PHILIP CHUN
Building Compliance

PITT STREET SOUTH OVER STATION DEVELOPMENT

Report Prepared for: Pitt Street Developer South Pty Ltd

Report Prepared by: Philip Chun Accessibility Pty Ltd

Report Reference: SMCSWSPS-PCH-OSS-PL-REP-000002
Report Revision: Revision C
Report Issue: Issue for SSD DA Lodgement
Date: 15 May 2020

STATE SIGNIFICANT DEVELOPMENT, DEVELOPMENT APPLICATION (SSD DA) ACCESS REPORT

CONTENTS

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DOCUMENT ACCEPTANCE

	Name	Signed	Date
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REVISION HISTORY

Revision No.	Prepared by	Description	Date
R00	David Choe *Access Consultant* *ACAA Affiliate Member 574*	Draft SSD DA	6th December 2019
R01	David Choe *Access Consultant* *ACAA Affiliate Member 574*	Revised SSD DA	20th January 2020
R02	Lucy Alderson & David Choe *Access Consultants*	FINAL	17th February 2020
Revision B	David Choe *Access Consultant* *ACAA Affiliate Member 574*	Submission to Metro for Landowner's Consent	3rd April 2020
Revision C	David Choe *Access Consultant* *ACAA Affiliate Member 574*	SSD DA Submission	15th May 2020

This report has been prepared based on the available time allocated to conduct the review, and all reasonable attempts have been made to identify key compliance matters pursuant to the BCA and additional issues which have been deemed an impediment to access provision and may increase Client risk of attracting a complaint under the DDA.

The information provided within this report is relevant to this project and the documentation referenced. As such the information provided may not be transferred to other projects. This report must not be issued for public comment or be used for any other purpose without prior permission from Philip Chun Accessibility.

Philip Chun Accessibility accepts no responsibility for any loss suffered as a result of any reliance upon such assessment or report other than providing guidance to alleviate access barriers in the built environment and reduce Client risk of attracting a complaint under the DDA.

1. INTRODUCTION AND DOCUMENTATION

This report has been prepared to accompany a detailed State Significant Development (SSD) development application (DA) for a residential Over Station Development (OSD) above the new Sydney Metro Pitt Street South Station. The detailed SSD DA is consistent with the Concept Approval (SSD 17_8876) granted for the maximum building envelope on the site, as proposed to be modified.

The Minister for Planning, or their delegate, is the consent authority for the SSD DA and this application is lodged with the NSW Department of Planning, Industry and Environment (NSW DPIE) for assessment.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 28 October 2019.

The detailed SSD DA seeks development consent for the construction and operation of

- New residential tower with a maximum building height of RL 171.6, including residential accommodation and podium retail premises, excluding station floor space
- Use of spaces within the CSSI 'metro box' building envelope for the purposes of:
  - *Retail tenancies;*
  - Residential communal facilities, residential storage, bicycle parking, and operational back of house uses
  - Shared vehicle loading and service facilities on the ground floor
  - Landscaping
  - *Utilities and services provision.*
  - *Stratum subdivision (Station/OSD).*
- *Integration with the approved CSSI proposal including though not limited to:*
  - *Structures, mechanical and electronic systems, and services; and*
  - *Vertical transfers;*

The Site

The site is located within the Sydney CBD, on the corner of Bathurst Street and Pitt Street. It has two separate street frontages, Pitt Street to the west and Bathurst Street to the north. The area surrounding the site consists of predominantly residential high-density buildings and some commercial buildings, with finer grain and heritage buildings dispersed throughout.

The site has an approximate area of 1,710sqm and is now known as Lot 10 in DP 1255507. The street address is 125 Bathurst Street, Sydney.

Figure 1 – Location Plan

Sydney Metro Description
Sydney Metro is Australia's biggest public transport program. A new standalone railway, this 21st century network will revolutionise the way Sydney travels.

There are four core components:

- **Sydney Metro Northwest (formerly the 36km North West Rail Link)**

This project is now complete and passenger services commenced in May 2019 between Rouse Hill and Chatswood, with a metro train every four minutes in the peak. The project was delivered on time and $1 billion under budget.

- **Sydney Metro City & Southwest**

Sydney Metro City & Southwest project includes a new 30km metro line extending metro rail from the end of Metro Northwest at Chatswood, under Sydney Harbour, through new CBD stations and southwest to Bankstown. It is due to open in 2024 with the ultimate capacity to run a metro train every two minutes each way through the centre of Sydney.

Sydney Metro City & Southwest will deliver new metro stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Waterloo and new underground metro platforms at Central Station. In addition it will upgrade and convert all 11 stations between Sydenham and Bankstown to metro standards.

In 2024, customers will benefit from a new fully-air conditioned Sydney Metro train every four minutes in the peak in each direction with lifts, level platforms and platform screen doors for safety, accessibility and increased security.

- **Sydney Metro West**

Sydney Metro West is a new underground railway connecting Greater Parramatta and the Sydney CBD. This once-in-a-century infrastructure investment will transform Sydney for generations to come, doubling rail capacity between these two areas, linking new communities to rail services and supporting employment growth and housing supply between the two CBDs.

The locations of seven proposed metro stations have been confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and The Bays.

The NSW Government is assessing an optional station at Pyrmont and further planning is underway to determine the location of a new metro station in the Sydney CBD.

- **Sydney Metro Greater West**

Metro rail will also service Greater Western Sydney and the new Western Sydney International (Nancy Bird Walton) Airport. The new railway line will become the transport spine for the Western Parkland City's growth for generations to come, connecting communities and travellers with the rest of Sydney's public transport system with a fast, safe and easy metro service. The Australian and NSW governments are equal partners in the delivery of this new railway

The Sydney Metro Project is illustrated in the figure below.

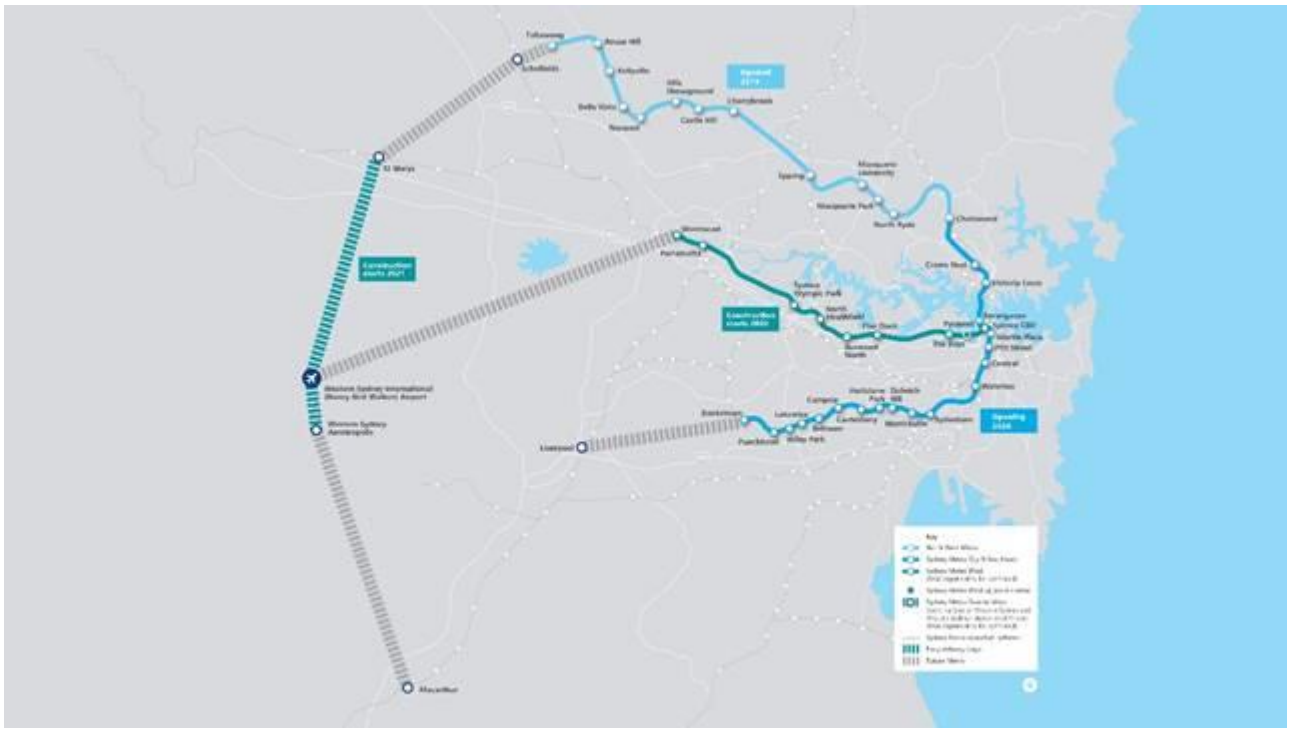


Figure 2 – Sydney Metro Alignment Map, Source: Sydney Metro

On 9 January 2017, the Minister for Planning approved the Sydney Metro City & Southwest - Chatswood to Sydenham project as a Critical State Significant Infrastructure project (reference SSI 15_7400) (CSSI Approval). The terms of the CSSI Approval includes all works required to construct the Sydney Metro Pitt Street Station, including the demolition of existing buildings and structures on both sites (north and south). The CSSI Approval also includes construction of below and above ground works within the metro station structure for appropriate integration with over station developments.

The CSSI Approval included Indicative Interface Drawings for the below and above ground works at Pitt Street South Metro Station site. The delineation between the approved Sydney Metro works, generally described as within the “metro box”, and the Over Station Development (OSD) elements are illustrated below. The delineation line between the CSSI Approved works and the OSD envelope is generally described below or above the transfer slab level respectively.

Figure 3 – Pitt Street Station (North-South Section)

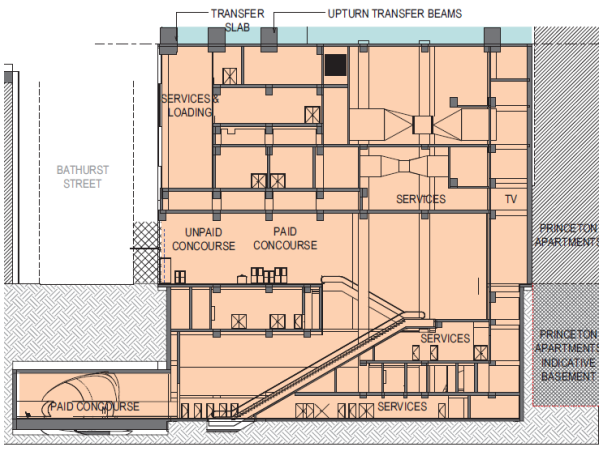
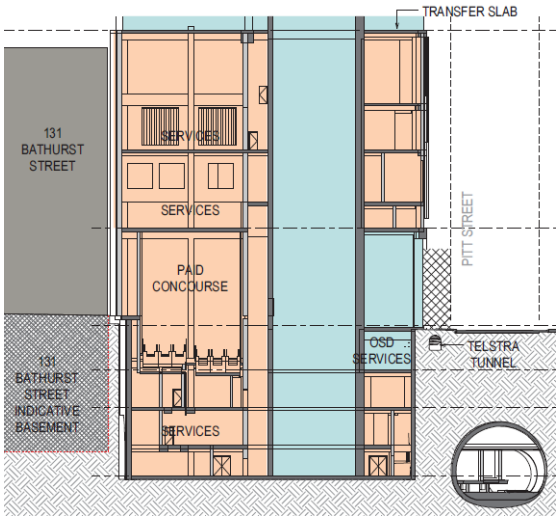
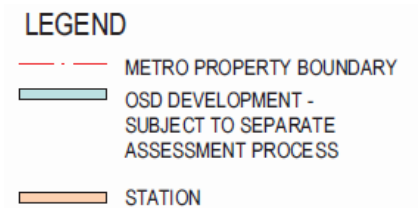


Figure 4 – Pitt Street Station (East-West Section)





Source: CSSI Preferred Infrastructure Report (TfNSW)

The Preferred Infrastructure Report (PIR) noted that the integration of the OSD elements and the metro station elements would be subject to the design resolution process, noting that the detailed design of the "metro box" may vary from the concept design assessed within the planning approval.

As such in summary:

- The CSSI Approval provides consent for the construction of all structures within the approved "metro box" envelope for Pitt Street South.
- The CSSI Approval provides consent for the fit out and use of all areas within the approved "metro box" envelope that relate to the ongoing use and operation of the Sydney Metro.
- The CSSI Approval provides consent for the embellishment of the public domain, and the architectural design of the "metro box" envelope as it relates to the approved Sydney Metro and the approved Pitt Street South Station Design & Precinct Plan.
- Separate development consent however is required to be issued by the NSW DPIE for the use and fit-out of space within the "metro box" envelope for areas related to the OSD, and notably the construction and use of the OSD itself.

As per the requirements of clause 7.20 of the *Sydney Local Environmental Plan 2012*, as the OSD exceeds a height of 55 metres above ground level (among other triggers), development consent is first required to be issued in a Concept (formerly known as Stage 1) DA. This is described below.

Pitt Street South Over Station Development (OSD)

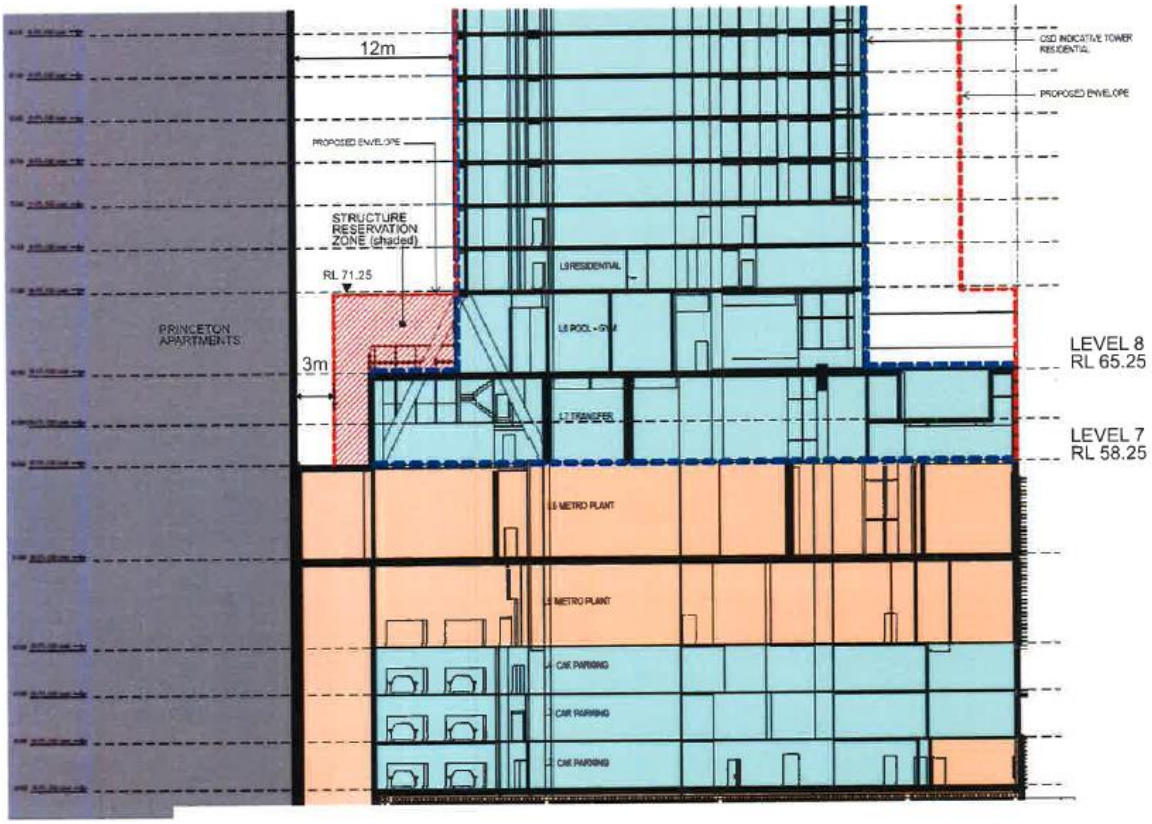
Development consent was granted on 25 June 2019 for the Concept Development Application (SSD 8876) for Pitt Street South OSD including:

- A maximum building envelope, including street wall and setbacks for the over station development.
- A maximum building height of RL171.6.
- Podium level car parking for a maximum of 34 parking spaces.
- Conceptual land use for either one of a residential or commercial scheme (not both). NO maximum Gross Floor Area was approved as part of SSD 8876.

The building envelope approved within the Concept SSD DA provides a numeric delineation between the CSSI Approval "metro box" envelope and the OSD building envelope. As illustrated in the figures below, the delineation line between the two projects is defined at RL 58.25 (Level 7).

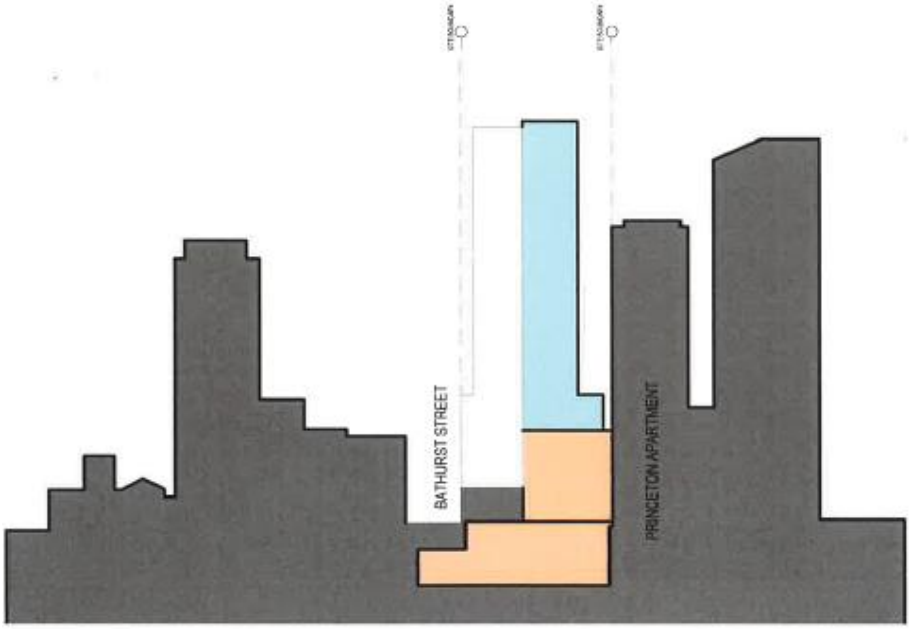
For the purposes of the Detailed (Stage 2) SSD DA, it is noted that while there are two separate planning applications that apply to the site (CCSI and SSD DA), this report addresses the full development across the site to provide contextual assessment.

Figure 5 – Pitt Street South Concept SSD DA – Building Section



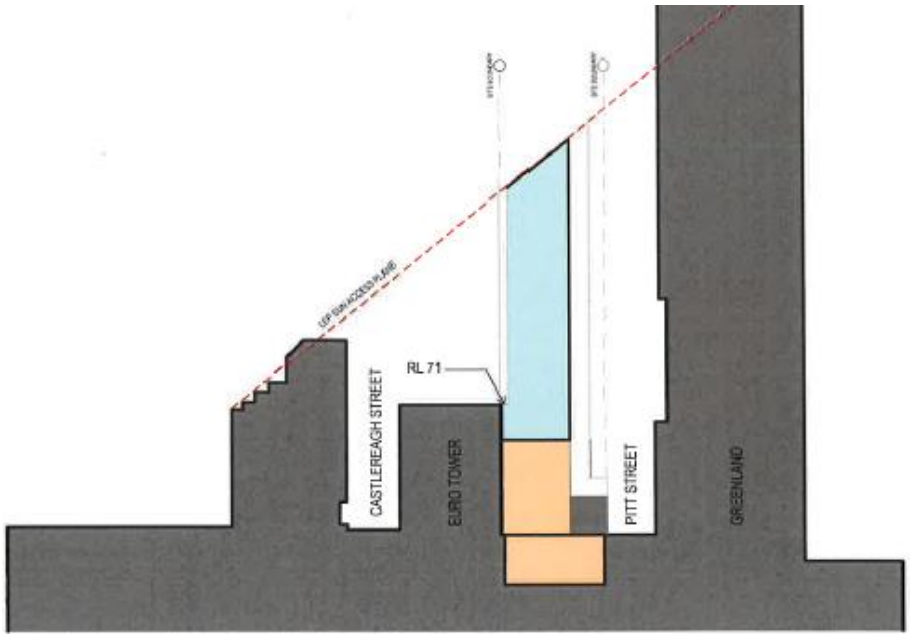
Source: SSD 8876 Concept Stamped Plans

Figure 6 – Pitt Street South Concept SSD DA – North South Section



Source: SSD 8876 Concept Stamped Plans

Figure 7 – Pitt Street South Concept SSD DA – East West Section



Source: SSD 8876 Concept Stamped Plans

1.1 Reviewed Documentation

This report is based upon the following design documents produced by Bates Smart Architects for Philip Chun Accessibility review.

Drawing No. (Revision)	Titled	Dated
SMCSWSPS-BAT-OSS-AT-DWG-900000-C	COVER SHEET	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-910041-C	SITE PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930041-C	L00 GROUND LEVEL - GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930141-C	L01 - GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930241-D	L02 - GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930341-C	L03 - GENERAL ARRANGMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930441-C	L04 - GENERAL ARRANGMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930541-C	L05 - GENERAL ARRANGMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930641-C	L06 - GENERAL ARRANGMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930642-C	L06 MEZZANINE - GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930741-D	L07 - GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930841-D	L08 - GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-930941-C	L09-13 - TYPICAL LOWRISE GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-931441-C	L14-34 - TYPICAL HIGHRISE GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-933541-C	L35 - GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-933641-C	L36 - GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-933741-C	L37 PLANT - GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-933841-C	L38 PLANT - GENERAL ARRANEGMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-933941-C	L39 ROOF - GENERAL ARRANGEMENT PLAN	31/03/2020

Drawing No. (Revision)	Titled	Dated
SMCSWSPS-BAT-OSS-AT-DWG-939542-C	B01 MEZZANINE - GENERAL ARRANGEMENT PLAN	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-950141-C	SECTION A-A	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-950241-C	SECTION B-B	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-960001-D	NORTH ELEVATION - BATHURST STREET	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-960002-D	WEST ELEVATION - PITT STREET	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-960003-C	SOUTH ELEVATION	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-960004-D	EAST ELEVATION	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-960005-C	BATHURST STREET - STREETSCAPE ELEVATION	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-960006-C	PITT STREET - STREETSCAPE ELEVATION	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-970041-D	GFA AND LAND USE PLANS - PODIUM LEVELS	31/03/2020
SMCSWSPS-BAT-OSS-AT-DWG-970141-D	GFA AND LAND USE PLANS - TOWER LEVELS	31/03/2020

1.2 Methodology

Philip Chun Accessibility aims to provide achievable recommendations related to the provision of access to premises based on current legislation and best practice options, enabling independent, equitable and functional access for all.

Accessibility is paramount in providing an inclusive environment for all users. Phillip Chun Access looks beyond basic compliance issues to ensure that all users are offered the opportunity to participate in society. We incorporate the principles of Universal Design into all of our work, taking a holistic approach in the provision of access for people with disabilities.

This report should be read in conjunction with Appendices A, B and C, which outlines the design requirements that need to be incorporated during subsequent detailed design development stages.

2. LEGISLATION

2.1 National Construction Code / The Building Code of Australia

The National Construction Code (NCC) comprises the Building Code of Australia (BCA) and the Plumbing Code of Australia (PCA). NCC is all encompassing and contains Volumes One, Two and Three; The Guide; and the Consolidated Performance Requirements. Detailed of these are as follows:

- Volume One contains the requirements for Class 2 to 9 (multi-residential, commercial, industrial and public) buildings and structures (BCA).
- Volume Two contains the requirements for Class 1 (residential) and Class 10 (non-habitable) buildings and structures.
- Volume Three contains the requirements for plumbing and drainage for all classes of buildings.
- The Guide is a companion manual to Volume One. The Guide provides clarification, illustration and examples for complex NCC provisions.
- Consolidated Performance Requirements provides a compilation of all NCC Performance Requirements and the supporting General Requirements in a single document.

The primary classification for the proposed buildings pursuant to the BCA is a Class 2 - residential, as advised by the relevant Building Surveyor.

Building Classification(s)	Basement 01 Mezzanine	OSD pump room and Plant Space – Ancillary to Class 2
	Ground level	Loading dock – Class 7b Entry lobby – Ancillary to Class 2
	Level 1	Plant space – Ancillary to Class 2 Substation – Class 8
	Level 2	Restaurant – Class 6 Residential Facilities – Ancillary to Class 2
	Level 3	Storage – Class 7b
	Level 4	Plant space – Ancillary to Class 2
	Level 5	Plant space – Ancillary to Class 2
	Level 6	Residential Facilities – Ancillary to Class 2
	Level 7-34	Residential SOU's – Class 2
	Level 35	Residential SOU's – Class 2 Residential Facilities – Ancillary to Class 2
	Level 36	Residential SOU's – Class 2
	Level 35	Residential SOU's – Class 2 Residential Facilities – Ancillary to Class 2

	Level 36	Residential SOU's – Class 2
	Level 37-38	Plant space – Ancillary to Class 2

Part D3 of the BCA and Premises Standards prescribes the minimum requirement for access to a building. Access for people with disabilities is required through the principal pedestrian entrance and throughout the building in accordance with Table D3.1.The following table outlines the general building access requirements for this project:

Class of building	Access requirements
Class 2	
Common areas	From a pedestrian entrance *required* to be accessible to at least one floor containing *sole-occupancy units* and to the entrance doorway of each *sole-occupancy unit* located on that level. To and within not less than one of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, *swimming pool*, common laundry, games room, individual shop, eating area, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed- (a) to the entrance doorway of each sole-occupancy unit; and (b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp.
Class 6	To and within all areas normally used by the occupants
Class 7b	To and within all areas normally used by the occupants
Class 8	To and within all areas normally used by the occupants
Class 10b	
Swimming pool	To and into *swimming pools* with a total perimeter greater than 40m, associated with a Class 1b, 2, 3, 5, 6, 7, 8 or 9 building that is *required* to be *accessible*, but not *swimming pools* for the exclusive use of occupants of a 1b building or a *sole-occupancy unit* in a Class 2 or Class 3 building

2.2 Disability Discrimination Act 1992 (Cth) (DDA)

The accessibility assessment process covers all aspects of the infrastructure (premises), to the extent required to meet the objectives of the Disability Discrimination Act 1992 (Cth), including, however not limited to, Section 23 which relates to access to premises and facilities which the public may enter or use.
The Act is enforced primarily through a complaints mechanism, which allows individuals who have directly or indirectly experienced unlawful discrimination to seek a conciliated outcome through the Australian Human Rights Commission and, in the instance of unsuccessful conciliation, to bring an action in the Federal Magistrates Court or the Federal Court of Australia.

2.3 Access to Premises Standards – General

In contrast to building regulations, the DDA is not prescriptive. The implementation of the Premises Standards in 2010, and corresponding changes to the BCA, is a significant step towards achieving equal access to premises and is crucial to justice and social inclusion for people with disabilities.

It is noted that the Premises Standards are limited in scope, covering aspects of building compliance applicable under the BCA. It is acknowledged that the Premises Standards could address a broader range of accessibility issues including considerations to accessibility of parkland, playgrounds, transport vehicles, interior fit-out of buildings, and fixtures and fittings. As such, there are features which fall beyond the scope of the Standards which may be subject to the general complaints provisions of the DDA.

2.4 Access to Premises Standards – New Work

Where new work that requires building or construction approval is undertaken on an existing building, such as an extension or refurbishment, there is a requirement to ensure the new or modified part of the building complies with the Premises Standards.

2.5 State Environmental Planning Policy No. 65 (SEPP 65) - Apartment Design Guide

SEPP 65 makes reference to Apartment Design Guidelines, which requires a provision for 20% of total apartments to incorporate Liveable Housing Guidelines for Silver Level design compliance (i.e. liveable apartments).

Philip Chun Accessibility can be flexible in achieving a practical balance/ratio of adaptable apartments and Silver Level liveable apartments by taking the required number and class of adaptable apartments (as determined by the relevant state planning authority) to add/account towards the 20% liveable apartments.

3. COMPLIANCE SUMMARY

We have assessed the architectural documentation available to date and have reviewed the proposed building works with respect to the Building Code of Australia 2019 and Premises Standards. The design is at a point where the inherent BCA philosophies have been checked and Development Consent can be sought. The finer details with respect to BCA 2019 compliance can be finalised prior to the issue of a Construction Certificate.

Item	Description	Compliant			Comments
		Yes	No	TBC	
4.0 Access and Approach					
4.1	Approach from Allotment Boundary	•			Capable of compliance, subject to further design coordination to provide compliant approach from allotment boundary during subsequent detailed design development stages.
4.2	Approach from Accessible Car Parking Spaces				Not applicable - it is understood that there will be no parking spaces proposed (excl. shared loading bays).
4.3	Approach Between Buildings	•			Capable of compliance, subject to further design coordination to provide compliant approach to between over station and station buildings during subsequent detailed design development stages.
4.4	Accessible Car Parking				Not applicable - it is understood that there will be no parking spaces proposed (excl. shared loading *bays).*
4.5	Building Entrance	•			Capable of compliance, subject to further design coordination to provide compliant building entrances during subsequent detailed design development stages.
5.0 Accessibility Provisions – Internal Areas					
5.1	Internal Paths of Travel	•			Capable of compliance, subject to further design coordination to provide compliant internal paths of travel during subsequent detailed design development stages.
5.2	Floor Finishes	•			Capable of compliance, subject to further design coordination to provide compliant floor finishes during subsequent detailed design development stages.
5.3	Internal Doors	•			Capable of compliance, subject to further design coordination to provide compliant internal doorways during subsequent detailed design development stages.
5.4	Internal Doors – Operational Forces	•			Capable of compliance, subject to further design coordination to provide compliant internal doorways during subsequent detailed design development stages.
5.5	Exemptions			•	Generally services related areas such as plant rooms, fire control room and storage areas where heavy bulky items and equipment are stored can be exempt. There are some unlabelled rooms and storage areas that can be confirmed as to what their use is and/or what is being stored during subsequent detailed design development stages.

Item	Description	Compliant			Comments
		Yes	No	TBC	
5.6	Signage	•			Capable of compliance, subject to further design coordination to provide compliant signage during subsequent detailed design development stages.
5.7	Hearing Augmentation	•			Capable of compliance, subject to confirmation of areas with built-in amplification system other than one used for emergency warning and further design coordination to provide compliant hearing augmentation during subsequent detailed design development stages.
5.8	Tactile Indicators	•			Capable of compliance, subject to further design coordination to provide compliant tactile indicators during subsequent detailed design development stages.
5.9	Swimming Pools	•			A communal pool for residents is provided on level 06 with a perimeter measuring approximately 55m. Pool design is capable of compliance, subject to further design coordination to provide at least one compliant accessible pool entry/exit as listed in BCA D3.10 during subsequent detailed design development stages.
5.10	Glazing on an Accessway	•			Capable of compliance, subject to further design coordination to provide compliant glazing on an accessway during subsequent detailed design development stages.
5.11	Slip Resistance	•			Capable of compliance, subject to further design coordination to provide surfaces with compliant slip resistance during subsequent detailed design development stages.
5.12	Thresholds	•			Capable of compliance, subject to further design coordination to provide compliant thresholds during subsequent detailed design development stages.
6.0 Vertical Circulation					
6.1	Passenger Lifts	•			Capable of compliance, subject to further design coordination to provide compliant passenger lifts during subsequent detailed design development stages.
6.2	Accessible Ramps				Not applicable – there appears to be no accessible ramps that are steeper than1:20 but no steeper than 1:10.
6.3	Stairs	•			Capable of compliance, subject to further design coordination to provide compliant stairs during subsequent detailed design development stages.
6.4	Fire Isolated Stairs	•			Capable of compliance, subject to further design coordination to provide compliant fire-isolated stairs during subsequent detailed design development stages.
7.0 Sanitary Facilities					
7.1	Unisex Accessible Toilet	•			Capable of compliance, subject to further design coordination to provide compliant unisex accessible toilets during subsequent

Item	Description	Compliant			Comments
		Yes	No	TBC	
					detailed design development stages.
7.2	Unisex Accessible Shower	•			Capable of compliance, subject to further design coordination to provide compliant unisex accessible shower/s where required during subsequent detailed design development stages.
7.3	PAD Cubicles	•			Capable of compliance, subject to further design coordination to provide compliant PAD cubicles during subsequent detailed design development stages.
8.0 Adaptable Housing					
8.1	Required Provision and Design Class			•	From documentation provided to date, there appears to be multiple types of adaptable apartment types to offer a wide range/variety of housing choices for the greater community. All adaptable apartment designs in their pre versus post adaptation layouts are subject to design coordination to provide compliant adaptable apartments during subsequent detailed design development stages as required by the relevant state planning authority in terms of numbers of adaptable apartments and their required class in accordance with AS4299 series. Further to the above requirements for adaptable apartments, the client will provide 2% of the total number of apartments as adaptable for the building. Please refer to the drawings and assessment by Batessmart.
9.0 Apartment Design Guide - NSW					
9.1	Required Provision			•	This requirement is subject to design coordination to provide compliant ratio of liveable versus adaptable apartments as required by the relevant state planning authority. Refer to previous section 8 of report.

4. ACCESS AND APPROACH - EXTERNAL AREAS

External areas of the development generally comprise of public foot paths on two sides of the development's boundary for pedestrians as shown in the figure below:

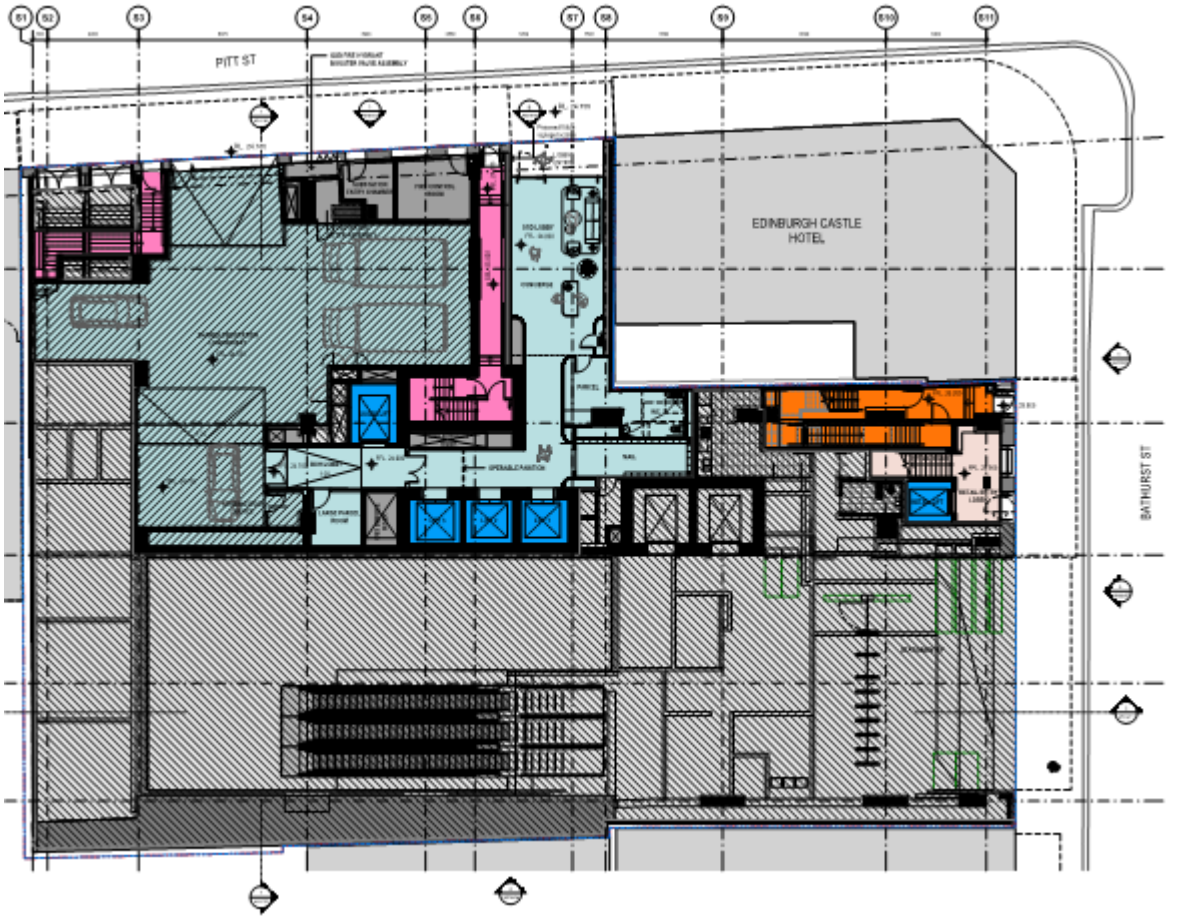


Figure 1 – Above figure showing Ground Level Plan as provided by Bates Smart Architects showing external linkages.

The pedestrian residential entrance to the site is available from Pitt Street public foot path whereas the pedestrian retail entrance is available from Bathurst Street public foot path.

4.1 Approach from the Allotment Boundary (BCA Part D3.2)

The BCA requires that a continuous accessible path of travel within the meaning of AS1428 be provided from the allotment boundary at the main points of pedestrian entry to the main entrance.

Compliance can be achieved subject to further design coordination during subsequent detailed design development stages.

4.2 Approach from the Accessible Car Parking (BCA Part D3.2)

The BCA requires that a continuous accessible path of travel within the meaning of AS1428.1 (2009) be provided from the accessible car parking areas to the main entrance.

Not applicable - it is understood that there will be no parking spaces proposed (excl. shared loading bays).

4.3 Approach between Buildings on Site (BCA Part D3.2)

The BCA requires that a continuous accessible path of travel within the meaning of AS1428 be provided between associated accessible buildings.

Compliance can be achieved subject to further design coordination during subsequent detailed design development stages.

4.4 Accessible Car Parking (BCA Part D3.5)

Accessible car parking, designed and constructed in accordance with AS 2890.6 (2009), is required to be provided as per the below ratio:

Class of building to which the Class 7a building or carparking area is associated	Number of accessible carparking spaces required
Class 6	
(a) Up to 1 000 car parking spaces; and	1 space for every 50 car parking spaces or part thereof.
(b) for each additional 100 car parking spaces or part thereof in excess of 1 000 car parking spaces.	1 space.

An accessible car parking space need not be designated where the total number of car parking spaces available does not exceed 5.

For Class 2 buildings, there is no requirement in BCA for accessible car parking.

Not applicable - it is understood that there will be no parking spaces proposed (excl. shared loading bays).

4.5 Building Entrance (BCA Part D3.2)

A continuous, accessible path of travel must be provided through the principal pedestrian entrance and not less than 50% of all pedestrian entrances / exits.

Where the total floor area of the building exceeds 500m2, therefore the distance of travel between accessible and inaccessible entrances must not exceed 50m.

Where a door required to be accessible has more than one door leaf, one of the leaves must have a clear opening of 850mm.

Compliance can be achieved subject to further design coordination during subsequent detailed design development stages.

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5. ACCESSIBILITY PROVISIONS – INTERNALS AREAS

This report so for the base building component of building works only. Fit-out of individual retail and commercial tenancies will be subject to a separate development application and as such do not form a part of this access report.

5.1 Internal Paths of Travel Generally (BCA Part D3.3)

BCA Part D3.3 requires that accessways complying with AS 1428.1 (2009) must be provided to and throughout areas of buildings required to be made accessible, including:

- Minimum corridor widths of not less than 1000mm;
- Passing spaces with a minimum width of 1800mm and minimum length of 2000mm to be provided in corridors at maximum 20m intervals where a direct line of sight is not available; and
- Turning spaces of minimum 1540mm width and minimum 2070mm length to be provided within 2m of the end of corridors and at maximum 20m intervals.

Note: a passing space may serve as a turning space.

Increased landings are required at changes of direction, including 1500mm x 1500mm turning spaces to facilitate a 60-90 degree turn.

Design is capable of compliance, subject to further design coordination to provide compliant internal paths of travel during subsequent detailed design development stages.

5.2 Floor Finishes / Surfaces (BCA Part D3.3)

The following applies to interior finished and surface materials, in keeping with AS1428.1 (2009):

- Where carpet or any soft flexible materials are used as flooring material, the pile height or pile thickness is to be no greater than 11mm and the carpet backing to be not more than 4mm thick.
- Matting recessed within a continuous accessible path of travel to have a surface level difference to surrounding materials not more than 3mm for vertical and 5mm for rounded or bevelled edges.
- Grates are to have openings no greater than 13mm in diameter and any slotted openings to be no more than 13mm wide and orientated perpendicular to the dominant direction of travel.

Design is capable of compliance, subject to further design coordination to provide compliant floor finishes during subsequent detailed design development stages.

5.3 Internal Doors – Circulation Areas

Doors and doorways to be provided with the following circulation clearances as per AS 1428.1 (2009):

Table 5.3(a) – Hinged Door Requirements

Door Approach	Door opening direction	Clearances (mm)		
		Latch side	Hinge side	Depth in front of door
Front	Towards occupant	530	110	1450
	Away from occupant	510	-	1450
Latch Side	Towards occupant	900	110	1670

	Away from occupant	660	240	1240
Hinge Side	Towards occupant	900	660	1670
	Away from occupant	340	560	1220
Either Side	Towards occupant	900	660	1670
	Away from occupant	660	560	1240

Table 5.3(b) – Sliding Door Requirements

Door Approach	Clearances (mm)		
	Latch side	Slide side	Depth in front of door
Front	530	-	1450
Slide Side	395	660	1280
Latch Side	660	185	1230
Either Side	660	660	1280

Note: the above clearances are based upon an unobstructed door opening of 850mm, which is the minimum required clearance. Unobstructed door openings greater than 850mm will have different requirements. This will be reviewed upon provision of a door schedule and detailed architectural drawings.

Where a door required to be accessible has more than one door leaf, one of the leaves must have a clear opening of 850mm.

The distance between successive doors within airlocks, vestibules and the like require a minimum 1450mm depth between swing doors, 900mm for the path of travel to ambulant toilet cubicles.

Design is capable of compliance, subject to further design coordination to provide compliant doorways during subsequent detailed design development stages.

5.4 Internal Doors – Operational Forces

Door operating forces to manual doors to meet the requirements of AS 1428.1 (2009), Clause 13.5.2 (e).

Ensure any door closers selected (and when installed) will meet the requirements for operating forces, that is:

- 20N to initially open the door;
- 20N to swing the door; and
- 20N to hold the door open between 60 and 90°.

We recommend that the abovementioned items be addressed during subsequent design stages. Refer to Appendix B for compliance requirements.

5.5 Exemptions (BCA Part D3.4)

Where full access is unachievable due to the functions of the space, there may be opportunity to access the area under the permitted exemptions of the BCA D3.4 which states:

The following areas are not required to be accessible:

a) An area where access would be inappropriate because of the particular purpose for which the area is used.
b) An area that would pose a health or safety risk for people with a disability.

c) Any path of travel providing access only to an area exempted by (a) or (b).

Due to the inappropriate functions of services related areas on typical floor plate such as various Plant rooms, fire hydrant/pump/booster assembly rooms, fire control room; the majority of these areas can be subject to a D3.4 exemption under the provisions of the BCA.

There are multiple storage rooms and unidentified B.O.H rooms that require confirmation as to what is being stored and what the unidentified rooms will be used for. This can be coordinated, confirmed and addressed during subsequent detailed design development stages.

5.6 Signage (BCA Part D3.6)

Braille and tactile signage is required to be provided throughout any building required to be made accessible in accordance with BCA specification D3.6 and AS1428.1 (2009) and must identify:

- Each sanitary facility
- Any space with a hearing augmentation system
- Accessible unisex facilities and indicate whether the facility is suitable for left or right handed use
- Ambulant accessible sanitary facilities on the door of the cubicle
- Where an entrance is not accessible, directional signage to identify nearest accessible entrance
- Where a bank of sanitary facilities is not provided with an accessible sanitary facility, directional signage to identify nearest accessible sanitary facility.
- Each door required by Part E4.5 to be provided with an exit sign and state “Exit” and “Level” followed by either the floor level number, the floor descriptor or combination of these.

The abovementioned requirements can be coordinated and addressed to comply during subsequent design development stages.

5.7 Hearing augmentation (BCA Part D3.7)

A hearing augmentation system must be provided where an inbuilt amplification system is provided, other than one used for emergency purposes only as required by BCA Part D3.7.

Further, for buildings that are required to be accessible, the BCA (Part D3.7) requires hearing augmentation systems at service counters **where the user is screened from the service provider.**

Note: Consideration to the design specifications of AS 1428.5 (2010) is recommended, however is not mandatory to meet the Premises Standards.

At current stage and from the level of documentation provided to date, we do not foresee any requirements for hearing augmentation. However, if required by the BCA, we recommend that the abovementioned items be addressed during subsequent design stages.

5.8 Tactile indicators (BCA Part D3.8)

Where a building is required to be made accessible, BCA Part D3.8 requires that tactile indicators must be provided, in accordance with AS1428.4.1 (2009)) to:

- A stairway
- A ramp, other than kerb ramp
- Any overhead obstruction less than 2m above the FFL, other than a doorway, where a suitable barrier has not been provided
- Where an accessway meets a vehicular way in the absence of a kerb or kerb ramp

Design is capable of compliance, subject to further design coordination to provide compliant tactile indicators during subsequent detailed design development stages.

5.9 Swimming pools (BCA Part D3.10)

The BCA Part D3.10 requires access for persons with a disability to swimming pools with a total perimeter greater than 40m that are associated with as Class 1b, 2, 3, 5, 6, 7, 8, or 9 building that is required to be accessible (Table D3.1).

For pools required to be accessible by this clause, not less than one accessible entry / exit must be provided by means of a fixed or moveable ramp and an aquatic wheelchair; or a zero depth entry at a maximum gradient of 1:14; or a platform swimming pool lift; or a swing style swimming pool lift. For pools with a perimeter greater than 70m, the use of a swing stile swimming pool lift is not permitted.

A communal pool for residents is provided on level 06 with a perimeter measuring approximately 55m. Pool design is capable of compliance, subject to further design coordination to provide at least one compliant accessible pool entry/exit as listed in BCA D3.10 during subsequent detailed design development stages.

5.10 Glazing on an accessway (BCA Part D3.12)

BCA Part D3.12 requires that where full height glazing that can be mistaken for an unobstructed opening is provided along an accessway, the glazing must be provided with visual identification as per AS 1428.1 (2009).

Design is capable of compliance, subject to further design coordination to provide compliant glazing on an accessway during subsequent detailed design development stages.

5.11 Slip Resistance (BCA Part D2.14)

Landings in a stairway must have;

(a) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or
(b) a strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586, where the edge leads to a *flight* below;

Application	Surface Conditions	
	Dry	Wet
Ramp steeper than 1:14	P4 or R11	P5 or R12
Ramp steeper than 1:20 but not steeper than 1:14	B or R10	P4 or R11
Tread or landing surface	B or R10	P4 or R11
Nosing or landing edge strip	B	P4

Design is capable of compliance, subject to further design coordination to provide compliant slip resistant floor surfaces during subsequent detailed design development stages.

5.12 Thresholds (BCA Part D2.15)

The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—

(c) in a building required to be accessible by Part D3, the doorway
  (i) opens to a road or open space; and
  (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1 (2009); or

Design is capable of compliance, subject to further design coordination to provide compliant door thresholds during subsequent detailed design development stages.

6. VERTICAL CIRCULATION

6.1 Passenger Lifts (BCA Part E3.6)

Every passenger lift in an accessible building must be suitable for use by people with a disability and offer compliance with AS1725.12. Typically, the following is required to be provided:

Lift dimensions

- Lift floor dimensions of not less than 1100mm X 14000mm for lifts which travel not more than 12m.
- Lift floor dimensions of not less than 1400mm X 1600mm for lifts which travel more than 12m.
- Provision for a stretcher facility within at least one emergency lift required by E3.4, or where an emergency lift is not required, if passenger lifts are installed to serve any storey above an effective height of 12m, in at least one of those lifts to serve every floor served by lifts.

Lift Features

- Handrail complying with the provisions for a mandatory handrail in AS1735.12.
- Minimum clear door opening complying with AS1735.12.
- Passenger protection system complying with AS1735.12.
- Lift landing doors at the upper landing.
- Lift car and landing control buttons complying with AS173.5.12.
- Lighting in accordance with AS1735.12.
- Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received.

All passenger lifts serving more than 2 levels must possess:

- Automatic audible information within the lift car to identify the level each time the car stops.
- Audible and visual indications at each lift landing to indicate the arrival of the lift car.
- Audible information and audible indication must be provided in a range between 20-80dB(A) at a maximum frequency of 1500Hz.

Design is capable of compliance, subject to further design coordination to provide compliant passenger lifts during subsequent detailed design development stages.

6.2 Accessible Ramps (BCA Part D3.3 & D3.11)

All accessible ramps must be designed and constructed in accordance with AS 1428.1 (2009) Clause 10. The maximum allowable gradient of the ramp is 1:14, minimum clear width to be 1000mm and maximum length between landings to be 9m (for 1:14 gradient).

On and accessway –

(a) A series of connected ramps must not have a combined vertical rise of more than 3.6m; and
(b) A landing for a step ramp must not overlap a landing for another step ramp or ramp.

Not applicable - from the information provided to date, there appears to be no accessible ramps with gradients steeper than 1:20 but no steeper than 1:14.

6.3 Stairs (BCA Part D3.3)

All stairways, excluding fire-isolated stairs, must be designed and constructed in accordance with AS 1428.1 (2009) Clause 11 and include the provision of handrails, handrail extensions, opaque risers, contrasting nosing strips and tactile indicators.

Further to this is recommended that fire-isolated stairways proposed to be used as a means of general communication between floors should meet these enhanced requirements for the safety of all occupants.

Design is capable of compliance, subject to further design coordination to provide compliant stairways during subsequent detailed design development stages.

6.4 Fire Isolated Stairs (BCA Part D3.3)

All fire-isolated stairways must possess luminance contrast to the stair nosing as per AS 1428.1 (2009) Clause 11.1(f) and (g).

As per BCA Clause D2.17 (vi), handrails within the fire isolated stairways are required to comply with Clause 12 of AS 1428.1 (2009). The height of handrails is to be between 865-1000mm and be consistent along the length of the stair. Consider the design of a staggered stair to avoid handrail extensions intruding into stairway landings, particularly in the down flight.

Design is capable of compliance, subject to further design coordination to provide compliant fire-isolated stairs during subsequent detailed design development stages.

7. SANITARY AND OTHER FACILITIES

7.1 Unisex Accessible Toilets (BCA Part F2)

Accessible unisex sanitary compartments must be provided in accessible parts of the building in accordance with Table F2.4(a). That is:

Class of building	Minimum accessible unisex sanitary compartments to be provided
Class 2	Where *sanitary compartments* are provided in common areas, not less than 1
Class 5, 6, 7, 8 and 9 — except for within a ward area of a Class 9a *health-care building*	Where Part F2.3 of the *BCA* requires closet pans: (a) 1 on every *storey* containing *sanitary compartments*; and (b) where a *storey* has more than 1 bank of *sanitary compartments* containing male and female *sanitary compartments* at not less than 50% of those banks

Design

- An accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary towels.
- The circulation spaces, fixtures and fittings of all accessible sanitary facilities must comply with the requirements of AS1428.1.
- Where two or more of each type of accessible unisex sanitary facility are provided, the number of left and right handed mirror image facilities must be provided as evenly as possible.
- The door to a fully enclosed sanitary compartment must:
  (i) Open outwards; or
  (ii) Slide; or
  (iii) Be readily removable from the outside of the sanitary compartment,
  Unless there is a clear space of at least 1.2m measured in accordance with Figure F2.5, between the closet pan with the sanitary compartment and the doorway.

Location

- An accessible sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only.
- Where male sanitary facilities are provided in a separate location to female sanitary facilities, accessible unisex sanitary facilities are only required at one of these locations.

Design is capable of compliance, subject to further design coordination to provide compliant unisex accessible sanitary compartments during subsequent detailed design development stages.

7.2 Unisex Accessible Showers (BCA Part F2)

Accessible unisex showers must be provided in accordance with Table F2.4(b). That is:

Class of building	Minimum accessible unisex showers to be provided
Class 2	Where showers are provided in common areas, not less than 1.

Class of building	Minimum accessible unisex showers to be provided
Class 5, 6, 7, 8 and 9 — except for within a ward area of a Class 9a *health-care building*	Where Part F2.3 of the *BCA* requires 1 or more showers, not less than 1 for every 10 showers or part thereof.

Design is capable of compliance, subject to further design coordination to provide compliant unisex accessible shower/s where required during subsequent detailed design development stages.

7.3 Sanitary compartments for people with an ambulant disability (BCA Part F2)

At each bank of toilets where there are one or more toilets are provided in addition to an accessible unisex sanitary compartment at that bank of toilets, a sanitary compartment suitable for people with an ambulant disability (PAD) must be provided for use by males and females.

Design of the cubicles is to include the following:

- PAD cubicles within male and female toilets to be in compliance with AS1428.1 (2009).
- Width of PAD cubicles is to be 900–920mm.
- Provide grabrails to PAD cubicles.
- Provide 900 x 900mm circulation space in front of pan and each side of doors on path to the toilet. Doors are not to swing into circulation spaces.

On levels 02, 06 there is one unisex accessible sanitary compartment proposed on each level in addition to bank of toilets. Levels 06 require provisions of additional ambulant toilet cubicles to serve males and females.

Design is capable of compliance, subject to further design coordination to provide compliant sanitary compartments for people with ambulant disability during subsequent detailed design development stages.

8. ADAPTABLE HOUSING PROVISIONS

For a State Significant Development, Development Application, the required percentage of total apartments to be designed as Adaptable Housing (incl. the required class of adaptable housing) in accordance with AS4299 series is confirmed and determined by the relevant state planning authority.

From documentation provided to date, there appears to be multiple types of adaptable apartment types to offer a wide range/variety of housing choices for the greater community.

All adaptable apartment designs in their pre versus post adaptation layouts are subject to design coordination to provide compliant adaptable apartments during subsequent detailed design development stages as required by the relevant state planning authority in terms of numbers of adaptable apartments and their required class in accordance with AS4299 series.

Further to the above requirements for adaptable apartments, the client will provide 2% of the total number of apartments as adaptable for the building. Please refer to the drawings and assessment by Batessmart.

9. SEPP 65 – SILVER LEVEL LIVEABLE HOUSING PROVISIONS

SEPP 65 and the Apartment Design Guide apply to residential flat buildings, shop top housing and the residential component of mixed use developments with NSW. They apply to buildings that are three or more storeys and that have four or more dwellings in the following situations:

- The erection of a new building
- The substantial redevelopment or refurbishment of an existing building
- The conversion of an existing building to a residential flat building.

Objective 4Q-1 of Part 4 of the Apartment Design Guide requires Universal design features to be included in the apartment design to promote flexible housing for all community members. The design guidance for this objective is;

- Developments are to achieve a benchmark of 20% of the total apartments incorporating the Liveable Housing Guideline's silver level universal design features.

  This requirement is subject to design coordination to provide compliant ratio of liveable versus adaptable apartments as required by the relevant state planning authority. Refer to previous section 8 of report.

10. ADDITIONAL ACCESSIBILITY CONSIDERATIONS

As detailed above, it is acknowledged that the Premises Standards are limited in scope, covering aspects of building compliance applicable under the BCA only.

Philip Chun Access provides the following as a summary of additional accessibility issues that can be addressed in order to reduce Client risk of attracting a discrimination complaint. Refer to Appendix E for specific requirements

- Fire Egress for People with Disabilities
- Signage and Wayfinding
- Access controlled entries to carparks
- Depth of Door Recess
- Luminance Contrast
- Lighting and Glare

11. CONCLUSION

We have assessed the architectural documentation available to date and have reviewed the proposed building works with respect to the Building Code of Australia 2019 and Premises Standards. In our opinion, Development Consent should not be withheld for concern that the works cannot meet a combination of the Deemed-to-Satisfy and Performance Requirements of the Building Code of Australia 2019. Areas of the design are still being refined and will be addressed for compliance during subsequent design development stages.

APPENDIX A

MANDATORY ACCESS COMPLIANCE REQUIREMENTS

A1 EXTERNAL PATHWAYS AND WALKWAYS

The minimum unobstructed width of all pathways and walkways is to be 1000mm (AS1428.1 (2009), Clause 6.3). A width of 1200mm is preferred for compliance with AS1428.2 (1992).

All pathways and walkways are to be constructed with no lip or step at joints between abutting surfaces. A construction tolerance of 3mm is allowable, 5mm for bevelled edges -refer to Figure 6 of AS1428.1(2009).

The maximum allowable crossfall of pathways and walkways is to be 1:40. The surfaces of an accessible path of travel are be slip-resistant.

The ground abutting the sides of the pathways and walkways should follow the grade of the pathway and extend horizontally for 600mm. This is not required where there is a kerb or handrail provided to the side of the pathway (refer to AS1428.1 (2009) Clause 10.2).

Maximum allowable gradient of the walkway is 1:20 and maximum length between landings to be 15m (for 1:20 gradient). Landings to be a minimum 1200mm in length (where there is no change in direction). For changes in direction of 180º, landings to be 1540mm in length – refer to AS1428.1 (2009), Clause 10.8.

A2 KERB RAMPS

Kerb ramps to comply with AS1428 (2009) Amendment 1, Clause 10.7.

Maximum gradient of the kerb ramps to be 1:8 and maximum length to be 1520mm (providing a maximum height of 190mm).

Kerb ramps to have a non-slip surface as required by AS1428.

A tooled joint should be provided between parts of the kerb ramp to assist persons with a vision impairment with orientation.

A3 STEP RAMPS

The configuration of the step ramps to comply with the requirements of AS1428.1, Clause 10.6.
Maximum gradient of the step ramp is to be 1:10 and maximum length to be 1900mm (providing a maximum height of 190mm).
Provide landings at the top and bottom of the step ramp to comply with AS1428.1, Clause 10.8.2.

Step ramp to be enclosed on both sides (minimum height 450mm) or a kerb and handrail needs to be installed. Where a kerb is to be installed, the height of kerb rails is to be less than 65mm or greater than 150mm above the finished surface level of the ramp. This is to ensure that the foot plate of a wheelchair cannot become lodged on the kerb rail.

A4 ACCESSIBLE RAMPS

Ramps are to comply with AS1428.1 (2009) Clause 10.3. Maximum allowable gradient of the ramp is 1:14, minimum clear width to be 1000mm and maximum length between landings to be 9m (for 1:14 gradient).

Accessible ramp are to have a maximum rise of 3.6m (BCA Part 3.11).

Externally, ramps are required to be set back a minimum 900mm from the property boundary (AS1428.1 (2009), Clause 10.3 (f)). This allows tactile indicators and handrail extensions to occur within the boundary and not protrude into the footpath area.

Internally, ramps are required to be set back a minimum 600mm from an internal corridor (AS1428.1 (2009), Clause 10.3 (f)). This allows tactile indicators and handrail extensions to be provided an not protrude into the corridor area.

Provide handrails, with extensions, to both sides of the ramp to comply with AS1428.1 (2009), Clause 12. Handrails are to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails are required on both sides of the ramp to cater for left and right handed disabilities.

Where a ramp is not enclosed, provide kerb rails in accordance with AS1428.1 (2009). The height of kerb rails is to be less than 65mm or greater than 150mm above the finished surface level. This is to ensure that the foot plate of a wheelchair cannot become lodged on the kerb rail.

Provide tactile indicators at the top and bottom of the ramps to comply with BCA Part D3.8 and AS1428.4.1 (2009),. Tactile indicators are to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour. Tactile indicators at the top and bottom of the ramps to be 600-800mm deep across the width of the ramp and set back 300mm from the edge of the ramp (refer AS1428.4 (2009), Figure A1.

Tactile indicators will be required at a mid-landing where the ramp is not continuous. Where the handrail is continuous along both sides of the mid-landing, tactile indicators are not required.

A5 PEDESTRIAN CROSSINGS

Where kerb ramps are to be provided at pedestrian crossings to provide an accessible path of travel for persons with a disability they are to comply with AS1428.1 (2009), Clause 10.7.

Where a pedestrian crossing is at the same level as the roadway, provide tactile indicators to both sides of the roadway to alert persons with a vision impairment of the hazard. Tactile indicators are to be 600-800mm deep across the width pedestrian crossing. Tactile indicators are to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour.

A6 THRESHOLD RAMPS

Threshold ramps are to comply with AS1428.1 (2009), Clause 10.5.

Threshold ramps are to have a maximum rise of 35mm, maximum length of 280mm and maximum gradient of 1:8.

Threshold ramps to be located within 20mm of the door leaf that it services.

A7 BUILDING ENTRANCES

Entrances are to comply with AS1428.1 (2009), Clause 13 as part of the accessible path of travel.

Doors are to have a minimum clear opening width of 850mm to comply AS1428.1 (2009), Clause 13.2.

Door thresholds are to be level to provide seamless entry to the building. The maximum allowable construction tolerance is 3mm for compliance with AS1428.1 (2009), 5mm where bevelled edges are provided between surfaces – refer to Figure 6.

Door to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1 (2009), Clause 13.5)

For glass doors, provide decals to assist persons with a vision impairment. Decals to be solid and have a minimum 30% luminance contrast to the background colour and be not less than 75mm high

located within the height range of 900-1100mm above the finished floor level. Decals are to be solid pattern to AS1428.1 (2009) Clause 6.6.

A8 TACTILE INDICATORS AT THE BUILDING ENTRANCE

BCA Clause 3.8 (a) (v) states that for a building that is required to be accessible, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching – in the absence of a suitable barrier – an accessway meeting a vehicular way adjacent to any pedestrian entrance to a building…if there is no kerb or kerb ramp at that point, except for areas exempted by D3.4.

Tactile indicators are to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour.

Tactile indicators are to be 600-800mm deep across the width of the path of travel.

A9 DOORWAYS

Doorways within the accessible path of travel are to have a minimum clear opening width of 850mm (AS1428.1 (2009), Clause 13.2). We recommend the use of a 920 leaf door as a minimum to achieve adequate clear width.

All doorways within the accessible path of travel to have complying circulation areas as illustrated in AS1428.1 (2009), Figure 31. Circulation areas are to have a maximum crossfall of 1:40.

Doorways to have minimum 30% luminance contrast as described in AS1428.1 (2009), Clause 13.1.

Doors to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1 (2009), Clause 13.5) and allows for single handed operation.

A10 TACTILE INDICATORS

Installation of tactile indicators is to be in accordance with AS1428.4.1 (2009).

Tactile indicators are to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour.

Tactile indicators are to be 600-800mm deep across the width of the path of travel.

A11 VISUAL INDICATION TO GLAZING

Provide decals to assist persons with a vision impairment. Decals to be solid and have a minimum 30% luminance contrast to the background colour and be not less than 75mm high located within the height range of 900-1100mm above the finished floor level. Decals are to be solid pattern to AS1428.1 Clause 6.6.

A12 SIGNAGE

The BCA has requirements for Braille and tactile signage within Specification D3.6. This provides information for the provision of statutory signage
Braille and tactile signage is required to be provided throughout any building required to be made accessible in accordance with BCA specification D3.6 and AS1428.1 (2009) and must identify:

- Each sanitary facility
- Any space with a hearing augmentation system
- Accessible unisex facilities and indicate whether the facility is suitable for left or right handed use
- Ambulant accessible sanitary facilities on the door of the cubicle

- Where an entrance is not accessible, directional signage to identify nearest accessible entrance
- Where a bank of sanitary facilities is not provided with an accessible sanitary facility, directional signage to identify nearest accessible sanitary facility.
- Each door required by Part E4.5 to be provided with an exit sign and state “Exit” and “Level” followed by either the floor level number, the floor descriptor or combination of these.

In addition, AS1428.2 (1992) contains additional information as to the form of signage.

Signage should be easily comprehended by all building users. In this regard, the use of pictograms is highly recommended. The message that the sign conveys should be unambiguous.

Placement of signage should be considered at the following locations:

- Where it is clearly visible to people in bot a standing and seated position.
- At changes in direction.
- At locations where directional decisions are made.
- As required to amenities and exits

A13 HEARING AUGMENTATION

A hearing augmentation system must be provided where an inbuilt amplification system is provided, other than one used for emergency purposes only as required by BCA Part D3.7.

Further, for buildings that are required to be accessible, the BCA (Part D3.7) requires hearing augmentation systems at service counters **where the user is screened from the service provider.**

While it is not referenced by the BCA, AS1428.5 (2010): Communication for people who are deaf or hearing impaired contains information regarding assisted listening systems and can be used to ensure equitable facilities are provided for this user group.

The standard provides information relating to design solutions and equipment for the following:

- Assisted listening systems.
- Early warning systems
- Visual display systems for intercommunication, public announcements and the like
- Telephone services and telecommunications available to the public.

A14 WHEELCHAIR SEATING

Where fixed seating is provided in an assembly building, the required wheelchair seating spaces (number per BCA) are required to be:

- Accessed via an accessible path of travel.
- Located adjacent to, and at the same level as, other seating in a row.
- Located to allow lines of sight comparable to those for general viewing areas.

The special requirement for the footprint of a single wheelchair seating space is 800x1250mm.

A15 PASSENGER LIFTS

Every passenger lift in an accessible building must be suitable for use by people with a disability and offer compliance with AS1725.12. Typically, the following is required to be provided:

Lift dimensions

- Lift floor dimensions of not less than 1100mm X 1400mm for lifts which travel not more than 12m.
- Lift floor dimensions of not less than 1400mm X 1600mm for lifts which travel more than 12m.

- Provision for a stretcher facility within at least one emergency lift required by E3.4, or where an emergency lift is not required, if passenger lifts are installed to serve any storey above an effective height of 12m, in at least one of those lifts to serve every floor served by lifts.

Lift Features

- Handrail complying with the provisions for a mandatory handrail in AS1735.12.
- Minimum clear door opening complying with AS1735.12.
- Passenger protection system complying with AS1735.12.
- Lift landing doors at the upper landing.
- Lift car and landing control buttons complying with AS173.5.12.
- Lighting in accordance with AS1735.12.
- Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received.

All passenger lifts serving more than 2 levels must possess:

- Automatic audible information within the lift car to identify the level each time the car stops.
- Audible and visual indications at each lift landing to indicate the arrival of the lift car.
- Audible information and audible indication must be provided in a range between 20-80dB(A) at a maximum frequency of 1500Hz.

A16 STAIRS

Stair construction is to comply with AS1428.1 (2009) Clause 11.1.

Stairs are to have closed or opaque risers. Open risers cause confusion for persons with a vision impairment and may trigger conditions such as epilepsy due to light penetrating through the open risers.

Where the stair intersects with an internal corridor, the stair shall be set back in accordance with AS1429.1 (2009) Figure 26C/D to allow adequate space for handrail extensions and tactile indicators.

Provide handrails, with extensions, to both sides of the stair (AS1428.1 (2009), Clause 11.2). Handrails are to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails should be continuous around the landings where possible. Handrails are required on both sides of the stair to cater for left and right handed disabilities. A central handrail is also an acceptable solution where adequate width is available.

Stair nosings to have minimum 30% luminance contrast strip 50-75mm wide to the top of the stair tread to assist persons with a vision impairment. The strip can be set back 15mm from the edge of the riser.

Stair nosings shall not project beyond the face of the riser.

Provide tactile indicators at the top and bottom of the stair to comply with BCA Part D3.8 and AS1428.4.1 (2009).

Tactile indicators are to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour.

Tactile indicators at the top and bottom of the stair to be 600-800mm deep across the width of the stair set back 300mm from the edge of the stair.

A17 FIRE ISOLATED STAIRS

Stair nosings to have minimum 30% luminance contrast strip 50-75mm wide to the top of the stair tread to assist persons with a vision impairment. The strip can be set back 15mm from the edge of the riser. Stair nosings shall not project beyond the face of the riser.

A18 UNISEX ACCESSIBLE SANITARY FACILITIES

Set-out of fixtures and fittings within the accessible sanitary facilities to offer compliance with AS 1428.1 (2009) Clause 15 as follows.

Crucial dimensions for the toilet are 450mm from centreline of pan to side wall, 800mm from front of pan to rear wall and a seat height of 470mm.

A minimum clear dimension of 1400mm is required from the toilet pan to any other fixture (see figure 43).

For the basin, a minimum dimension of 425mm is required from the centreline of the basin to the side wall and height of basin to be between 800 and 830mm.

Grabrails are to be provided at the side and rear of the toilet in compliance with AS1428.1 at a height of 800mm.

Taps are to have lever handles, sensor plates or similar controls. For lever taps a minimum of 50mm clearance to be provided to adjacent surfaces.

Toilet seat shall be of the full round type, be securely fixed in position when in use and have fixings that create lateral stability. They should be load rated to 150kg, have a minimum 30% luminance contrast to the background colour (e.g. pan, wall or floor) and remain in the upright position when fully raised.

Provide a backrest to accessible toilets to comply with AS1428.1, Clause 15.2.4.

Accessible toilet to be identified using the International Symbol for Access. Pictograms / lettering to have a minimum 30% luminance contrast to the background colour. Signage is to comply with AS1428.1, Clause 8 and include information in tactile and Braille formats (as required by the BCA).

Doorways are to have a minimum clear opening width of 850mm to comply AS1428.1 (2009), Clause 13.2 as part of the accessible path of travel. Adequate circulation area at the latch side of the doorway is required to allow independent access to the facility – for details refer to AS1428.1, Figure 31.

Door hardware are to be located within the accessible height range of 900-1100mm above the finished floor level. The use of lever handles is encouraged to assist persons with a manual disability such as arthritis.

Controls within the accessible toilet facilities, such as light switches, are to be in the accessible height range of 900-1100mm above the finished floor level to comply with AS1428.1 (2009), Clause 14. Controls should be located not less than 500mm to a corner.

A19 UNISEX ACCESSIBLE SHOWERS

Showers are to comply with AS 1428.1, Clause 15.5 and include accessible features such as grabrails, adjustable height shower rose and fixtures within an accessible height range.
The minimum dimensions of an accessible shower are to be 1160 x 1000mm. A folding seat, at a height of 470mm is to be provided. All taps to be located within the height range of 900-1100mm above the finished floor level.

Circulation space in front of the shower is to be provided as illustrated in AS1428.1, Figure 47.

A20 PEOPLE WITH AMBULANT DISABILITIES CUBICLES (PAD)

PAD cubicles within male and female toilets to be in compliance with AS1428.1, Clause 16.

Width of PAD cubicles is to be 900-920mm.

Provide grabrails to PAD cubicles to comply with AS1428.1, Clause 17 and Figure 53A.

Doors are to have a minimum opening width of 700mm and comply with AS1428.1 Figure 53B.

Provide signage to the PAD cubicles to comply with AS1428.1, Clause 16.4.

Provide 900x900 circulation space in front of pan and each side of doors on path to the toilet. Door are not to swing into circulation spaces.

APPENDIX B

ADAPTABLE HOUSING REQIUIREMENTS

B1 PERFORMANCE REQUIREMENTS

The performance requirements of AS4299 (Clause 2.2) state that an adaptable unit will be designed and constructed to meet the following requirements:

a) Visitability – all adaptable units are required to be "visitable" from the outset. That is, there must be at least one wheelchair entry and path of travel to the living are and to a toilet that is either visitable or accessible.
b) Avoidance of level Change – all units to have no steps which will ensure adaptability will be easy to accommodate.
c) Manoeuvrability – adequate space for a wheelchair to manoeuvre within a living area, bedroom and bathroom with an accessible path of travel linking these areas to the entrance.
d) Ease of adaption – if the design for adaption requires demolition of walls, these need to be non-loadbearing and free of services.
e) Ease of reach – key services and controls should be located so they are within the reach range of a wheelchair user.
f) Laundry facilities – these need to be capable of being accessible against the provisions of AS4299 post-adaption.

B2 ACCESS TO COMMON USE AREAS

Access routes required for access by those living in the adaptable units is to comply with AS1428.1 (2009) requirements. Access is to be provided to all common use facilities. Letterboxes are to have a hard standing area and be connected to an accessible pathway.

B3 CAR PARKING

One car parking space is required for each of the adaptable units to comply with AS4299 Clause 3.7. The allocated spaces for the adaptable units are to have a minimum width available of 3.8 m and have 2.5m head clearance over the parking space to allow the use of wheelchair loading ramps.

B4 ENTRANCE, DOORWAYS AND INTERNAL CIRCULATION

All adaptable units are designed to enable access to and through the main entrance with clear opening widths to entrances of not less than 850mm and appropriate circulation spaces per AS 1428.1 (2009) Clause 13.3.

In regards to internal doors, each requires appropriate clear opening width with a minimum clear width of 820mm, with the door to the accessible bathroom meeting AS1428.1 (2009) requirements with a minimum clear width of 850mm. We recommend providing 850mm to all doors in adaptable units from the onset.

A minimum unobstructed width of internal pathways will be 1000mm.

B5 BATHROOM

At least one pre adaption toilet is to provide 1250x900mm clear circulation space in front of the toilet so as to comply as a visitable toilet.

The post adapted bathroom that is to provide sufficient circulation space for compliance with AS1428.1 (2009).

Structural support (such as structural ply sheeting) is to be provided at toilet and shower grab rail zones, to allow for ease of installation of any future fixings.

B6 KITCHEN

On adaption, the kitchen facilities will need to achieve a minimum circulation of 1540mm between opposing walls, cabinets and appliances to facilitate completion of a 180 degree turn by a wheelchair user.

In addition the design of the kitchen should accommodate the following on adapttion:

- An 800mm length of worktop that can be adjusted in height, with a removable base unit under
- The location of the fridge adjoining a suitable work surface
- Potential to adjust sink height, with a sink bowl depth of 150mm - lever type taps to be provided to the side of the sink
- Cooktops with side controls
- Isolation switches for appliances to be accessible / reachable (e.g. oven and fridge / freezer)
- Suitable oven height and worktop adjoining

B7 BEDROOM

The main bedroom, on adaption, will require sufficient circulation space to permit movement by a wheelchair user, being not less than 1540mm x 2070mm clear circulation to at least one side and/or base of a queen size bed on post adaption.

Window sills within the bedroom and living areas should be a maximum of 600mm and 730mm above finished floor level respectively, to enable viewing by persons in the seated position and persons who may be confined to bed (AS 4299:1995 Clauses 4.6.2 / 4.7.2).

B8 LIVING AREAS

Living areas are to be designed to enable a wheelchair to turn 360 degrees after the placement of furniture so as to be visitable. An area of 2250mm minimum diameter is required to facilitate this.

B9 LAUNDRY

On adaption, laundry facilities and joinery will need to accommodate a clear 1500mm in front of the appliances to allow for wheelchair access.

B10 BALCONIES

It is recommended that the width of the balconies to adaptable units should be 1540mm or greater which will permit access to these spaces and facilitate completion of a 180 degree turn by wheelchair user. Internal and external surfaces will be designed and constructed at grade (the maximum change in level between abutting surfaces to be 3mm, or 5mm where edges are rounded or bevelled) to enable access by all.

Where waterproofing is a concern a maximum threshold of 35mm will be provided, with a 1:8 graded ramp abutting the door (with a maximum length of 280mm). Alternatively, consideration will be given to a raised, permeable balcony surface, such as decking which will not impede drainage.
The door accessing the balcony will possess appropriate clear opening width and circulation space to permit independent operation by a person with a disability and either provided with door furniture complying with AS1428.1 (2009) or capable of being added or modified.

B11 POWER AND LIGHTING SWITCHES AND TELEPHONE / TELEVISION OUTLETS

AS4299 has guidance on the location of key services and switches to assist residents with a disability. As part of the detailing of the apartments this will be considered, including:

- Power outlets located at strategic points,600mm - 1000mm off floor level, including
  - points 300mm from the edge of kitchen worktops
  - adjoining the bedhead
  - in living room (four outlets)
  - laundry areas (double outlet)
- Light switches, 900mm - 1100mm of floor level at convenient locations including:
  - adjoining potential bedhead
- Telephone points in the bedroom and living room (both adjoining a power outlet)
- Television outlets in the bedroom (opposite potential bedhead) and two points in living / dining areas

APPENDIX C

EXTRACTS FROM LIVEABLE HOUSING GUIDELINES

1 Dwelling access

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.

Silver Level

a. Provide a safe and continuous pathway from:

- **i.** the front boundary of the allotment; or
- **ii.** a car parking space, where provided, which may include the driveway on the allotment, to an entrance that is level (step-free) as specified in Element 2.

This provision does not apply where the average slope of the ground where the path would feature is steeper than 1:14.

b. The path of travel as referred to in (a) should have a minimum clear width of 1000mm and –

- **i.** an even, firm, slip resistant surface;
- **ii.** a crossfall of not more than 1:40;
- **iii.** a maximum pathway slope of 1:14, with landings provided at no greater than 9m for a 1:14 ramp and no greater than 15m for ramps steeper than 1:20. Landings should be no less than 1200mm in length; and
- **iv.** be step-free

c. A step ramp may be incorporated at an entrance doorway where there is a change in height of 190mm or less. The step ramp should provide:

- **i.** a maximum gradient of 1:10
- **ii.** a minimum clear width of 1000mm (please note: width should reflect the pathway width)
- **iii.** a maximum length of 1900mm

Level landings no less than 1200mm in length, exclusive of the swing of the door or gate than opens onto them, must be provided at the head and foot of the ramp.

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.

Gold Level

As for silver level except in (b) replace the minimum clear pathway width of 1000mm with 1100mm.

Platinum Level

As for silver level except in (b) replace with a minimum clear pathway width of 1100mm with 1200mm provided from:

i. the front boundary of the allotment, and

ii. any car parking space, where provided, which may include the driveway on the allotment, to an entrance that is level (step-free) as specified in Element 2.

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2 Dwelling entrance

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.

e. rance

Silver Level

a. The dwelling should provide an entrance door with -
   i. a minimum clear opening width of 820mm (see Figure 2(a));
   ii. a level (step-free) transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or beveled); and
   iii. reasonable shelter from the weather.

b. A level landing area of at least 1200mm x 1200mm should be provided at the level (step free) entrance door.

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.**

Gold Level

As for silver level except replace:

- (b) with a level landing area of at least 1350mm x 1350mm, and
- (a) (i) with minimum clear door opening width of 850mm (see Figure 2(b)).

Platinum Level

As for silver level except replace:

- (b) with a level landing area of at least 1500mm x 1500mm, and
- (a) (i) with a minimum clear door opening width of 900mm (see Figure 2(c)).

3 Car parking
(Where part of the dwelling access)

Performance Statement

Where the parking space is part of the dwelling access it should allow a person to open their car doors fully and easily move around the vehicle.

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).

Gold Level

As for silver level with the following additional features incorporated for Class 1a dwellings:

- **iv.** a vertical clearance over the parking space of at least 2500mm; and
- **v.** a covered parking space to ensure protection from the weather.

Platinum Level

As for gold level for Class 1a dwellings except that the parking space in (a)/(i) should be at least 3800mm (width) x 6000mm (length).

b. For Class 2 dwellings, parking spaces compliant with the accessible parking provisions detailed in AS2890.6 (2009), should be provided as follows:

- **i.** where individual parking spaces form part of the individual unit's title, at least one accessible parking space should be provided for each unit; and
- **ii.** if visitor parking is provided, then at least 1 space per 100 units (or part thereof) should be an accessible parking space.

4 Internal doors & corridors

Performance Statement

Internal doors and corridors facilitate comfortable and unimpeded movement between spaces.

Silver Level

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

Gold Level

As for the silver level except replace:

- (a)/(i) with a minimum clear opening width of 850mm (see Figure 2(b)), and
- (b) with a minimum corridor/passageway width of 1200mm.

Platinum Level

As for the silver level except replace:

- (a)/(i) with a minimum clear opening width of 900mm (see Figure 2(c)), and
- (b) with a minimum corridor/passageway width of 1200mm.

5 Toilet

Performance Statement

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

Silver Level

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).

b. If the toilet is located within the ground (or entry) level bathroom, the toilet pan should be located in the corner of the room to enable the installation of grabrails.

Gold Level

As for silver level except replace (a)/(i) with a minimum clear width of 1200mm between the walls of the bathroom if located in a separate room, or between amenities if located in a combined bathroom.

Platinum Level

As for the gold level with the following features added to (a):

- **iii.** a toilet pan positioned between 450mm – 460mm from the nearest wall as measured from the centre line of the toilet;
- **iv.** 600mm minimum clearance forward of the cistern measured from the front of the cistern to the front of the toilet pan. 800mm (+/-10mm) clearance is required if the cistern is recessed; and
- **v.** a height for the pan of between 460mm - 480mm above the finished floor level as detailed in Figure 4.

6 Shower

Performance Statement

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

Silver Level

a. One bathroom should feature a slip resistant, hobless (step-free) shower recess. Shower screens are permitted provided they can be easily removed at a later date.

b. The shower recess should be located in the corner of the room to enable the installation of grabrails at a future date.

Gold Level

As for silver level except:

c. The hobless (step-free) shower recess described in (a) should:

- i. be located in a bathroom on the ground (or entry) level;
- ii. provide minimum dimensions of 900mm (width) x 900mm (length); and
- iii. provide a clear space of at least 1200mm (width) x 1200mm (length) forward of the shower recess entry as detailed in Figure 5(a).

Platinum Level

As for gold level except:

- i. replace (c)/(ii) with dimensions of at least 1160mm (width) x 1100mm (length); and
- ii. replace (c)/(iii) with dimensions of at least 1600mm(width) x 1400mm (length) forward of the shower recess as detailed in Figure 5(b).

7 Reinforcement of bathroom & toilet walls

Performance Statement

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

Silver Level

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 fastenings, wall reinforcement and grabrails combined must be able to withstand at least 1100N of force applied in any position and in any direction. When it comes to assessing the existence of wall reinforcing, the Assessor Handbook provides information on a Wall Scanning device that can be used to verify that reinforcement exists behind wall sheeting. This information along with evidence such as details and drawings collected from the builder may be sufficient to satisfy an assessor. It is also possible that an inspection of the walls prior to sheeting is needed. Assessors should determine the inspection requirements for As Built inspections with their client and builder as early in the construction process as possible. Often asking the builder to photograph the wall before the sheeting is applied is sufficient.

c. 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).

d. 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).

e. The walls around the hobless (step-free) 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).

Gold Level

Silver level requirements apply.

Platinum Level

Silver level requirements apply.

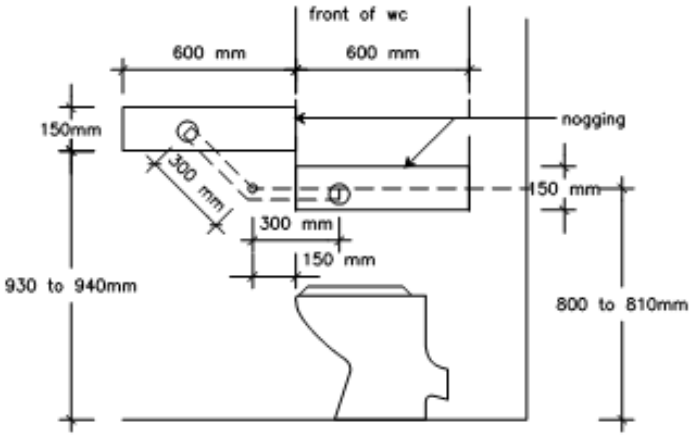

Figure 6(a) Toilet – Location of noggings

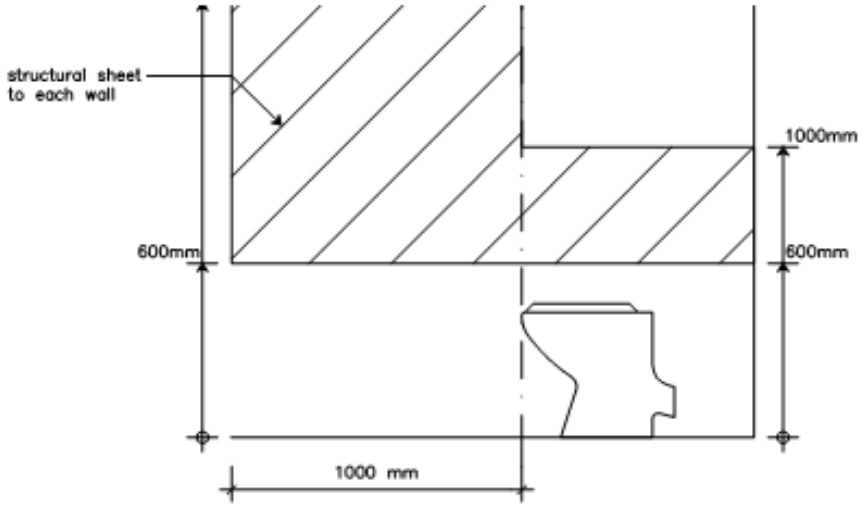

Figure 6(b) Toilet – Location of sheeting

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

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8 Internal stairways

Performance Statement

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

Silver Level

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.

Gold Level

As for the silver level with the following additional features:

ii. a minimum clear width of 1000mm;

iii. be straight in design; and

iv. be positioned adjoining a load bearing wall.

Note The steps must provide a slip resistant finish and suitable non-slip tread as specified in the NCC. Handrails on both sides of the stairway are preferred.

Platinum Level

As for the gold level with the following additional features:

v. closed risers;

vi. continuous handrails on both sides of the stairway; and

vii. minimum landing areas of 1200mm x 1200mm at the top and base of the stairway.

Note The steps must provide a slip resistant finish and suitable non-slip tread as specified in the NCC.

9 Kitchen space

Performance Statement

The kitchen space is designed to support ease of movement between fixed benches and to support easy adaptation.

Silver Level

No requirements.

Gold Level

a. The kitchen space should be designed to support ease of movement and adaptation with:

- **i.** at least 1200mm clearance provided in front of fixed benches and appliances; and
- **ii.** slip resistant flooring.[6]

b. Where practicable, floor finishes should extend under kitchen cabinetry to enable cupboards to be removed without affecting the flooring. An Assessor should ask the builder / client if he/she can confirm that flooring runs completely under cupboards. Sometimes it is relatively easy to confirm that floor coverings have been applied after cupboards have been installed and sometimes it is not so easy. If relying on advice from a third party, Assessors are advised to provide a note in the notes column of the Assessment.

Platinum Level

As for the gold level except that the kitchen space described in (a) should be designed to support ease of movement and adaptation with:

- **i.** at least 1550mm clearance should be provided in front of fixed benches and appliances;
- **ii.** slip resistant flooring[6]; and
- **iii.** task lighting installed above workspaces.

[6] Slip Resistance is referenced in the National Construction Code and ultimately, Livable Housing Australia would like to defer to the NCC and the Australian Building Codes Board (ABCB) for rulings related to slip resistance. Standards Australia publish a number of standards as well as a handbook that address slip resistance of surfaces.

10 Laundry space

Performance Statement

The laundry space is designed to support ease of movement between fixed benches and to support easy adaptation.

Silver Level

No requirements.

Gold Level

As for silver level except:

a. The laundry space should be designed to support ease of movement and adaptation with:

- **i.** at least 1200mm clearance provided in front of fixed benches and appliances; and
- **ii.** slip resistant flooring.[6]

b. Where practicable, floor finishes should extend under laundry cabinetry to enable cupboards to be moved without affecting the flooring.

Platinum Level

As for the gold level except that in laundry space described in (a) should be designed to support ease of movement and adaptation with:

- **i.** at least 1550mm clearance should be provided in front of fixed benches and appliances;
- **ii.** slip resistant flooring; and
- **iii.** task lighting installed above workspaces.

[6] As per the NCC

11 Ground (or entry level) bedroom space

Performance Statement

There is a space on the ground (or entry) level that can be used as a bedroom.

Silver Level

No requirements.

Gold Level

a. The dwelling should feature a space (or room) on the ground (or entry) level that:

- **i.** is of at least 10m² with one wall a minimum length of 3m;
- **ii.** provides for a minimum path of travel of at least 1000mm on at least one side of the bed.

Platinum Level

As for the gold level, but it also:

- **i.** provides a space of at least 1540mm (width) x 2070mm (in the direction of travel) on the side on the bed that is closest to the door approach; and
- **ii.** provides for a minimum path of travel of 1000mm on the remaining side of the bed.

For Platinum level, It should be assumed that a bed with dimensions 1500mm x 2000mm (as shown on the sketch overleaf) is present. This will mean that the minimum clear dimensions of a room would need to be 3000mm x 4040mm to meet the Platinum level requirements. Where a bed is present (in the case of an As Built Inspection), the clearance should be measured to the edges of the bed for beds smaller than 1500mm x 2000mm. If the bed provided is larger than 1500mm x 2000mm compliance should be determined based upon a bed with dimensions 1500mm x 2000mm.

12 Switches and powerpoints

Performance Statement

Light switches and powerpoints are located at heights that are easy to reach for all home occupants.

Silver Level

No requirements.

Gold Level

a. Light switches should be positioned in a consistent location:

- **i.** between 900mm – 1100mm above the finished floor level; and
- **ii.** horizontally aligned with the door handle at the entrance to a room.

b. Powerpoints should be installed not lower than 300mm above the finished floor level.

Platinum Level

As for gold level with the following feature:

c. Light and powerpoint switches should be rocker action, toggle or push pad in design with a recommended width of 35mm.

13 Door and tap hardware

Performance Statement

Home occupants are able to easily and independently open and close doors and safely use tap hardware.

Silver Level

No requirements.

Gold Level

a. Doorways should feature door hardware installed at between 900mm – 1100mm above the finished floor.

Platinum Level

As for gold level with the following features:

b. Doorways should feature lever or D-pull style door hardware; and

c. Basins, sinks and tubs should feature lever or capstan style tap hardware with a central spout.

For Gold and Platinum level, the handle clearances for D-pull style door hardware should be the same as AS1428.1. AS 1428.1 is the most relevant set of specifications aimed at providing the greatest access to the greatest number of people and as such is an appropriate standard to reference for this Element.

14 Family/living room space

Performance Statement

The family/living room features clear space to enable the home occupant to move in and around the room with ease.

Silver Level

No requirements.

Gold Level

No requirements.

Platinum Level

a. The family/living room should accommodate a free space, minimum 2250mm in diameter, to enable ease of movement clear of furniture.

15 Window sills

Performance Statement

Windows sills are installed at a height that enables home occupants to view the outdoor space from either a seated or standing position.

Silver Level

No requirements.

Gold Level

No requirements.

Platinum Level

a. Window sills on the ground (or entry) level in living areas and bedroom spaces should be positioned no higher than 1000mm above the finished floor level to enable enjoyment of the outlook.

b. Window controls should be able to be easy to operate with one hand and located within easy reach from either a seated or standing position.

Note A concession from (a) is reasonable in kitchen, bathroom and utility spaces.

16 Flooring

Performance Statement

Floor coverings are slip resistant to reduce the likelihood of slips, trips and falls in the home.

Silver Level

No requirements.

Gold Level

No requirements.

Platinum Level

a. All floor coverings should:
   i. be firm and even, and
   ii. feature a level transition between abutting surfaces (a maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or beveled).

APPENDIX D

BEST PRACTICE RECOMMENDATIONS

D1 FIRE EGRESS FOR PEOPLE WITH DISABILITIES

HREOC Advisory notes on access to premises, Item 5.21 states that, in an emergency, all users should be provided with a means of egress from a premises to a place of comparative safety. This ensures people with disabilities to be provided with the same level of protection as other premises users or building occupants.

Consider providing a refuge area within fire isolated stairs by incorporating a 800mm x 1300mm area at stair landings of every accessible floor. A 1000mm unobstructed egress width to the area should be provided.

We recommend that signage displaying the International Symbol of Access (ISA) be provided to identify any places of comparative safety provided. Signage should state that the area is safe in the event of an emergency. Evacuation procedures for the building should address the provision of places of comparative safety for people with limited mobility. Signage should comply with BCA D3.6 and BCA Specification 3.6 and have braille and tactile components.

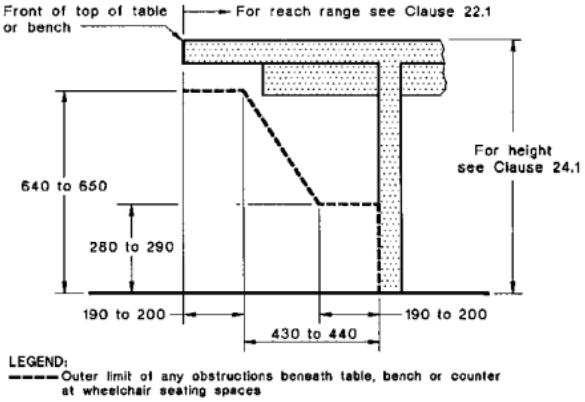
We also recommend that as a part of the emergency evacuation plan for the building, egress for persons requiring assistance be addressed. The provision of places of comparative safety within fire isolated passages would be advantageous to persons with a disability. This consists of a waiting area large enough to accommodate a wheelchair where persons can wait for assistance from emergency services. The waiting area should be identified with appropriate signage that incorporates the International Symbol for Access.

D2 RECEPTION COUNTERS

We recommend the provision of accessible reception counters designed in accordance with AS1428.2 (1992), Part 24.1.

- Provide a lower section of counter at a height between 830mm and 870mm above finished floor level.
- A counter required to be accessible must comprise a clear length of no less than 900mm.
- Where the counter requires a high level of interaction or worktop function: provide knee clearance of no less than 800mm in height for a minimum depth of 350mm; and foot clearance of not less than 300mm in height for a depth of 650mm.
- Where the counter requires brief or minimal interaction: provide knee clearance o no less than 750mm in height for a minimum depth of 350mm; and foot clearance of not less than 300mm in height for a depth of 400mm.
- Unobstructed circulation space must be provided in front of the lower height counter of 1540mm by 2070mm, with maximum grade of 1:40.
- Finished surfaces, including counter face and top, and the background to which each is viewed to be selected to ensure adequate definition for people with varying degrees of vision impairment, such as minimum 30% luminance contrast between counter top and counter face.
- Way-finding principles to be considered in the identification of the reception area, including provisions to aid detection of the accessible counter.

- Under the BCA an assistive listening is to be provided where the client is screened from the service provider. In order to satisfy the requirements of the DDA it is recommended that an assistive listening system, including Braille and tactile signage, be provided at any place where a service provider deals with a client or customer (reception desk) (AS 1428.2:1992 Clause 21.1).



NOTE: For width of seating spaces see Clause 24.1.3.

DIMENSIONS IN MILLIMETRES

FIGURE 25 KNEE AND FOOT CLEARANCE BENEATH A TABLE, BENCH OR COUNTER

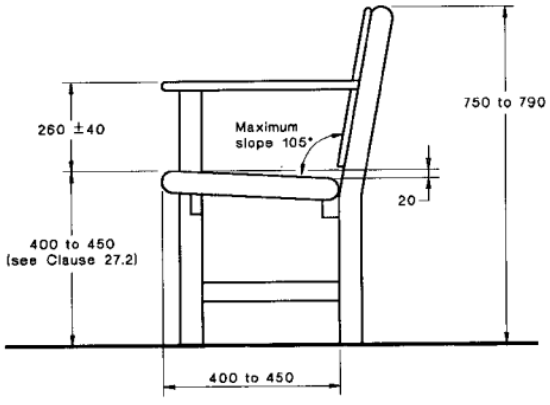
D3 SEATING TO PUBLIC AREAS

Where seating is located within public areas (for example to waiting area at Level 16), a proportion of accessible seating should be provided offering compliance with AS1428.2:1992 Clause 27.

Provide a seat height of 450mm; with side arms that extend a further 260mm +/- 40mm in height. Seating to have a back height of 750mm-790mm (AS 1428.2:1992 Clause 27.2). · Armrests must not extend beyond the perimeter of the base or legs of the seat to ensure stability of the chair when rising with use of only one armrest.· Heel space of at least 150mm with a minimum width of 350mm should be provided under seats to assist in rearward adjustments of feet when rising.

Seats located adjacent to pathways to set back at least 600mm to allow leg room without obstructing the adjacent path (AS 1428.2:1992 Clause 27.1(a)).

At casual seating spaces, waiting areas and the like, provide a minimum of 900mm space between seats or at either end to accommodate wheelchair users.



(a) Side view — Type A

In addition, the provision wheelchair seating places within waiting areas is highly recommended. These spaces to allow a floor space of 800x1300mm.

D4 SIGNAGE AND WAYFINDING

Signs and symbols should be provided to inform all users. Provide a signage system which informs all users (HREOC Advisory notes on access to premises, Item 5.15). The use of pictograms is recommended as is the use of luminance contrast to ensure the message is clear and legible.

The height of letters in signs shall be not less than that show in the table below – AS1428.2(1992), Table 2.

HEIGHT OF LETTERS FOR VARYING VIEWING DISTANCES

Required viewing distance m	Minimum height of letters* mm
2	6
4	12
6	20
8	25
12	40
15	50
25	80
35	100
40	130
50	150

* For further information on the heights of letters for different situations, reference should be made to AS 1744.

NOTE: Helvetica Medium typeface is preferred.

The development of a way-finding strategy with consideration to landmarks and visual features of the development is recommended. This would include the use of varied finished surfaces to differentiate areas of each building.

Signs including symbols, numbering and lettering shall be located where they are clearly visible to people in both a seated and standing position. That is, they should be placed within a zone at a height not less than 1400 mm and not more than 1600 mm above the plane of the finished floor. Where space in this zone is used up, the zone for placement of signs may be extended downward to not less than 1000 mm from the plane of the finished floor. This height assists people to read from either a seated or a standing position, and also assists people with low vision to read the information on the sign. Letters and symbols in relief assist people with severe visual disabilities.

Where a sign can be temporarily obscured, e.g. in a crowd, the sign should be placed at a height of not less than 2000 mm above the plane of the finished floor.

Signs to assist way-finding should be provided at changes of direction and at sites where directional decisions are made, to enable the appropriate decisions to be made before a change of direction occurs.

Where the surface of the wall surrounding the sign provides insufficient contrast (e.g. patterned wallpapers), the background area to the sign may need to be increased in size.

The message that the sign carries should be unambiguous.
Tactile floor plans or maps and prerecorded auditory instructions at the main entrance and at other useful locations can be of assistance to people with visual impairment.

D5 STAFF WORKSTATIONS

Consideration should be given to the provision of accessible staff workstations within the building. Height adjustable workstations which can be adjusted by the user are highly recommended, with an adjustment capability between 610 and 760mm from the floor (AS 4442:1997 Clause 2.2.2 (b)).

Where provided, fixed height workstations to be provided at a height between 700 and 720mm (AS 4442:1997 Clause 2.2.4).

It is recommended that adjustable tables have a height adjustment capacity accommodating standing and seated users per AS4442 (1997).

Power and data outlets to be provided at desk top height at a distance not greater than 550mm from the front edge of the desktop (AS 1428.2:1992 Clause 22.; Figure 20 (b)).

The provision of a clear floor space of not less than 1370mm between the table edge and the opposing wall or fixtures will allow access by a person in a wheelchair to or past the table.

Ensure the layout of furniture and fittings allows for the provision of accessways in accordance with AS 1428.1 (2009), including:

- Minimum widths of paths of travel to be not less than 1000mm;
- Passing spaces with a minimum width of 1800mm and minimum length of 2000mm to be provided along paths of travel at maximum 20m intervals where a direct line of sight is not available; and
- Turning spaces of minimum 1540mm width and minimum 2070mm length to be provided within 2m of the end of paths of travel and at maximum 20m intervals.
  Note: a passing space may serve as a turning space.
- Increased landings are required at changes of direction, including 1500mm X 1500mm turning spaces to facilitate a 60°-90° turn.

This may form part of a client management plan and associated operational procedures relating to individual facilitation of employees with temporary or permanent disabilities

D6 KITCHEN / KITCHENETTE FACILITIES

Consideration should be given to the provision of accessible kitchen /kitchenette facilities which are designed and constructed in accordance with AS 4299:1995 Clause 4 and AS 1428.2:1992 Clause 24.

This includes consideration to a bench height of 870mm in lieu of 900mm, appropriate knee and foot clearance to the underside of utility benches and appropriate circulation space within the room.

To provide access for people using wheelchairs, the sink should be located at a height between 850mm-870mm above the finished floor. The design of the sink must allow knee and foot clearance to the underside of the bowl for a clear width of no less than 900mm, in accordance with the following:

- Provision of knee clearance of no less than 680mm in height for a minimum depth of 300mm.
- Provision of foot clearance of not less than 290mm in height for a depth of 200mm (AS 1428.2:1992 Figure A2).
- Provide a section of clear bench space of no less than 900mm in length adjacent to the sink
- Provide a maximum depth to the sink of 150mm. This applies to the main bowl where a double sink is installed.

D7 LUMINANCE CONTRAST

Luminance contrast is the light reflected from one surface or component, compared to the light reflected from another surface or component. A luminance contrast of 30% between two surfaces is generally accepted as a minimum when considering it as a navigational / way-finding tool for people with Vision impairment.

In this regard, we recommend that the provision of a minimum 30% luminance contrast between surfaces be adopted in the following instances to assist people with Vision impairment negotiate the built environment:

- Provide luminance contrast between walls and doors.
- Generally, contrasting wall and floor surfaces should be provided. At a minimum, skirting boards which provide suitable contrast to the floor surface assist people with low vision in identifying perimeters of corridors and accessible spaces.
- For joinery, Counters or benches to achieve a minimum 30% luminance contrast with the counter / bench face to which it is viewed. Additionally, Counter / bench surfaces to have a matte or low sheen finish;
- For handrails and grabrails, provide a luminance contrast between the rail and the wall colour;
- For signage, provide luminance contrast so that message can be conveyed – luminance contrast required between the information in the sign and base sign colour.

  Note: Statutory requirements for luminance contrast include tactile indicators, stair nosing strips, toilet seats and door / wall identification.

D8 CHANGING PLACES

Changing Places Australia is an initiative of the Association for Children with a Disability to provide safe and clean accessible toilets for use by people with severe disabilities. The goal is to have “changing places” incorporated within high use public buildings such as sporting venues, shopping centres and transport interchanges. A standard unisex accessible toilet offers a facility for independent use. Often being designed to minimum dimensions, they generally do not allow for assistance from a carer which is required by many people with severe disabilities. The lack of suitable changing places presents a barrier to inclusion within the community for many Australians.

Philip Chun Access is taking a pro-active role in ensuring that the provision of a changing place is at least considered within the design / redevelopment of major public buildings. The key design principles to be incorporated include a ceiling hoist, adequate circulation areas to allow for up to two assistants, and an adult change table which is fully adjustable.

Over 200,000 Australians are in need of facilities like this to be able to participate in their communities. The provision of changing places promotes inclusion and is expected to be adopted by many Councils’ planning policies in the near future.

D9 LOCKERS

The provision of lockers at a suitable height for people using a wheelchair is recommended. The height range for accessible lockers to be 230mm-1350mm AFFL based on the reach ranges prescribed in AS1428.2 (1992).

D10 FURNITURE HARDWARE

Generally, drawer and cupboard fronts that have recessed finger pull handles do not comply with AS 1428.1 (2009) Clause 13.5.2(b) and therefore are not recommended.

We recommend the use of D-type pull handles to furniture generally which provide a minimum 35mm clearance between the rear face of the handle and the face of the drawer.

D11 LIGHTING AND GLARE

Minimum interior lighting levels of maintenance illumination are to be in accordance with AS1680.1 (1990) and with consideration to AS1428.2 (1992) Clause 19. Consistent lighting levels should be provided throughout, without pools of light or dark areas.

Glare and excessively reflective surfaces should be avoided. This includes glare from windows.

AS1428.2 (1992) recommends the following minimum illumination levels:

- Entrances 150lx
- Passages and walkways 150lx
- Stairs 150lx
- Toilets and Locker rooms 200lx
- Counter tops 250lx
- Generally displays 200-300lx

At reception counters, appropriate lighting levels at the counter areas must be provided in accordance with AS 1680.2.2 (1994).

Generally, a task lighting of no less than 320lx must be provided with environmental lighting of no less than 160lx. That is:

(i) Where general lighting only is provided to provide both task and environmental lighting, the illuminance throughout the area shall be no less than 320lx; or

(ii) Where a system of local lighting is provided for tasks in combination with reduced environmental lighting, this may be provided as noted above (AS 1680.2.2:1994 Appendix F (b); AS1680.2.2:1994 Table F1).