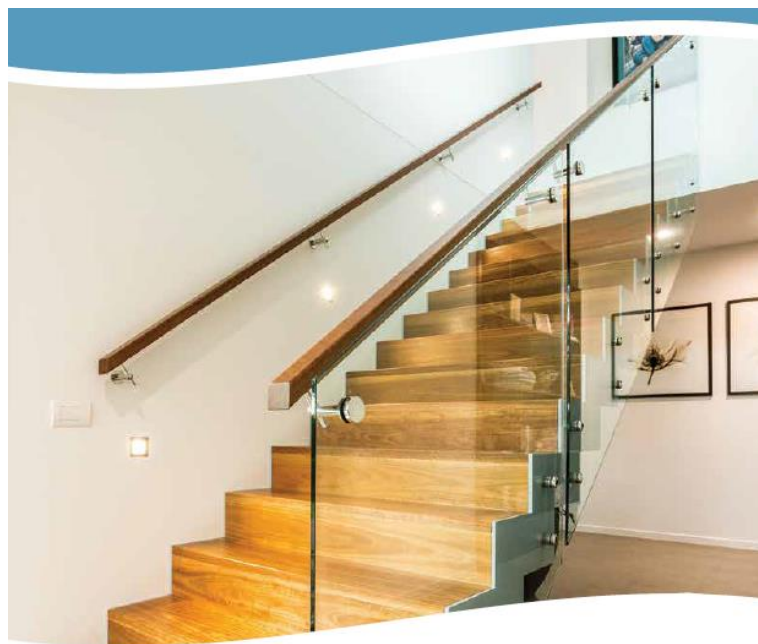
N / A

Where installed, stairways are designed to reduce the likelihood of injury and also enable safety pathway.

a. Stairways in dwellings must feature:

i. a continuous handrail on one side of the stairway where there is a rise of more than 1m.

Note: This is a requirement for all new homes under the NCC. Homes built prior to 2014 may benefit from this element.



Performance Statement
Where installed, stairways are designed to reduce the likelihood of injury and also enable future adaptation

No stairways proposed in the subject dwellings. Therefore, this item is not required.



6.0. CONCLUSION

6.1. Adaptable Housing Consistency Statement

This report has reviewed the subject development to determine compliance with the objectives and performance requirements of AS 4299-1995 Adaptable Housing, outlined in Section 2.3 of this report. This assessment has been conducted through review of the architectural plans detailed in Appendix A below.

This statement is strictly limited to the items of Appendix A within AS4299-1995 Adaptable Housing compliance with a Class C adaptable unit relating to the units identified in Section 0 of this report and does not include a BCA or Access to Premises Standards compliance assessment or the like.

This consistency statement confirms that upon completion of recommendations and actions detailed in this report, the subject development appears to either comply directly with Appendix A of AS4299-1995 for Class C essential features or complies indirectly with the objectives and/or performance requirements relevant to these items as permitted during development consent determination by Clause 79C(3A)(b) of the Act.

6.2. Livable Housing Design Guideline Consistency Statement

This report has reviewed the subject development to determine compliance with the performance statements of the Livable Housing Design Guidelines Fourth Edition, outlined within each element of this report. This assessment has been conducted through a review of the architectural plans detailed in Appendix A below.

This statement is strictly limited to the elements relevant to the performance level(s) of the units identified in Section 4.1 of this report and does not include a BCA, Adaptable Housing, Access to Premises Standards compliance assessment or the like.

This consistency statement confirms that upon action of recommendations identified in this report, the subject development appears to either comply directly with the design features of each element of the identified performance level or complies indirectly with the performance statement relevant to these elements as permitted during development consent determination by Clause 79C(3A)(b) of the Act.



**BUILDING
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APPENDIX A – REFERENCED DOCUMENTATION

The following documentation was used in the preparation of this report:

Drawing No.	Title	Rev.	Project No.	Date	Drawn By
DA-0-220	(A) BASEMENT BUILDING A	D	23-049	02.07.2024	Dickson Rothschild
DA-0-221	(A) GROUND LEVEL BUILDING A	E	23-049	02.07.2024	Dickson Rothschild
DA-0-222	(A) LEVEL 1	G	23-049	02.07.2024	Dickson Rothschild
DA-0-223	(A) LEVEL 2-4	G	23-049	02.07.2024	Dickson Rothschild
DA-0-224	(A) LEVEL 5	H	23-049	02.07.2024	Dickson Rothschild
DA-0-225	(A) ROOF PLAN	E	23-049	02.07.2024	Dickson Rothschild
DA-0-301	ELEVATION SHEET – BUILDING A	A	23-049	25.08.2023	Dickson Rothschild
DA-0-302	ELEVATION SHEET II – BUILDING A	A	23-049	25.08.2023	Dickson Rothschild
DA-0-401	SECTION 1	A	23-049	24.05.2024	Dickson Rothschild
DA-0-401	SECTION 1	A	23-049	24.05.2024	Dickson Rothschild
DA-0-501	ADAPTABLE UNITS – BUILDING A – SHEET 1	A	23-049	02.07.2024	Dickson Rothschild
DA-0-502	ADAPTABLE UNITS – BUILDING A – SHEET 2	A	23-049	02.07.2024	Dickson Rothschild