



To: Investec Australia Limited
Level 23, Chifley Tower, 2 Chifley Square
Sydney NSW 2000

Project: Wickham Woolstore Development – Building 1

Report: Access Assessment Report

Reference No: 107528-Access-r1

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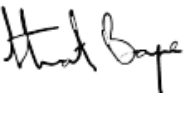
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107528-Access-r1	15/3/2017	Description:	Preliminary Access Assessment Report		
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1 BASIS OF ASSESSMENT

1.1 Location

The building development, the subject of this report, is the change in use and internal alterations of the existing Wickham Woolshed building located on the corner of Milford Street and Annie Street, Wickham.

The existing building will have an adaptive reuse as a residential apartment building with apartments at ground, first, second, third and fourth (mezzanine) levels and internal carparking at ground and first floor level.

The existing external masonry walls and internal timber beams and columns are proposed to remain and the alterations of the building will ensure that existing heritage elements are retained.

Access to the development is via driveways leading from Milford Street to the ground floor level carpark.

1.2 Purpose

The purpose of this report is to assess the proposed / existing building against the following Deemed-to-Satisfy provisions of the Building Code of Australia 2016 (BCA2016) to clearly outline those areas where compliance is not achieved and provide recommendations to upgrade such areas to achieve relevant compliance:

- Disability Discrimination Act 1992 (DDA);
- Disability Access to Premises Standards 2010 (Premises Standards);
- Design Quality of Residential Apartment Development 2015 (SEPP65)
- Building Code of Australia 2016 (BCA2016) – Part D3 and Clauses E3.6 and F2.4;
- Applicable Australian Standards AS1428.1:2009, AS1428.4.1:2009 and AS2890.6:2009.

1.3 Limitations

This report is limited to an assessment of the access and amenity provisions for people with a disability against the provisions of the BCA2016 as outlined in 1.2 above. It is not an assessment of the proposal against all provisions of the BCA2016 and if this is required, a separate report will be necessary.

This report does not include nor imply any detailed assessment for design, compliance or upgrading for:

- The structural adequacy or design of the building;
- The inherent derived fire-resistance ratings of any existing or proposed structural elements of the building (unless specifically referred to); and
- The design basis and/or operating capabilities of any existing or proposed electrical, mechanical or hydraulic fire protection services.

This report does not include, or imply compliance with:

- The Disability Discrimination Act (it cannot be guaranteed that that a complaint under the DDA will not be made, however should the building comply with BCA2016 and the Premises Standard then those responsible for the building cannot be subject to a successful complaint);
- BCA2016 Sections B, C, E, F, G, H, I, J, Parts D1 and D2;
- Demolition Standards not referred to by the BCA2016;
- Work Health and Safety Act;
- Construction Safety Act;
- Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work

Cover, Roads and Maritime Services (RMS), Roads and Transport Authority, Local Council, ARTC, Department of Planning and the like;

- Conditions of Development Consent issued by the Local Consent Authority; and
- This report does not assess the safety of the particular aspects of the building but merely the minimum standards called up by the Access provisions of BCA2016.

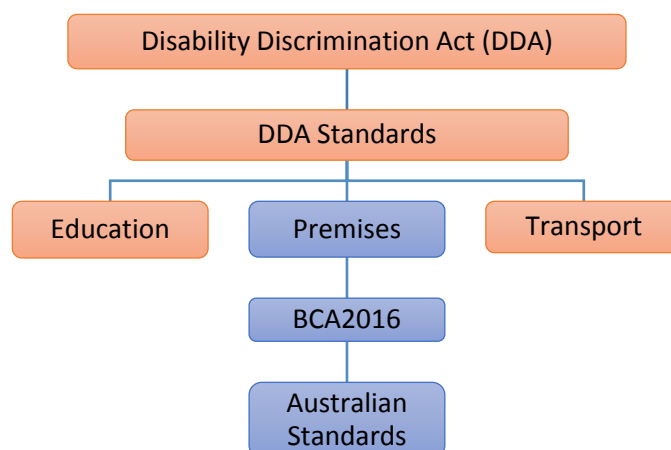
1.4 Federal Disability Discrimination Act (DDA)

Disability is broadly defined and includes disabilities which are physical, intellectual, psychiatric, neurological, cognitive or sensory (a hearing or vision impairment), learning difficulties, physical disfigurement and the presence in the body of disease causing organisms.

All organisations have a responsibility, under the DDA, to provide equitable, dignified access to goods and services and to premises used by the public. Premises are broadly defined and would include all areas included within the subject development.

The DDA applies nationally and is complaint based. While the BCA2016 is recognised as a design standard to satisfy certain aspects of the DDA, compliance with the BCA2016 and the referenced standards does not guarantee that a complaint will not be lodged.

The graph below indicates the current relationship of the BCA2016 to the DDA.



1.5 Disability Access to Premises Standards (Premises Standards)

The aim of the Premises Standards is to provide the building and design industry with detailed information regarding the required access provisions associated with the design and construction of new buildings and upgrade to existing buildings. They do not apply to existing buildings that are not undergoing upgrade. They will only apply to elements addressed within the Standards. All other elements related to premises will still be subject to the existing provisions of the DDA.

The Premises Standards generally align with the BCA2016 and reference a range of Australian Standards relating to access and other associated matters. The Premises Standards aim to provide certainty for the building industry in relation to meeting the requirements for access in new and upgraded buildings.

The “affected part” is the accessway from the principal pedestrian entrance to the area of the new works including the entry door at principal pedestrian entrance. The relevant provisions of the Premises Standards will apply to a new part of a building, and any “affected part” of a building, if the building is Class 1b, Class 2 (if a new and short term rent accommodation is available) and Classes 3, 5, 6, 7, 8, 9 or 10 buildings.

As a new Class 2 building is included within this development, the Premises Standards will apply to this building. However, with the requirements of the Premises Standards mirroring the requirements of the BCA2016, compliance under BCA2016 will be equivalent to achieve compliance with the Premises Standards.

1.6 Design Quality of Residential Apartment Development (SEPP65)

A comprehensive review of the Design Quality of Residential Apartment Development (SEPP65) was finalised in 2015, this review included the overhaul of the Residential Flat Design Code into the Apartment Design Guide (ADG) and Livable Housing Design Guidelines (LHDG). For apartment development applications lodged after 19 June 2015 and determined after 17 July 2015, the ADG, along with the changes to SEPP65 **WILL apply** to the common areas and Sole-Occupancy-Units (SOU's) within this development.

The ADG is to be used in conjunction with SEPP65 which sets out the NSW Government's policy direction for residential apartment development in NSW.

SEPP65 will apply to the following:

- Developments for the purpose of a residential flat building, shop top housing or mixed use development with a residential accommodation component if it is a new building, a substantial redevelopment / refurbishment of an existing building or the conversion of an existing building.
- Building with at least 3 or more storeys – not including levels below ground level (existing) or levels that are less than 1.2 metres above ground level (existing) that provide for car parking.
- Building containing at least 4 or more dwellings (SOU's).

Note: If a particular development comprises of a development to which subclause (1) applies and other development, this Policy applies to the part of the development that is development to which subclause (1) applies and does not apply to the other part.

Note: Will not apply for class 1a or 1b building within the meaning of the BCA2016.

Note: Unless a local environmental plan states otherwise, this Policy does not apply to a boarding house or a serviced apartment to which that plan applies.

Livable Housing Guidelines (LHDG) promotes homes to be designed and built to meet the changing needs of occupants across their lifetime, incorporating key easy living features that make the building easier and safer to use for all occupants including people with disability, elderly, people with temporary injuries, and families with young children.

LHDG has become legally relevant once required by ADG and therefore part of the current legislation. The eight design core elements within the guidelines are to be assessed and provided from an early stage of the development. However, the design element describes in these guidelines should only be applied to the parts of the building classes not covered by the Disability Standards and NCC (BCA216 Vol 1 and 2).

1.7 Design Documentation

This report has been based on the Design plans and Specifications listed in Annexure A of this Report.

2 BUILDING DESCRIPTION

For the purposes of the BCA2016 and Access Code for Buildings (Premises Standards – Schedule 1) the development may be described as follows.

2.1 Classification

Under the provisions of Clause A3.2 of BCA2016, the building has been classified as follows:

Class	Level	Description
2	Part Ground, Part first floor, second floor, third floor, fourth floor	Residential Sole Occupancy Units
7a	Part Ground and First Floor	Carpark

2.2 Areas Required to be Accessible

Under the provisions of Clause D3.1 of BCA2016, the following areas of the building are required to be accessible:

Level	Area / Room	Description
Level 1 – Level 4	Lobbies and Corridors	Common areas of the residential levels
Level 1 & 2	Carpark	To/from and through carpark to access the lobbies at each side
Level 1- Level 4	Sole Occupancy Units	No accessible requirements

Note: The limitations and exemptions of Clauses D3.2, D3.3 and D3.4 of the BCA2016 have been considered where applicable in the process of developing the above table.

2.3 Flexible SOU's

Within the plans provided, the following SOU's are required to maintain accessible features in accordance with the Council DCP and SEPP65 accessible design requirements.

Description	Location	SOU's
Livable SOU's	In up to 20% of units	Sole Occupancy Units are to be identified and designed as Livable Housing units.

Note: It is to be noted that and Adaptable SOU can incorporate required Livable Housing features and Visitable features.

3 ACCESS REQUIREMENTS FOR PEOPLE WITH DISABILITIES

3.1 Introduction

The table below is a summary of all the individual elements that relate directly to the ability of a person with a disability to access all the portions of the building required to be accessible as outlined in Part 1.2 of this report.

Accessibility has been assessed against the relevant portions of the BCA2016, Access Code for Buildings, SEPP65 and the related Australian Standards for each item listed below.

Compliance has been indicated by using the following symbols:

Symbol	Description
✓	Compliance is achieved, and no further information is required.
✓	Specific details are not provided, but compliance can be readily achieved.
✗	From the documentation provided, compliance is not achieved.

3.2 Council's Development Control Plan Requirements (DCP)

Newcastle DCP 2012 provides Council's planning controls on the provision of Accessibility.

There is no adaptability requirement for apartments within Newcastle DCP2012. And therefore, only the 20% livable housing apartments is required.

There are also no specific requirements for access for persons with a disability and there are only general access requirements for new developments whereby good access is a design principle but there are no specific requirements that would apply to this existing building as all carparking is internal and access to the building is captured by the Premises Standard and BCA2016 requirements.

The only specific controls for Accessibility are included below

Item No	Control	Comment	Compliance
7.03.02 E.	Parking for People with a Disability	A proportion of parking spaces for persons with a disability is required. Minimum rates are in accordance with the BCA2016. As there is no requirement under BCA2016 for accessible carspaces for class 2 developments then no onsite carparking is required in accordance with the DCP2012.	N/A

3.3 Apartment Design Guide Requirements (ADG / SEPP65)

A comprehensive review of SEPP65 was finalised in 2015, this review included the overhaul of the Residential Flat Design Code into the Apartment Design Guide (ADG) and Livable Housing Design Guideline (LHDG). For apartment development applications lodged after 19 June 2015 and determined after 17 July 2015, the ADG, along with the changes to SEPP65 will apply.

The SEPP 65 Apartment Design Code requires the following in relation to adaptability / accessibility within a residential flat building:

1. Access, entries and pathways are accessible and easy to identify. Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces (page 67).
 - a) Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces.
 - b) Minimise level changes along pathways and entries on ground floor and underground car parks.
 - c) Steps and ramps should be integrated into the overall building and landscape design.
 - d) For large developments “way finding” maps should be provided to assist visitors and residents.
 - e) For large developments electronic access and audio/video intercom should be provided to manage access.
2. Street frontage activity is maximised where ground floor apartments are located. Direct street access should be provided to ground floor apartments (page 109).
3. Developments achieve a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline’s silver level universal design features. Note: Universal design is different to adaptable housing which is governed by AS4299 (page 119).
4. A variety of apartments with adaptable designs in accordance with the relevant council policy are provided including the following design solutions (page 119):
 - a) Convenient access to communal and public areas
 - b) Minimal structural change and residential amenity loss when adapted.
 - c) Larger carparking spaces for accessibility.

Outlined below is a detailed assessment of the proposal against the relevant provisions of the ADG / SEPP65, with reference to the requirements as numbered above:

Item	Design Element	Comment	Compliance
1	Access, entries and pathways are accessible and easy to identify.	As an existing woolstore the existing main entrances contain steps which will need to be modified as necessary to provide access to the lobby areas. From the lobby areas access is possible via the lifts and level floors throughout.	x
2	Street frontage activity is maximised where ground floor apartments are located	Direct street access has been provided to a small number of units but due to the height difference of the existing woolshed floor then level access is not possible. This is an existing building constraint that will not be able to be addressed. This is not a mandatory requirement.	x
3	20% of Livable Housing Design Guidelines (LHDG) silver level	LHDG universal design features are required for this development and applicable to the building in addition to	x

	universal design benchmark to be included in the development.	the Disability Standards and BCA. See Section 3.4 below. At this early stage there is no allocation of 20% of Units to livable housing	
4	A variety of apartments with adaptable designs are provided	Adaptable Housing is not required in accordance with Newcastle Council policies. There is convenient communal space next to the building but further details of walkways to/from to be provided	✓

3.4 Livable Housing Design Guidelines Requirements (LHDG / SEPP65).

LHDG universal design features are required for Class 2 buildings and applicable to the parts of the building class not covered by the Disability Standards and BCA2016 (Vol. 1 and 2).

The new ADG / SEPP65 is applicable for development applications lodged from 17th of July 2015 which requires a benchmark of 20% of units to be designed under the LHDG “silver level” universal design requirements. Based upon the proposed 104 units a total of 21 units are to include LHDG requirements in compliance with the 20% benchmark according ADG / SEPP65.

Currently, the units have not been identified and designed accordingly to be able to conduct the assessment on this section of the report – **please provide the Livable units drawings.**

Item	Design Element	Comment	Compliance
1	DWELLING (SOU) ACCESS		
	Safe and continuous pathway from the boundary or carpark (1000mm clear width, even, firm and slip resistance surface, 1:14 max. cross fall).	Safe and continuous path of travel to be provided from the boundary. Modification of front entrance required as per BCA Clauses. Carpark appears to be level as required. Ensure flooring is continuous and slip resistant.	✓
	Maximum pathway slope of 1:14. Ramps (1:14) to have landings at 9mm max. and walkways (1:20) with landings at 15mm max.	There are no ramps detailed at this stage.	✓
	Step-free path of travel	There are currently steps at the main entrances to the building. To be addressed as per the BCA Clauses.	✗
	Step ramps allowed for 190mm rise max. (1:10 gradient, 1000mm clear width, and 1900mm length max., 1200mm landing length)	No step ramps are required at this stage.	N/A
2	DWELLING (SOU) ENTRANCE		
	Provide 820mm min. clear door width opening	SOU's to show 850mm clear door openings.	✓
	Ensure a level (step-free) transition.	SOU's to show a “step free” entrance.	✓
	Ensure 5mm max. vertical tolerance between bevelled abutting surfaces.	SOU's to show level entrance. Flooring to comply with this requirement, achieved at construction stage.	✓
	Reasonable shelter from the weather.	Shelter to be provided at the entrance.	✓

	Provide 1200x1200mm level landings at entry doors.	SOU to provide 1200x1200mm landing at entry door.	✓
	“Ramped threshold” (Fig 1b) allowed between 5-56mm height change.	SOU's to show a “step free” entrance.	✓
	Level & “step-free” entrance connected to the “safe and continuous pathway”.	SOU's to show “step free” entrance connected directly to a level common internal corridors.	✓
	Waterproofing and termite management at entry door (as per NCC).	Evidence to be provided at construction stage. Note: To comply with BCA2016 Part F	✓
3	CAR PARKING		
	Garages forming part of the dwelling access to be 3200x 5400mm min.	Garages to livable units to show 3200 x 5400 dimensions	✓
	Provide even, firm and slip resistant surface.	Slip resistance test results to comply with AS4586 to be reviewed at construction stage.	✓
	Provide 1:40 max. level surface (1:33 max. asphalt).	Carparking spaces to comply with this requirement.	✓
4	INTERNAL DOOR AND CORRIDORS		
	820mm clear door opening at entry level rooms (living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment).	Internal doors to be 820mm min. clear width	✓
	5mm max. vertical tolerance between bevelled abutting surfaces.	SOU's to show a level entrance. To be achieved at construction stage. Note: To comply with BCA2016 Part F.	✓
	1000mm internal corridors at entry level rooms (living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment).	Internal corridors to show over 1000mm clear width.	✓
5	TOILET		
	Toilet to be on entry level (ground floor).	Toilet to be provided at entry level.	✓
	If WC is located in a separate room. WC pan circulation space to be 900x1200mm front if WC (door not to encroach) (Fig 3a).	Toilet to provide 900x1200mm clearance in front of the WC pan. However, door is encroaching over this area. To assist, provide a sliding door instead a swing door.	✓
	If WC is located within a bathroom. WC pan circulation space to be in the corner of the room to enable installation of grabrails (door not to encroach) (Fig 3b).	Toilet to provide 900x1200mm clearance in front of the WC pan and be located in the corner of the room. To assist, provide a sliding door instead a swing door to avoid door encroachment over the circulation space.	✓
6	SHOWER		
	Bathroom to have slip resistant and hobless shower recess (portable shower screens allowed)	SOU's to be provided with a hobless shower recess. Shower screen can	✓

		be provided, however to be portable only. Test results and further details to be provided at construction stage.	
	Shower recess located in a room corner to enable the installation of grabrails.	Shower recess to be provided at the end of the bathroom. Details to be provided at construction stage.	✓
7	REINFORCEMENT ON WALLS		
	Walls to be constructed of solid masonry or concrete, otherwise to be reinforced.	Details to be provided at construction stage.	✓
	1100N min. withstand in all directions.	Details to be provided at construction stage.	✓
	For WC, the reinforcement to be 25mm thick noggings (Fig 6a), or 12mm thick sheeting (Fig 6b)	Details to be provided at construction stage.	✓
	For baths, reinforcement to be 25mm thick noggings (Fig 7a), or 12mm thick sheeting (Fig 7b)	Details to be provided at construction stage.	✓
	For showers, reinforcement to be 25mm thick noggings (Fig 8a), or 12mm thick sheeting (Fig 8b)	Details to be provided at construction stage.	✓
8	INTERNAL STAIRS		
	A continuous stairway handrail where there is a rise of more than 1m.	Where stairs provided, handrail to be provided in compliance with this clause.	✓

Note: The design elements describes in these guidelines should only be applied to the parts of the building classes not covered by the Disability Standards and NCC (BCA2016 Vol 1 and 2).

3.5 Building Code of Australia 2016 Assessment Summary (BCA2016)

CLAUSE		COMMENT	STATUS
SECTION D: ACCESS AND EGRESS			
PART D3 - ACCESS FOR PEOPLE WITH A DISABILITY			
D3.0	Deemed To Satisfy Provisions	Noted	-
D3.1	General Building Access Requirements	<p>Access is possible to and within all parts of the building due to the lifts provided to each level.</p> <p>Each storey is level and accessible path of travel is available throughout.</p> <p>No access is required to the mezzanine level as these are assumed to be within the level 4 units.</p>	✓
D3.2	Access to Buildings	<p>Access is not currently possible to the building as there are existing stairs to the two main entrances. Ramped entry or lift to be provided.</p> <p>The two main entrances are required to be accessible as the distance between entrances is more than 50 metres.</p> <p>There are no required onsite carparks and there is only a single building on the allotment so no additional accessways are needed.</p>	✗
D3.3	Parts of Buildings to be Accessible	<p>The accessways throughout the development are very concept in design but will need to be modified to address the following:-</p> <ul style="list-style-type: none"> -1540 x2070 turning bays at ends of corridors -Passing spaces along corridors at 20m intervals -Stairs to have offset/staggered riser at the bottom riser to ensure that handrails have no vertical sections <p>Note: The Access to Premises Standards to not provide the concessions provided in sub-clauses (g) and (h) in this clause, hence compliance with the Access to Premises Standards will require the floor covering in the accessible areas to strictly comply with Clause 7.4.1(a) of AS1428.1-2009.</p>	✓
D3.4	Exemptions	<p>Certain areas can be exempted under this clause if pose a health and safety risk for people with disability and /or access would be inappropriate because the particular purpose for which this area is used (e.g. plant rooms, service areas, heavy / toxic item storage, etc.)</p> <p>The following areas within this development have been identified as potential excepted areas, subject to certifier's approval:</p> <ul style="list-style-type: none"> • Plant /Service Rooms 	Noted
D3.5	Accessible Parking Car	As the carpark serves a class 2 residential development there is no requirement to provide accessible carparking spaces in accordance with this clause.	N/A

SECTION D: ACCESS AND EGRESS			
		Note: Livable housing parking spaces will require to comply with LHDG but only when the carpark forms part of the access to the unit.	
D3.6	Signage	Braille and tactile signage complying with Specification D3.6 and incorporating the international symbols as appropriate must identify each sanitary facility (accessible and ambulant), all accessible entrances where an entrance is not accessible and the all exits provided with exit signs.	✓
D3.7	Hearing Augmentation	N/A	N/A
D3.8	Tactile Indicators	TGSI's to be provided in compliance with this Clause, AS1428.1, AS1428.4.1 and AS4586/HB198 at bottom and top of stairs / ramps (except fire-isolated). Ensure installed full tread width, colour contrasting with adjacent surface, slip resistance and 300mm from the ramp edge of stair riser.	✓
D3.9	Wheelchair seating spaces in Class 9b Assembly Buildings	N/A	N/A
D3.10	Swimming Pools	N/A	N/A
D3.11	Ramps	On an accessway a series of connected ramps must not have a combined vertical rise of 3.6m and a landing for a step ramp must no overlap a landing for another step ramp or ramp.	N/A
D3.12	Glazing on an Accessway	On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.	✓
SPECIFICATION D3.6 – BRAILLE AND TACTILE SIGNS			
1.	Scope	Noted	-
2.	Location of Braille and Tactile Signs	The location of braille and tactile signs shall be in accordance with AS1428.1 and Specification D3.6.	✓
3.	Braille and Tactile Sign Specification	All accessible signage to comply with this clause and AS1428.1. Tactile characters to be raised in sentence case with matt finish.	✓
4.	Luminance-contrast	All accessible signage to comply with this clause and As1428.1. The sign background to have at least 30% luminance contrast with the 5mm width border, tactile characters and braille. Luminance contrast to be measured on the location once installed.	✓
5.	Lighting	Braille and tactile signs to be appropriate illuminated, in complaint with this Clause and AS1428.1. The access pathway must have a minimum luminance contrast of 30%, in accordance with AS1428.1.	✓
6.	Braille	Braille must be in accordance with the criteria set out by the Australian Braille Authority.	✓

SECTION E: SERVICES AND EQUIPMENT			
PART E3 – LIFT INSTALLATIONS			
E3.0	Deemed-to-Satisfy Provisions	Noted	-
E3.6	Passenger Lifts	<p>Passenger lift to comply with this Clause, Table 3.6a Limitation of Use, Table 3.6b Application of Features and AS1735.12.</p> <p>The passenger lifts travel less than 12m so will only require 1100 wide x1400mm deep minimum lift car internal dimensions.</p> <p>Note: Platform lifts can be used up to 4m travel distance.</p> <p>Note: Stairway lifts are not allowed where is possible to install another type of passenger lift (e.g. unjustifiable hardship, heritage buildings)</p>	✓

SECTION F: HEALTH AND AMENITY			
PART F2 – SANITARY AND OTHER FACILITIES			
F2.0	Deemed-to-Satisfy Provisions	Noted	-
F2.4	Accessible Sanitary Facilities (including Table F2.4)	<p>In accordance with Clause F2.1 a caretaker toilet facility is required. And in accordance with this clause the sanitary facility shall be accessible.</p> <p>Details to be provided of the accessible WC at or near ground level.</p>	✓

4 MATTERS FOR FURTHER CONSIDERATION

4.1 General

Assessment of the architectural design documentation against the Deemed-to-Satisfy Provisions of the BCA2016 has revealed the following areas where compliance with the BCA2016 may require further consideration.

Note: Part 3 of this report provides a detailed assessment of the proposal against all relevant Deemed-to-Satisfy Provisions of the BCA2016. It is important that Part 3 of this report is read in conjunction with the items below, as some matters may not have had sufficient information provided to allow a detailed assessment to be undertaken.

4.2 Universal Design (SEPP65)

4.2.1 Drawings

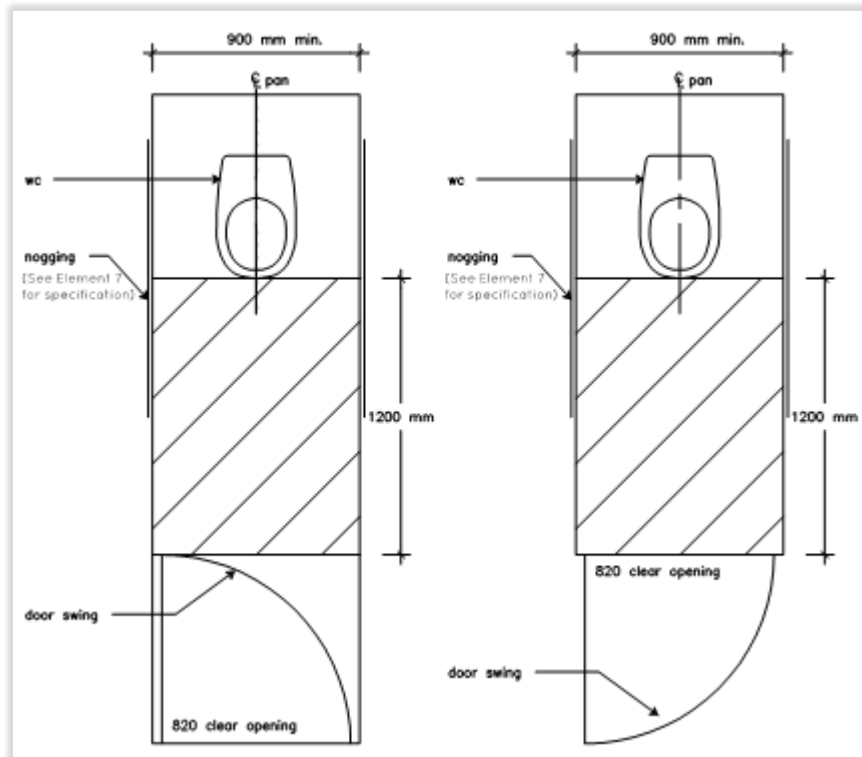
To allow assessment, the floorplan drawings will be required to be updated to identify the required 20% Livable housing sole occupancy units and be designed in compliance with LHDG silver level requirements.

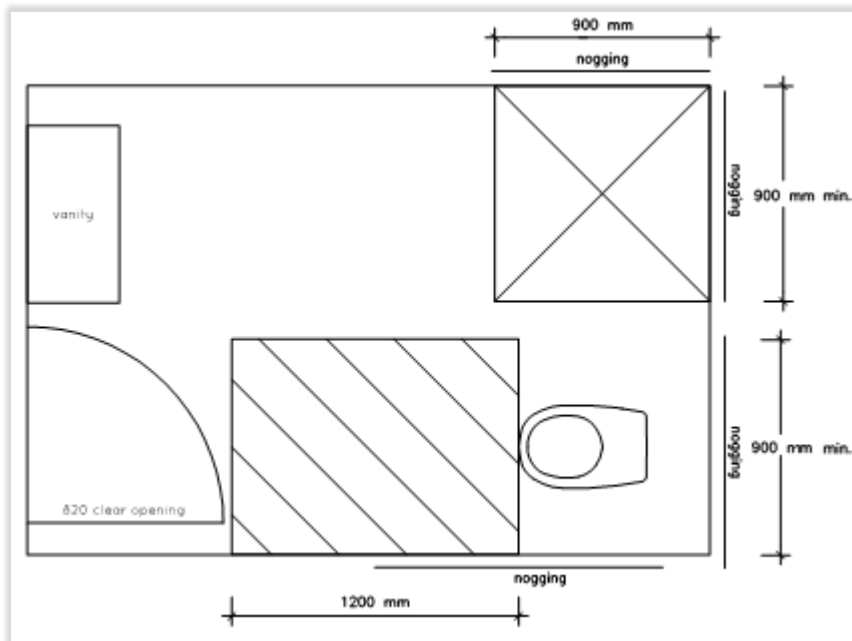
Specific requirements that will need to be included are detailed further below:-

4.2.2 Entry Level Bathroom

Livable housing bathroom to be located at entry level (ground floor) of any two storey units and WC pan to be placed in the corner of the room with a clear circulation space in front of 900x1200mm (door not to encroach) to enable grabrails installation.

Note: If WC is placed in a separate cubicle to have 900x1200mm clear circulation space in front (door not to encroach)





4.2.3 Entry Door

Livable housing Sole Occupancy Units are to be provided with 1200x1200mm level landings at the entry door. Where livable housing units are located along narrow corridors then the corridor width to be increased accordingly.

4.2.4 Shower

Livable housing bathroom to have slip resistant and hob-less shower recess (portable shower screens allowed) and located in a room corner to enable the installation of grabrails.

4.2.5 Carpark

If any of the level 1 units containing an associated adjoining carpark are proposed to be Livable Apartments then the carparks are required to have increased internal dimensions as follows:-

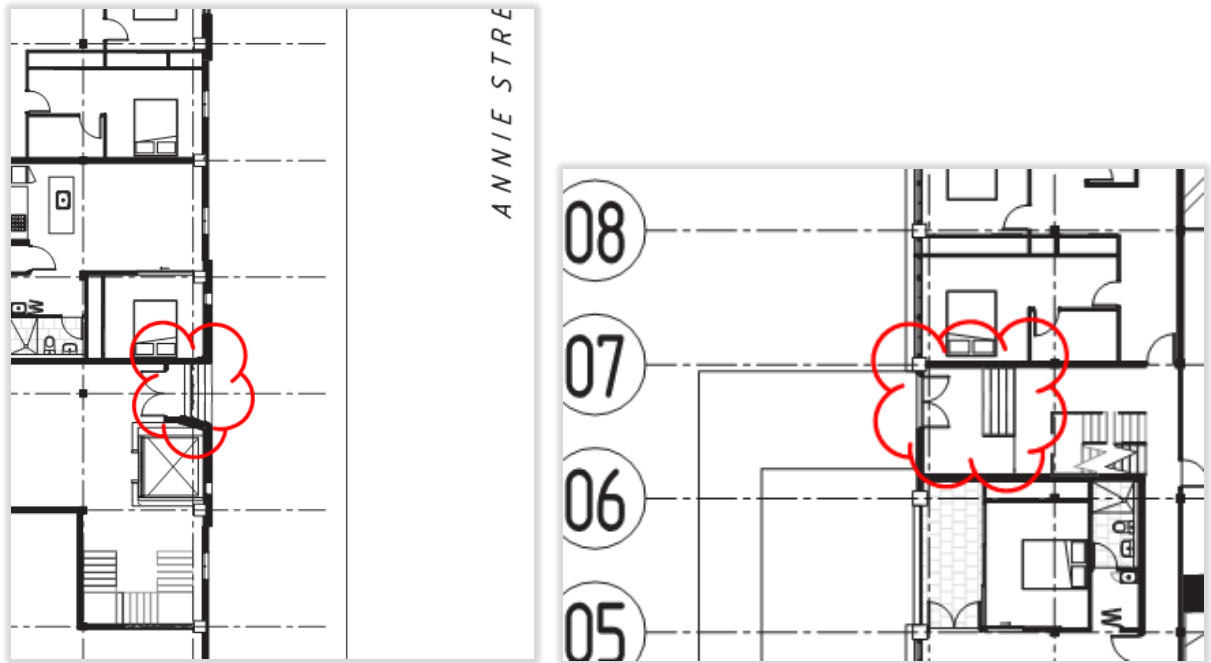
Silver Level

- a. Where the parking area forms part of the dwelling access the space should incorporate:
 - 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).

4.3 Accessibility (BCA)

4.3.1 Site Boundary - D3.2

Provide an accessway compliant with AS1428.1 to the principal pedestrian entrances at the site boundary. Currently there are stairs leading up to the level 1 floor level of both entrances and these will be required to be ramped, or otherwise an internal lift will be needed.



4.3.2 Accessways – D3.3

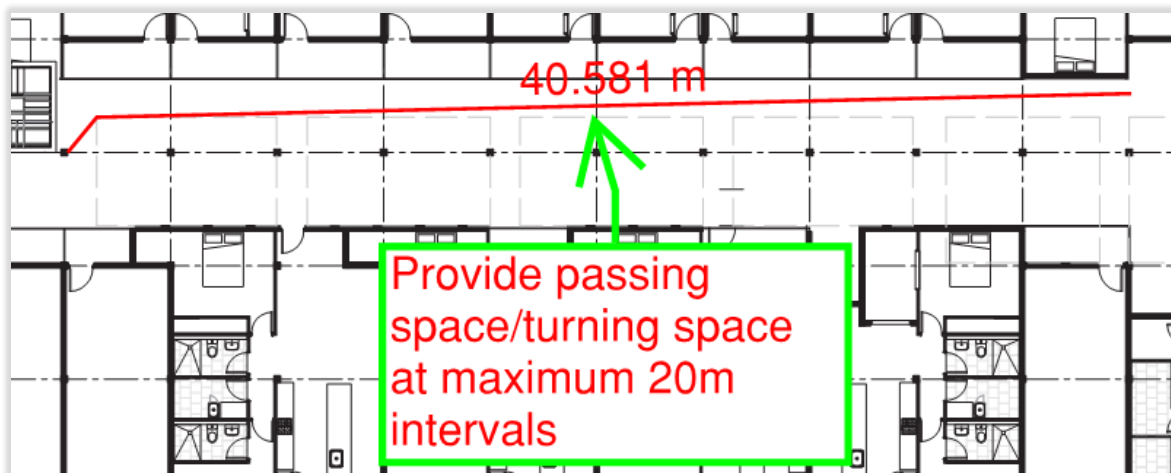
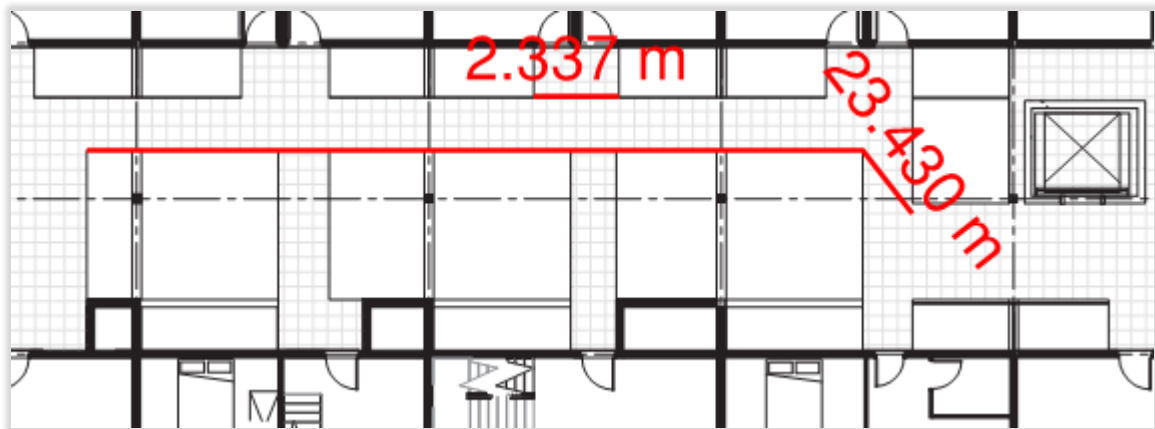
a. Provide a 1540 x2070mm turning bay within 2 metres of the end of all corridors in accordance with AS1428.1-2009.

There are multiple locations where this is an issue. Example location at level 1 below:-

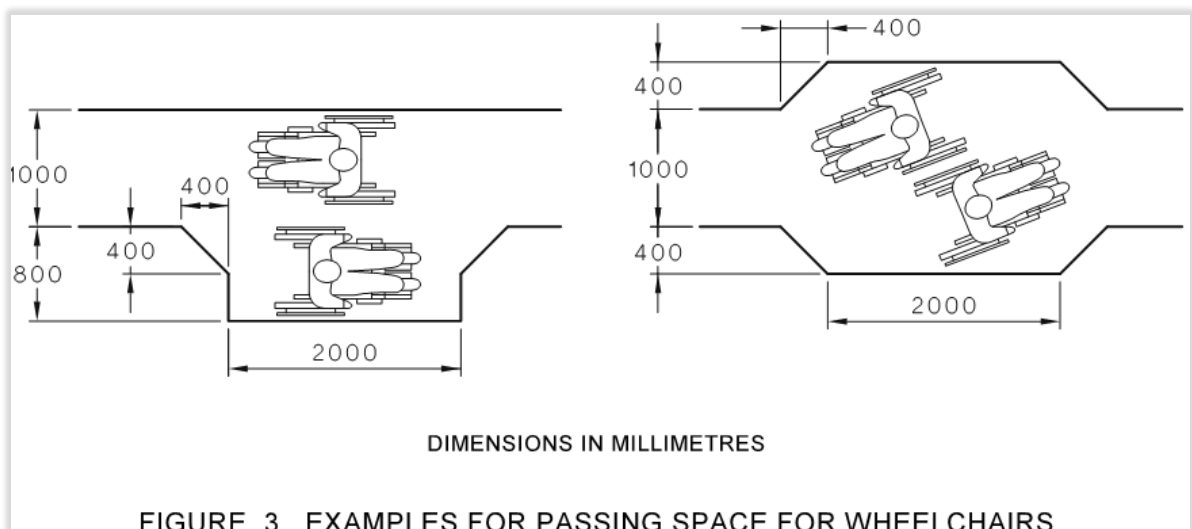


b. Provide a passing space/turning space for wheelchairs at maximum 20 metre intervals in accordance with AS1428.1-2009.

Example locations below:-



Redesign of all long corridors at levels 3 & 4 to include compliance with AS1428.1-2009 excerpt below:-

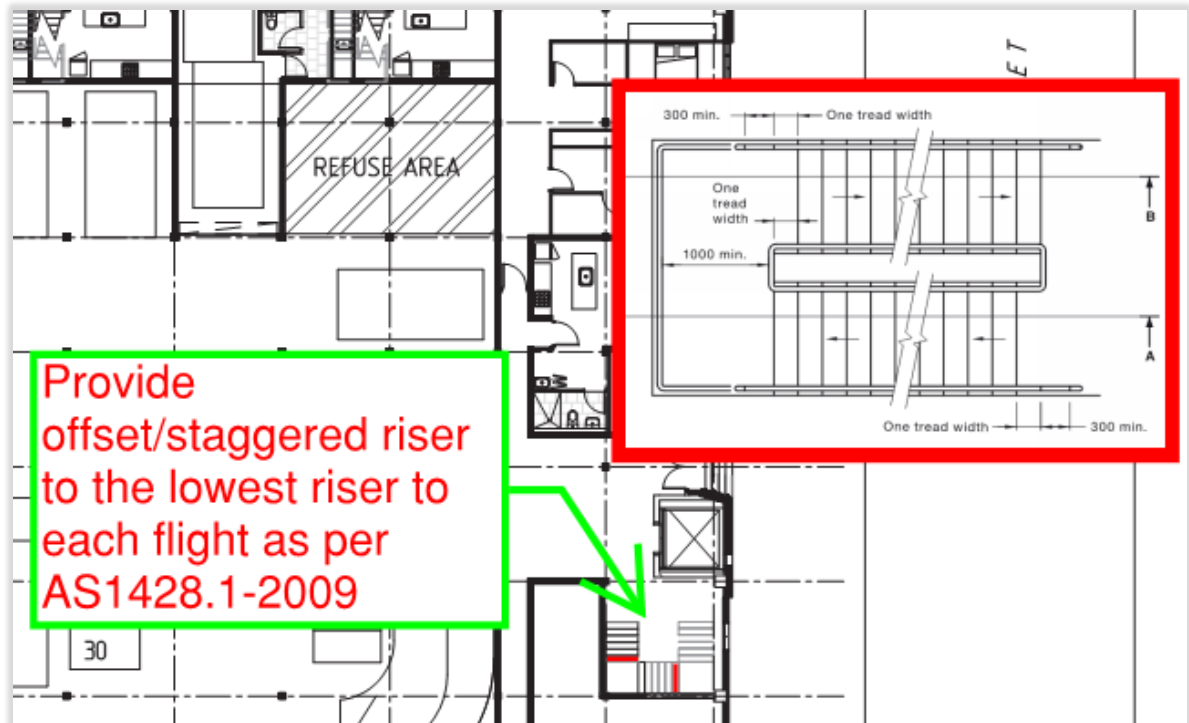


4.3.3 Stairs

To all stairs, provide an off-set tread at stair base to allow continuous height handrail along the full stair flight, compliant with AS1428.1.

Note: this will result in the stair lengthening and stair shaft increase.

Example stair below:-



4.3.4 Accessible Toilets – F2.4

In accordance with BCA Clause F2.1 a caretaker toilet facility is required and this is to be an accessible sanitary facility in accordance with this clause.

Indicate on the drawings the location of the caretaker toilet facility with dimensions complying with AS1428.1-2009.

4.4 Design Certification

Further due to the level of detail provided at this stage the following items are to form part of a design statement or specification:

General

- 1 Tactile ground surface indicators will be installed at the top and bottom of stairways / ramps (other than fire isolated stairways / ramps); and where an overhead obstruction is less than 2 metres above the floor level. Tactile ground surface indicators will comply with Sections 1 and 2 of AS1428.4.1.
- 2 On an accessway where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights or glazing capable of being mistaken for a doorway or opening will be clearly marked and comply with Clause 6.6 of AS1428.1-2009. A solid non-transparent contrasting line not less than 75mm wide is to extend across the full width of the glazing panel. The lower edge of the contrasting line is to be located between 900-1000mm above the plane of the finished floor level. The contrasting line is to provide a minimum of 30% luminance contrast when viewed against the floor surface or surfaces within 2 metres of the glazing on the opposite side.
- 3 All doorways will have a minimum luminance contrast of 30% in accordance with Clause 13.1 of AS1428.1-2009.
- 4 Fixtures and fittings in accessible sanitary facilities will be provided and installed in accordance Clause 15 of AS1428.1-2009.
- 5 Fixtures and fittings in ambulant facilities will be provided and installed in accordance Clause 16 of AS1428.1-2009.
- 6 Walkways will comply with Clause 10 of AS1428.1-2009.
- 7 For the walkways, the floor or ground surface abutting the sides of the walkway will be firm and level of a different material to that of the walkway at the same level and follow the grade of the walkway and extend horizontally for a minimum of 600mm, or be provided with a kerb or kerb rail in accordance with Clause 10.2 of AS1428.1-2009.
- 8 Stairways will comply with Clause 11 of AS1428.1-2009.
- 9 The fire isolated stairs will comply with Clause 11.1(f) and (g) of AS1428.1-2009.
- 10 Handrails will comply with Clause 12 of AS1428.1-2009.
- 11 Grabrails will comply with Clause 17 of AS1428.1-2009.
- 12 Accessible car spaces will achieve compliant headroom clearances in accordance with Clause 2.4 of AS2890.6-2009.
- 13 Demarcation will be provided in the accessible car space and adjacent shared zone in accordance with Clause 3.1 and 3.2 of AS2890.6. Refer to Annexure B1 for a diagrammatic explanation.
- 14 Bollards will be provided in the shared disabled car space area in accordance with Clause 2.2.1(e) of AS2890.6-2009. Refer to Annexure B1 for a diagrammatic explanation.
- 15 Switches and power points will comply with Clause 14 of AS1428.1-2009.
- 16 Floor and ground floor surfaces on accessible paths and circulation spaces including the external areas will comply with Clause 7 of AS1428.1-2009. Any level difference over 3mm must be ramped according AS1428.1 Clause 10.5.
- 17 Braille and tactile signage will comply with BCA2016 Clause D3.6.
- 18 Signage will to comply with Clause 8 of AS1428.1-2009.
- 19 The passenger lifts will comply with BCA2016 Table E3.6b and AS1735.12.
- 20 The unobstructed height of a continuous accessible path of travel will be a minimum of 2000mm and 1980mm at doorways.
- 21 Door handles and the like, will be in accordance with Clause 13.5 of AS1428.1-2009.

SEPP 65 – Livable Housing Design Guidelines (LHDG)

1. Entrance door to have 820mm min. clear door width opening, level transition (5mm max. vertical tolerance) and reasonable shelter from the weather.
2. Entrance door to have 1200x1200mm level landings.
3. “Ramped threshold” (Fig 1b) allowed between 5-56mm height change.
4. Level & “step-free” entrance connected to the “safe and continuous pathway”.
5. Waterproofing and termite management at entry door (as per NCC).
6. Garages to have minimum 3200x5400mm, an even, firm and slip resistant surface with 1:40 max. level surface (1:33 max. asphalt).
7. All internal doors to have 820mm min. clear door opening at entry level rooms, 5mm max. vertical tolerance surface, and 1000mm min. internal corridors at entry level rooms.
8. Toilet to be on entry level (ground floor).
9. If WC is located in a separate room. WC pan circulation space to be 900x1200mm front if WC (door not to encroach) (Fig 3a).
10. If WC is located within a bathroom. WC pan circulation space to be in the corner of the room to enable installation of grabrails (door not to encroach) (Fig 3b).
11. Bathroom to have slip resistant and hobless shower recess (portable shower screens allowed)
12. Shower recess located in a room corner to enable the installation of grabrails.
13. Walls to be constructed of solid masonry or concrete, otherwise to be reinforced (1100N min. withstand in all directions).
14. For WC, the reinforcement to be 25mm thick noggings (Fig 6a), or 12mm thick sheeting (Fig 6b)
15. For baths, reinforcement to be 25mm thick noggings (Fig 7a), or 12mm thick sheeting (Fig 7b)
16. For showers, reinforcement to be 25mm thick noggings (Fig 8a), or 12mm thick sheeting (Fig 8b)
17. A continuous stairway handrail where there is a rise of more than 1m.

Annexure A**Design Documentation**

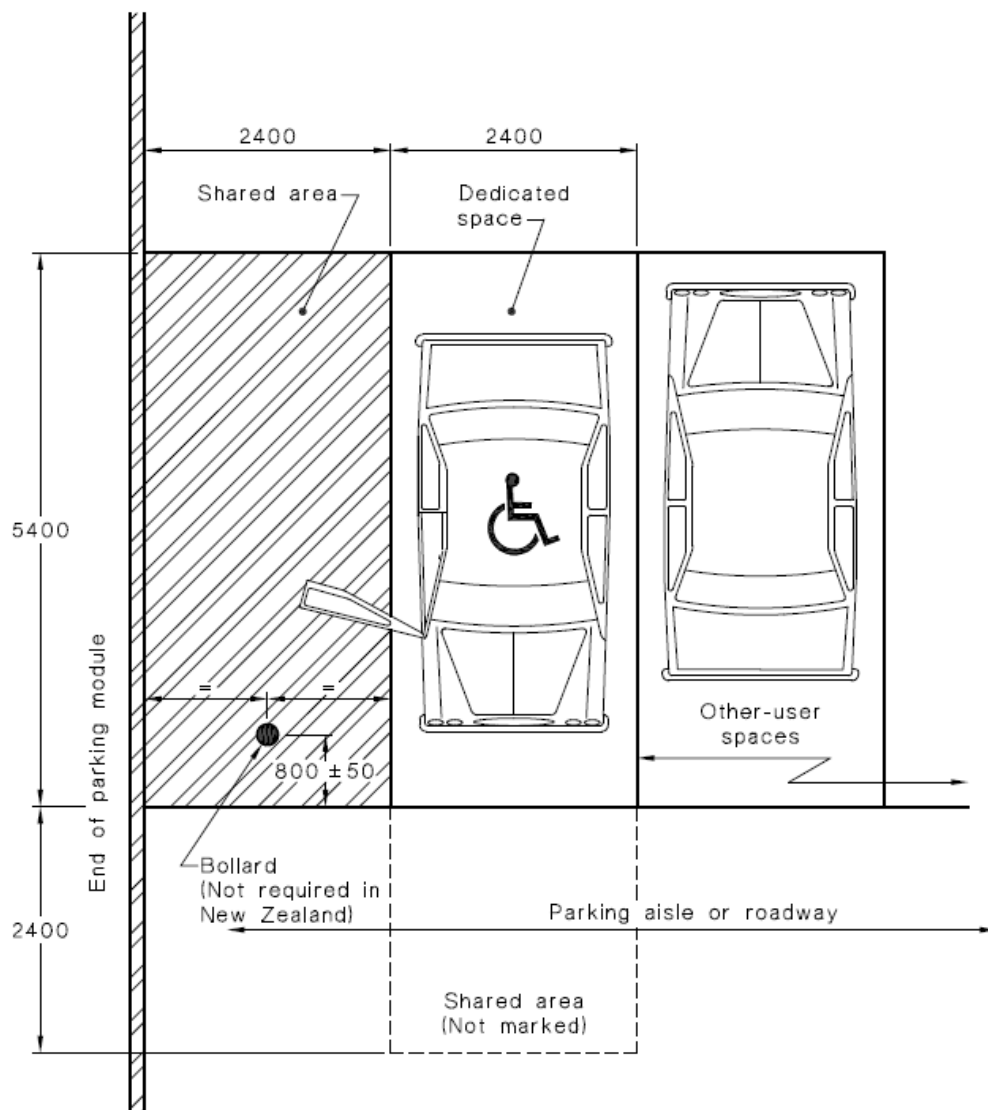
This report has been based on the following design documentation.

Architectural Plans Prepared by Fairweather Jemmott (DA Package Draft)		
Drawing Number	Revision	Title
5		Site Plan
6		Site Analysis
7		Existing Level 1 Plan
8		Existing Level 2 Plan
9		Existing Level 3 Plan
10		Existing Level 4 Plan
11		Existing Elevations
12		Proposed Level 1 Plan
13		Proposed Level 2 Plan
14		Proposed Level 3 Plan
15		Proposed Level 4 Plan
16		Proposed Elevations
17		Proposed Elevations
18		Proposed Sections
19		Proposed Sections

Annexure B

Figures and Drawings Sample

B 1



DIMENSIONS IN MILLIMETRES

FIGURE 2.2 EXAMPLE OF AN ANGLE PARKING SPACE WITH SHARED AREA ON ONE SIDE ONLY—DIMENSIONS FOR AUSTRALIA ONLY*

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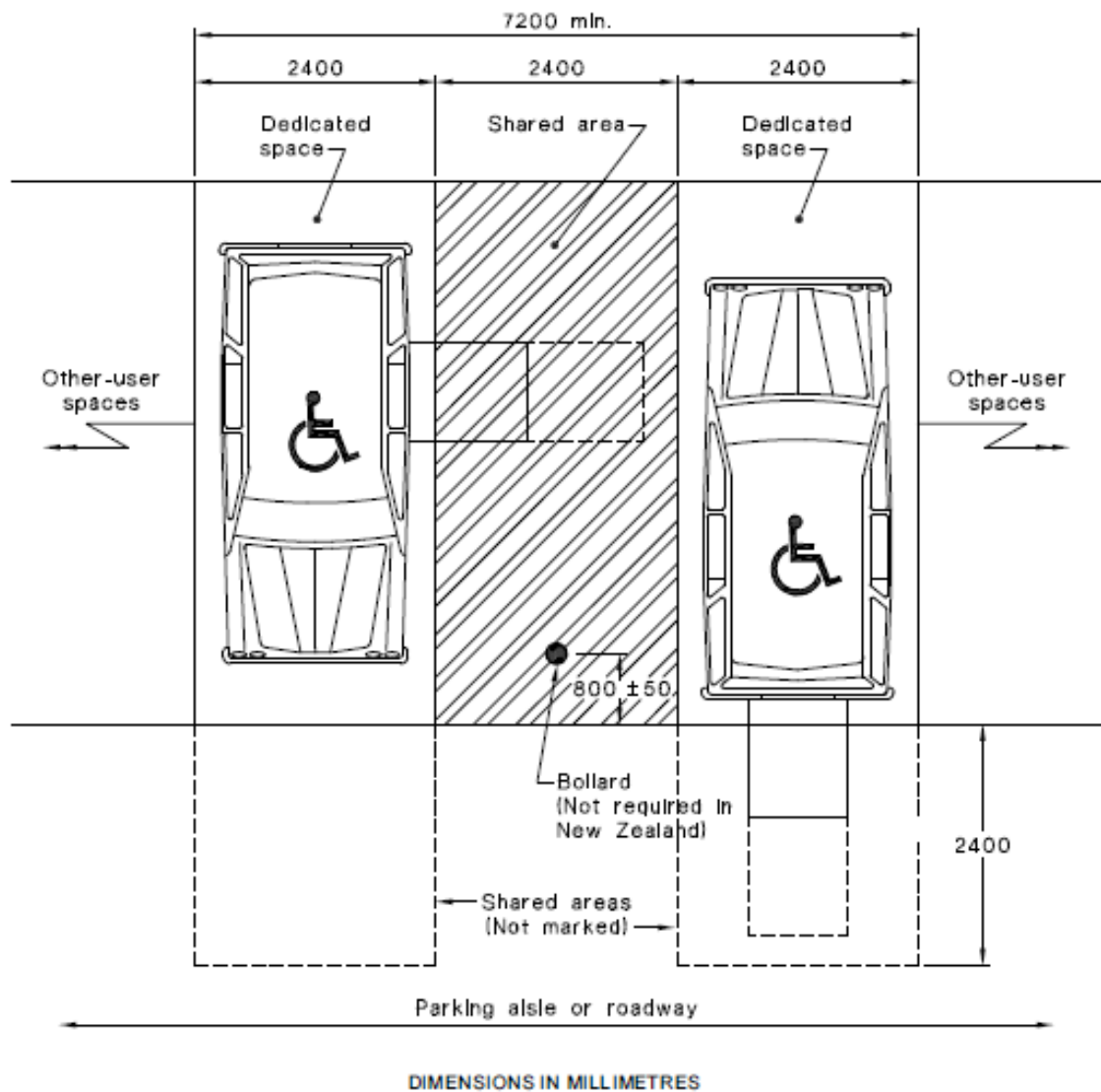
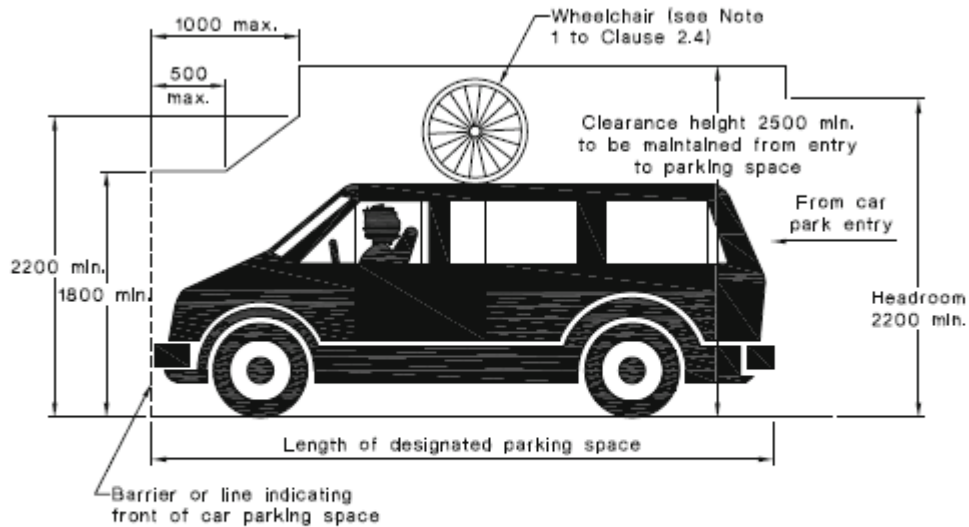
B 2

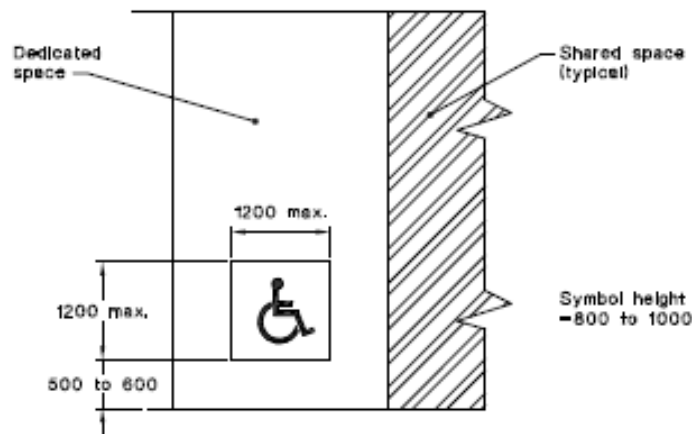
FIGURE 2.3 EXAMPLE OF TWO PARKING SPACES WITH A COMMON SHARED AREA—DIMENSIONS FOR AUSTRALIA ONLY*

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B 3

DIMENSIONS IN MILLIMETRES

FIGURE 2.7 HEADROOM REQUIRED ABOVE CAR SPACES FOR PEOPLE WITH DISABILITIES

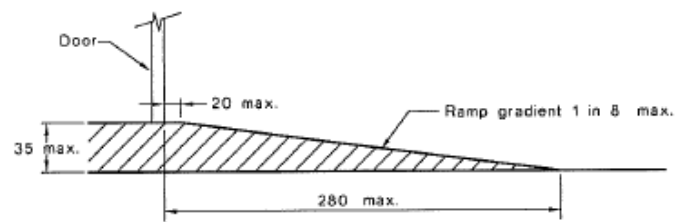
[Back](#)**B 4**

DIMENSIONS IN MILLIMETRES

FIGURE 3.1 USE OF SYMBOL OF ACCESS TO IDENTIFY SPACES

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B 5



DIMENSIONS IN MILLIMETRES

FIGURE 21 THRESHOLD RAMP

B 6

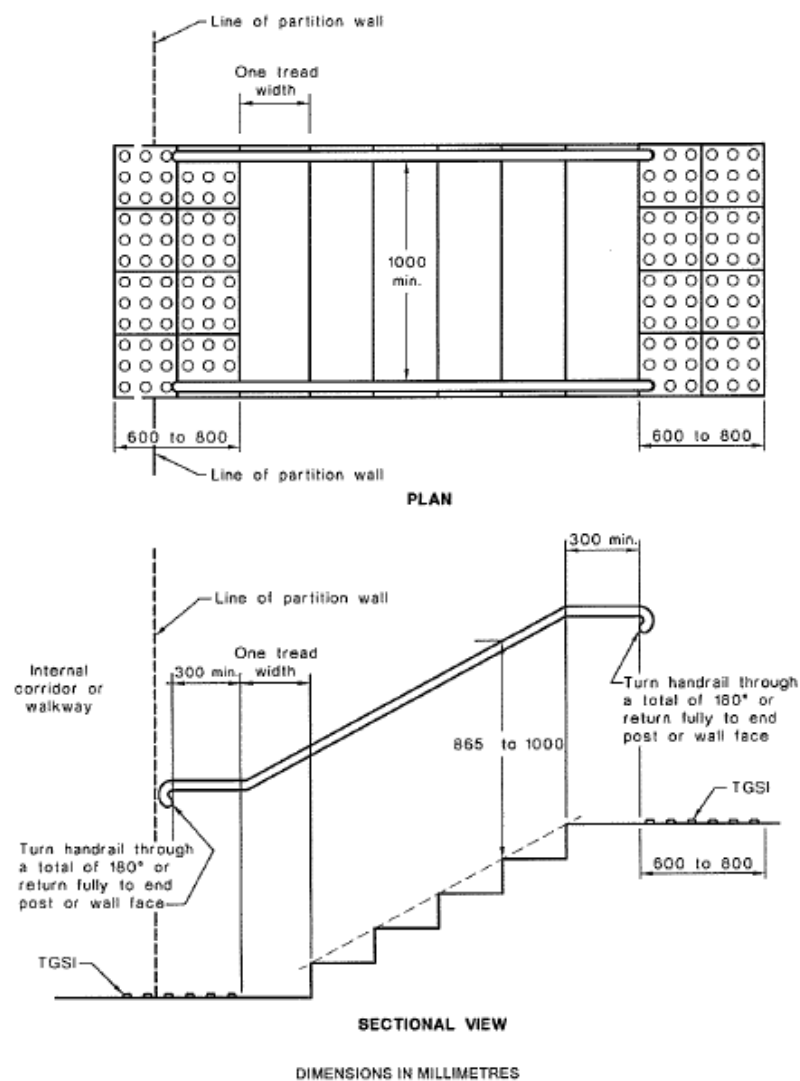
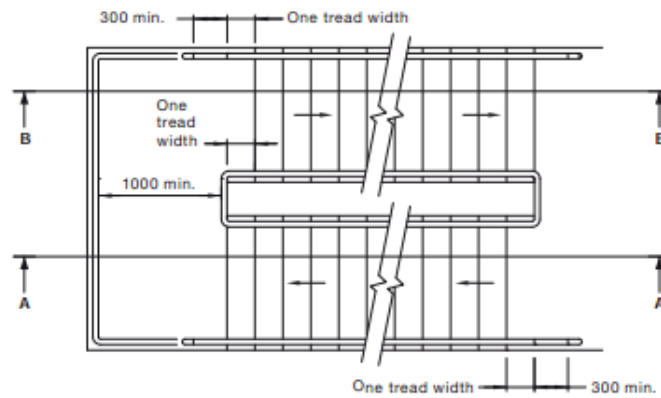


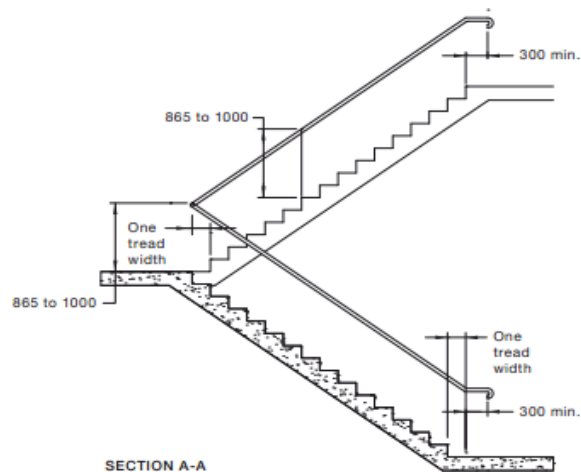
FIGURE 26(B) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT END OF STAIRWAY OTHER THAN AT LINE OF BOUNDARY

B 7

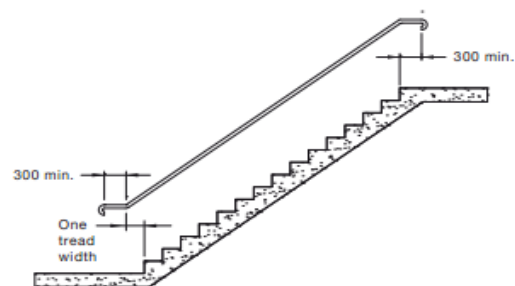
(a) Plan

DIMENSIONS IN MILLIMETRES

FIGURE 28 (in part) HANDRAILS TO STAIRS WITH INTERMEDIATE LANDINGS



SECTION A-A



SECTION B-B

(b) Sections

DIMENSIONS IN MILLIMETRES

FIGURE 28 (in part) HANDRAILS TO STAIRS WITH INTERMEDIATE LANDINGS

