

DEVELOPMENT APPLICATION ACCESS REVIEW

BCA 2014 / Premises Standards and

Disability Discrimination Act 1992 (*Cth*) (DDA) Assessment

WATERSIDE MIXED USE DEVELOPMENT

**50-70 Mann Street
GOSFORD NSW 2250**

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DOCUMENT ACCEPTANCE

	Name	Signed	Date
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REVISION HISTORY

Revision No.	Prepared by	Description	Date
00	Lindsay Perry	DRAFT for comment	28 January 2015
01	Lindsay Perry	Issued for DA	29 January 2015

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 Access.

Philip Chun Access 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

This report documents a comprehensive review of the proposed project documentation with consideration to all aspects of accessibility to the site and throughout the development and with reference to the Building Code of Australia (BCA), Disability (Access to Premises – Buildings) Standards 2010 (Premises Standards), relevant Australian Standards as they relate to access to premises and the spirit and intent of the Disability Discrimination Act 1992 (*Cth*) (DDA).

This report has been prepared for New Hong Kong Macau Australian Pty Ltd (C/- CKDS Architecture) by Philip Chun Access with the aim of providing reasonable recommendations in regards to access to premises. Philip Chun Access has endeavored to clearly identify each issue of concern with respect to the building element and with reference to relevant legislation and guidelines.

Matters that fall outside the scope of this report include structure or installation methods and assessment against Occupational Health and Safety legislation.

Site and Contexts

The site is located at 50-70 Mann Street Gosford and has three street frontages being Mann Street, Georgiana Terrace and Baker Street. The site falls down from Mann Street (eastern boundary) to Baker Street (western boundary). The location of the site within the Gosford town centre provides easy links to public transport and community facilities.

The project consists of three towers to house a mix of uses including retail tenancies, commercial tenancies, a hotel (60 rooms) and residential apartments (572 apartments). Carparking is provided at the basement level (660 spaces).

Reviewed Documentation

This report is based upon the following design documents produced and provided by CKDS Architecture for Philip Chun Access review and approval.

Document No	Title	Revision
A-101	Plan Basement Level 04	C
A-102	Plan Basement Level 02-03	C
A-103	Plan Basement Level 01: Baker Street	C
A-104	Plan Ground Floor: Mann Street	C
A-105	Plan Level 01	C
A-106	Plan Level 02	C
A-107	Plan Level 05: Typical Tower Low Rise	C
A-108	Plan Level 20: Typical Tower Mid Rise	C
A-116	Plan Level 30: Typical Tower High Rise	B-1
A-121	Apartment Plans – Mann Street Tower	B-1
A-123	Apartment Plans – Georgiana Terrace Tower	B-1
A-201	Elevations – North Elevation	C
A-202	Elevations – East Elevation	C
A-203	Elevations – South Elevation	C
A-204	Elevations – West Elevation	C
A-301	Sections – Section A	C
A-302	Sections – Section B	C
A-303	Sections – Section C	C

Council Requirements

We have reviewed Gosford City Council DCP Part 4 (4.1 Gosford City Centre) for accessibility requirements. The following items are considered relevant to this development.

4.1.4.2 Pedestrian Access and Mobility

(c) Barrier free access to not less than 20% of dwellings.

The proposed development will exceed this requirement due to lift access to all levels.

Table 4.2 – Required Parking Rates – not less than 10% of the required residential and visitor spaces.

1.1.6.2 Housing Choices

- (a) Where residential units are provided at the ground level within a mixed use area or special activities area, a report prepared by an accredited access consultant to be submitted with the DA demonstrating how future commercial use can be accommodated. It must address access for PWD; any upgrade work required; appropriate floor to ceiling heights.

An accessible path of travel has been provided to residential entrance foyers from the surrounding street footpaths and basement carparking areas. Compliance would be dependent upon the design / layout and subject to DA approval.

- (d) On land with less than 20% slope, 15% of all dwellings to be designed to be capable of adaption (AS4299) with pre-adaption design features to ensure visitability.

This requirement has been achieved in the current design as documented throughout this report.

- (e) Where possible adaptable units to be provided at the ground floor. If not, a lift needs to be provided including to basement carparking areas.

This requirement potentially contravenes DDA and AS4299 which suggests an equitable spread of adaptable housing throughout a development. Note that BCA also requires an equitable spread for Class 3 buildings. We note that it is intended to provide adaptable housing units equitably throughout the development and encourage this approach.

- (g) carparking to adaptable units must comply with the relevant Australian Standards.

There are potentially two standards relevant to adaptable housing. AS4299 requires adaptable spaces to be 3.8m wide. Alternatively, AS2890.6 (2009) could be adopted. We note that the latter will be incorporated into the design. We have been advised that a carparking space will be provided for each unit on the site.

Methodology

Philip Chun Access 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.

2. LEGISLATION

Building Code of Australia

The classification for the proposed buildings pursuant to the BCA is varied given the mixed uses provide on the site. The following table demonstrates this:

Level	Proposed Use	Building Classification
Basement (Typical)	Carparking	Class 7a
Basement 01	Carparking	Class 7a
Basement 01	Retail	Class 6
Basement 01	Hotel	Class 3
Ground Level	Retail	Class 6
Ground Level	Tavern	Class 9b
Ground Level	Commercial	Class 5
Level 01	Commercial	Class 5
Level 01	Childcare	Class 9b
Level 02	Commercial	Class 5
Level 02	Hotel	Class 3
Level 02	Residential	Class 2
Level 05 (Typical low Rise)	Hotel	Class 3
Level 05 (Typical low Rise)	Residential	Class 2
Level 20 (Typical low Rise)	Hotel	Class 3
Level 20 (Typical mid Rise)	Residential	Class 2
Level 30 (Typical high Rise)	TBC	
Level 30 (Typical high Rise)	TBC	

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 – Residential Apartments	
Common areas	From a pedestrian entrance <i>required</i> to be accessible to at least one floor containing <i>sole-occupancy units</i> and to the entrance doorway of each <i>sole-occupancy unit</i> 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, <i>swimming pool</i>, 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 of building	Access requirements
Class 3 – Hotel	
Common areas	From a pedestrian entrance <i>required</i> to be <i>accessible</i> to at least one floor containing <i>sole-occupancy units</i> and to the entrance doorway of each <i>sole-occupancy unit</i> 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, <i>swimming pool</i>, common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunchroom, lounge room, or the like Where a ramp complying with AS 1428.1 or a passenger lift is installed: (a) to the entrance doorway of each <i>sole-occupancy unit</i>; 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
Sole-occupancy units	Not more than 2 <i>required accessible sole-occupancy units</i> may be located adjacent to each other Where more than 2 <i>accessible sole-occupancy units</i> are <i>required</i>, they must be representative of the range of rooms available
If the building or group of buildings contain: 1 to 10 <i>sole-occupancy units</i> 11 to 40 <i>sole-occupancy units</i> 41 to 60 <i>sole-occupancy units</i> 61 to 80 <i>sole-occupancy units</i> 81 to 100 <i>sole-occupancy units</i> 101 to 200 <i>sole-occupancy units</i> 201 to 500 <i>sole-occupancy units</i>	To and within: 1 <i>accessible sole-occupancy unit</i> 2 <i>accessible sole-occupancy units</i> 3 <i>accessible sole-occupancy units</i> 4 <i>accessible sole-occupancy units</i> 5 <i>accessible sole-occupancy units</i> 5 <i>accessible sole-occupancy units</i> plus 1 additional <i>accessible sole-occupancy unit</i> for every 25 units or part thereof in excess of 100 9 <i>accessible sole-occupancy units</i> plus 1 additional <i>accessible sole-occupancy unit</i> for every 30 units or part thereof in excess of 200
more than 500 <i>sole-occupancy units</i>	19 <i>accessible sole-occupancy units</i> plus 1 additional <i>accessible sole-occupancy unit</i> for every 50 units or part thereof in excess of 500
Class 5 – Commercial	To and within all areas normally used by the occupants
Class 6 – Retail	To and within all areas normally used by the occupants
Class 7a - Carparking	To and within any level containing <i>accessible</i> carparking spaces
Class 9b – Childcare + Tavern	
<i>Schools</i> and <i>early childhood centres</i>	To and within all areas normally used by the occupants
An <i>assembly building</i> not being a <i>school</i> or an <i>early childhood centre</i>	To wheelchair seating spaces provided in accordance with Part D3.9 To and within all other areas normally used by the occupants, except that access need not be provided to tiers or platforms of seating areas that do not contain wheelchair seating spaces

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.

Access to Premises Standards

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.

3. ACCESS AND APPROACH - EXTERNAL AREAS

External areas of the development generally comprise the drop-off area along Baker Street and “plaza” areas between the three buildings at the Ground Floor (Mann Street) level. These areas appear to be paved landscaping and been integrated with the street footpaths to offer pedestrian access to the site.

Due to the level of detail provided on the documentation at this stage of the design process, high level advice regarding accessibility has been provided to be addressed in subsequent design stages.

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

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

There are two pedestrian entrance points to the development. One is provided from Baker Street (Basement Level 01) which includes an accessible drop off area. The other is provided from Mann Street (Ground Floor) which abuts the street footpath.

Refer to Appendix B for compliance requirements regarding pathways, ramps and walkway which should be addressed during subsequent design stages.

3.2 Approach from the Accessible Carparking (BCA Part D3.2)

The BCA requires that a continuous accessible path of travel be provided from the accessible carparking areas to the main entrance.

At this stage of the design process, accessible carparking has not been indicated on the documentation. We note that lift access is provided to all carparking levels.

As such, we advise that this requirement is capable of being met during subsequent design stages.

3.3 Approach Between Buildings on Site (BCA Part D3.2)

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

The three buildings on the site are connected at the ground floor level.

Insufficient detail is provided at this stage of the design process to ascertain compliance. We recommend that this be addressed in subsequent design stages.

3.4 Accessible Carparking (BCA Part D3.5)

Accessible carparking, 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 1b and 3	
(a) Boarding house, guest house, hostel, lodging house, backpackers accommodation, or the residential part of a hotel or motel.	To be calculated by multiplying the total number of carparking spaces by the percentage of: (a) accessible sole-occupancy units to the total number of sole-occupancy units; or (b) <i>accessible</i> bedrooms to the total number of bedrooms; and the calculated number is to be taken to the next whole figure.
(b) Residential part of a <i>school</i> , accommodation for the aged, disabled or children, residential part of a <i>health care building</i> which accommodates members of staff or the residential part of a detention centre.	1 space for every 100 carparking spaces or part thereof.
Class 5, 7, 8 and 9c	1 space for every 100 carparking spaces or part thereof.
Class 6	
(a) Up to 1 000 carparking spaces; and	1 space for every 50 carparking spaces or part thereof.
(b) for each additional 100 carparking spaces or part thereof in excess of 1 000 carparking spaces.	1 space.
Class 9a	
(a) Hospital (non-outpatient area)	1 space for every 100 carparking spaces or part thereof.
(b) Hospital (outpatient area): (i) up to 1 000 carparking spaces; and (ii) for each additional 100 carparking spaces or part thereof in excess of 1 000 carparking spaces.	1 space for every 50 carparking spaces or part thereof. 1 space.
(c) Nursing home	1 space for every 100 carparking spaces or part thereof.
(d) Clinic or day surgery not forming part of a hospital	1 space for every 50 carparking spaces or part thereof.
Class 9b	
(a) School	1 space for every 100 carparking spaces or part thereof.

Class of building to which the Class 7a building or carparking area is associated	Number of accessible carparking spaces required
(b) Other assembly buildings:	
(i) up to 1 000 carparking spaces; and	1 space for every 50 carparking spaces or part thereof.
(ii) for each additional 100 carparking spaces or part thereof in excess of 1 000 carparking spaces.	1 space.

Note: an accessible carparking space need not be designated where the total number of carparking spaces available does not exceed 5

We have been advised that there is a total of six-hundred and sixty (660) carparking spaces are to be provided on the site. Twelve (12) are for use by the Hotel component, fifty (50) for the commercial component and five-hundred and seventy-two (572) for the residential component.

No accessible carparking has been indicated on the documentation received to date. We advise the following with regard to the number of accessible spaces.

Hotel (Class 3) will require the provision of 1 accessible carparking space (based on 5% of all spaces per BCA requirements)

Commercial (Class 5) will require the provision of 1 accessible carparking space (based on ratio of 1:100 per BCA requirements)

Residential Apartments (Class 2) will require the provision of 86 accessible carparking spaces (based on one carparking space per apartment – 15% adaptable)

Refer to Appendix B for compliance requirements for accessible carparking spaces.

3.5 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.

Insufficient detail is provided at this stage of the design process to ascertain compliance.

Refer to Appendix B for compliance requirements for entrance doors.

4. ACCESSIBILITY PROVISIONS – INTERNALS AREAS

For the purposes of this report, the internal areas of the development include commercial areas, hotel common areas, retail areas and the residential common areas. Further design in keeping with the following items is required to ensure BCA compliance.

4.1 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.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

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

The following applies to interior finished and surface materials:

- 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.

At the development application stage, details of this nature have not been indicated on the documentation. We recommend that the abovementioned items be addressed during subsequent design stages.

4.3 Internal Doors

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.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

4.4 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:

- An area where access would be inappropriate because of the particular purpose for which the area is used.
- An area that would pose a health or safety risk for people with a disability.
- Any path of travel providing access only to an area exempted by (a) or (b).

4.5 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 the floor level number.

At the development application stage, signage details have not been indicated on the documentation. We recommend that the abovementioned items be addressed during subsequent design stages.

4.6 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.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

4.7 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 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

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

4.8 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).

At the development application stage, glazing details have not been indicated on the documentation. We recommend that the abovementioned items be addressed during subsequent design stages – refer to Appendix B for compliance requirements.

4.9 Slip Resistance (BCA Part D2.14)

Landings in a stairway must have;

- a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or
- 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	P3 or R10	P4 or R11
Tread or landing surface	P3 or R10	P4 or R11
Nosing or landing edge strip	P3	P4

At the development application stage, slip resistance requirements have not been addressed. We recommend that the abovementioned items be addressed during subsequent design stages.

4.10 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—

(a) in patient care areas in a Class 9a health-care building, the door sill is not more than 25 mm above the finished floor level to which the doorway opens; or

(b) in a Class 9c aged care building, a ramp is provided with a maximum gradient of 1:8 for a maximum height of 25 mm over the threshold; or

NSW D2.15(d),(e)

(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; or

(d) in other cases—

(i) the doorway opens to a road or open space, external stair landing or external balcony; and

(ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.

At the development application stage, threshold details have not been indicated on the documentation. We recommend that the abovementioned items be addressed during subsequent design stages. – refer to Appendix B for compliance requirements.

5. VERTICAL CIRCULATION

Lifts provide the main access between levels of the building. Multiple lifts are provided within the development. Stairs within the building are generally fire egress stairs.

5.1 Passenger Lifts

Every passenger lift in an accessible building must be suitable for use by people with a disability. Typically, requiring the following 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 AS1735.12.
- 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 indication 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.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

5.2 Stairs

All stairways, excluding fire-isolated stairs, must be designed and constructed in accordance with AS 1428.1 (2009) Clause 11.

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.

Stairs provided externally are regarded public access stairs. AS1428.1 has access requirements for all public access stairs and is applicable in this instance.

At the development application stage, stair details have not been indicated on the documentation. We recommend that the abovementioned items be addressed during subsequent design stages. – refer to Appendix B for compliance requirements.



5.3 Fire Isolated Stairs

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

At the development application stage, stair details have not been indicated on the documentation. We recommend that the abovementioned items be addressed during subsequent design stages. – refer to Appendix B for compliance requirements.

5.4 Accessible Ramps

All accessible ramps must be designed and constructed in accordance with AS 1428.1 (2009) Clause 10.

Refer to Appendix B for compliance requirements for accessible ramps.

6. SANITARY AND OTHER FACILITIES

6.1 Unisex Accessible Toilets

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 <i>sanitary compartments</i> are provided in common areas, not less than 1
Class 3	(a) In every accessible sole-occupancy unit provided with sanitary compartments within the accessible sole-occupancy unit, not less than 1; and (b) at each bank of <i>sanitary compartments</i> containing male and female <i>sanitary compartments</i> 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 <i>health-care building</i>	Where Part F2.3 of the <i>BCA</i> requires closet pans: (a) 1 on every <i>storey</i> containing <i>sanitary compartments</i> ; and (b) where a <i>storey</i> has more than 1 bank of <i>sanitary compartments</i> containing male and female <i>sanitary compartments</i> 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.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.



6.2 Unisex Accessible Showers

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 3	(a) In every accessible sole-occupancy unit provided with showers within the accessible sole-occupancy unit, not less than 1; and (b) 1 for every 10 showers or part thereof provided in common areas.
Class 5, 6, 7, 8 and 9 — except for within a ward area of a Class 9a <i>health-care building</i>	Where Part F2.3 of the <i>BCA</i> requires 1 or more showers, not less than 1 for every 10 showers or part thereof.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

6.3 Sanitary compartments for people with an ambulant disability

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.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

7. HOTEL – ACCESSIBLE ROOMS

The hotel offers sixty (60) rooms (sole occupancy units). As such, the BCA requires the provision of three (3) accessible sole occupancy units.

The following access requirements apply to the accessible sole occupancy units and should be addressed during subsequent design stages.

7.1 Doorways

Doorways within accessible sole occupancy units (including the entrance door) should comply with the requirements of AS1428.1 (2009) as a part of the accessible path of travel.

Access requirements for doorways within the accessible path of travel are as follows.

- a. Doorways within the accessible path of travel to have a minimum clear opening width of 850mm (AS1428.1 (2009), Clause 13.2).
- b. All doorways within the accessible path of travel to have complying circulation areas as illustrated in AS1428.1(2009), Figure 31. Circulation areas to have a maximum crossfall of 1:40.
- c. Doorways to have minimum 30% luminance contrast as described in AS1428.1(2009), Clause 13.1.
- d. Doors to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1(2009), Clause 13.5)

7.2 Bathroom

- a. Bathroom to comply with AS1428.1 (2009), Clause 15 including set-out of fittings and fixtures, circulation areas and doorways.

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

The minimum dimensions of the accessible showers 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 (2009), Figure 47 – generally a space 1600x1250mm is required dependent on arrangement of fixtures.

Shower to be fitted within grabrails and tapware as outlined in AS1428.1 (2009).

- b. Taps to have lever handles, sensor plates or similar controls. For lever taps, a minimum 50mm clearance to be provided to adjacent surfaces.
- c. 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 (eg pan, wall or floor) and remain in the upright position when fully raised.

- d. Provide a backrest to accessible toilets to comply with AS1428.1 (2009), Clause 15.2.4.
- e. 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 (2009), Clause 8 and include information in tactile and Braille formats (as required by the BCA).
- f. Doorways 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.
- g. Door hardware 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.
- h. Controls such as light switches within the accessible toilet facilities 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.

7.3 Kitchenette – if provided

Requirements for kitchens are provided with AS1428.2 (1992), Appendix A. Recommendations for the dimensioning, layout and arrangement of kitchens are offered to maximize usability for persons with a disability. Some key principles are as follows:

- a. There is no typical kitchen layout.
- b. Kitchen design should be one which conserves the user's energy. The relationship between facilities is critical in this regard to minimize travel distance.
- c. Shelves and cupboards should be installed in accordance with AS1428.2 (1992), Clause 24.2. The most usable height range for persons using a wheelchair is 230-1350mm affl.
- d. Acceptable hardware for cupboards includes touch latches and D shaped pull handles.
- e. Work surfaces should be at a consistent level and have an uninterrupted flow to allow the user to slide goods along the surface. A clear set-down space adjacent to the oven, cook-top, fridge and dishwasher should be provided.
- f. The height of benches should be between 700-850mm affl. We note that no height will suit all users. We recommend a height of 850mm as per AS1428.2 (1992), Clause 24.1.1. At least one work surface should provide a clear width opening beneath the surface of not less than 820mm to allow for the frontal approach of a person using a wheelchair.
- g. A shallow sink should be provided. Optimum bowl depth is 150mm with clearances under as per requirements for handbasins – see AS1428.1 (2009), Clause 15.
- h. Where possible, a side opening oven should be provided to enable use by persons using a wheelchair. The oven should be installed so that the bottom shelf is at the same height as the work surfaces.
- i. Cook tops should be flush with surrounding worksurfaces and have counter-top controls.

7.4 Robes

Robes within the accessible sole occupancy units to have hanging rods provided at 1350mm affl.

7.5 Circulation Spaces

It is best practice to provide circulation areas within the accessible rooms for wheelchair access. A minimum 1540mm wide circulation at the foot of the bed (for compliance with AS1428.2 (1992), Clause 6.1) is recommended.

Adequate circulation areas have been provided within the accessible room (Room 5).

7.6 Floor Finishes

All floor finishes are to be flush to provide an accessible path of travel throughout the different areas of the building. Maximum allowable construction tolerance is 3mm (5mm for bevelled edges) as part of the accessible path of travel. Refer to AS1428.1 (2009), Clause 7.2 for further details. This should be implemented during construction to ensure compliance.

7.7 Carpet

AS1428.1 (2009) has access requirements for carpet. Where **new** carpet is used as the floor surface, pile height should not exceed 4mm. Exposed edges will be fastened to the floor surface. Carpet trims shall have a vertical face not more than 3mm high.

7.8 Controls

New controls such as light switches, GPOs, alarm keypads, card swipes, intercoms, etc are to be located within the accessible height range of 900-1100mm above the floor level to comply with AS1428.1 (2009), Clause 14. This should be implemented during construction to ensure compliance.

8. ADAPTABLE HOUSING PROVISIONS

A total of 572 sole-occupancy units are proposed within the residential development. As such, 86 adaptable apartments are required within the development to satisfy Gosford City Council DCP for the Gosford Town Centre which requires 15% of all residential apartments to be adaptable within the meaning of AS4299 (1993). These units are required to be 'visitable' initially but can be made 'adaptable' should the need arise.

All adaptable units will require full compliance with the accessibility requirements for sole-occupancy units under the BCA, including a complying accessways as per AS 1428.1 (2009) to the entry door.

The design of the adaptable units have been assessed against the provisions of AS4299 Class C and the arrangements are considered capable of compliance with the guidance laid out in this Standard, as will be elaborated on below. Modifications may be required in the future, however are limited to elements which are likely to require adaptation to meet individual need.

- a) **Visitability** - all adaptable units are required to be "visitable" from the outset. Visitable units are required to have at least one wheelchair accessible entry, an accessible path of travel to the living area and to a toilet that is either accessible or visitable.
- b) **Avoidance of level Change** - All units have no steps which will ensure adaptability will be easy to accommodate.
- c) **Manoeuvrability** - the scheme provides for suitable space pre-adaption, but will accommodate wheelchair access and circulation against the principles of AS4299 on post adaption, particularly the kitchen, laundry, bathroom and an accessible bedroom.
- d) **Ease of adaption** - Care has been taken to optimise the pre adaption units to allow post adaption works relatively easily. Service locations have been considered and any wall relocation have been designed. Additional provisions are proposed to facilitate ease of modification in the future such as the provision of additional capped off drainage points.
- e) **Ease of reach** - key services and controls will be located so they are within the reach range of a wheelchair user.
- f) **Laundry facilities** - These have been reviewed to ensure they are accessible against the provisions of AS4299 on post-adaption.

8.1 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.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

8.2 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. Refer to previous Section on Accessible Car Parking of this report for car parking details.

Carparking for the adaptable units has been provided for compliance with AS2890.6 (2009). This will meet the requirements of AS4299.

8.3 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 is to be 1000mm.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

8.4 Bathroom

Pre and potential post adapted bathroom facilities have been addressed as part of the design.

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

Typically, the dimensions provide scope for a post adapted bathroom that will provide sufficient circulation space per AS 1428.1 (2009).

Structural support (such as structural ply sheeting) will be provided at toilet and shower grab rail zones, as appropriate, to allow for ease of installation of any future fixings. Whilst a vanity unit is proposed, this could be removed and non load-bearing walls relocated to enhance circulation as required. Generally, unit bathrooms provide the potential for the pan and shower in the appropriate location for compliant circulation space, or the location of drain outlet / falls located to accommodate easy adaptation.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

8.5 Kitchen

The kitchen facilities have been located and designed to allow simple modification and will achieve a minimum circulation of 1540mm between opposing walls, cabinets and appliances to facilitate completion of a 180 degree turn by a wheelchair user, when post adapted.

Where a proposed workbench will be relocated, consideration has been given to the location of services to ensure they can be reconnected without any difficulties.

In addition the design of the kitchen will accommodate for the potential adaption to include:

- 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

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

8.6 Bedroom

The main bedroom within the adaptable units will require sufficient circulation space (post adaption) 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 will 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).

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

8.7 Living Areas

Living areas are 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 available.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

8.8 Laundry

Laundry facilities and joinery will be designed to allow for adjustment where required to cater for accessibility in the future; the post adaption location will provide for a clear 1500mm approach to the facility.

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

8.8 Balcony

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.

8.9 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
 - o points 300mm from the edge of kitchen worktops
 - o adjoining the bedhead
 - o in living room (four outlets)
 - o laundry areas (double outlet)
- Light switches, 900mm - 1100mm of floor level at convenient locations including:
 - o 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

Insufficient detail is provided at this stage of the design process to ascertain compliance. The abovementioned items to be incorporated during subsequent design stages of the project.

9. 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 C for specific requirements

- Fire Egress for People with Disabilities
- Accessible Reception Counters
- Seating in Public Areas
- Signage
- Access controlled entries to carpark
- Depth of Door Recess
- Luminance Contrast

10. 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 2014 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 2014 compliance can be finalised prior to the issue of a Construction Certificate.

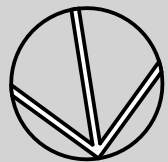
The proposed development is capable of providing access for people with disabilities and meeting all the relevant standards.



APPENDIX A

MARKED PLANS

ISSUE	REVISION	DESCRIPTION	DATE	VERIFIED	KEY PLAN
A	-	ISSUE TO CONSULTANTS FOR INFORMATION	19/12/14	PJ	
B	-	ISSUE TO CONSULTANTS FOR INFORMATION	20/01/15	PJ	
B	1	ISSUE TO CONSULTANTS FOR INFORMATION	21/01/15	PJ	
C	2	ISSUE TO CONSULTANTS FOR INFORMATION	27/01/15	PJ	
C	-	ISSUE FOR DCA	28/01/15	PJ	



Client
Jian Lin WANG
New Hong Kong Macau Australian Pty Ltd
Shenyang, Liaoning
China

Project
1485 Waterside Mixed Use Development
Lot 1 DP 51513, Lot 1 DP 433339, Lot 1 & 3 DP 219639
50-70 Mann Street
Gosford, NSW 2250

CKOS ARCHITECTURE
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Layout
Plan
Basement Level 02-03

Drawing Scale
1:250 @ A1
1:500 @ A3

Drawn
LF

Verified
PJ

Date
28/01/2015

Project Number
1485

Drawing Number
A-102

Issue
C

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Accessible car parking spaces must be designed in accordance with AS 2890.6(2009), including (but not limited to) the following:

- Minimum dimensions of 2400mm(W) X 5400mm(D);
- Minimum dimensions of 2400mm(W) X 5400mm(D) to the shared area;
- Provision of bollard to shared space;
- Appropriate line-marking and signage; and
- Minimum head height clearance in accordance with Clause 2.4.

There are a total 660 spaces proposed. The number of accessible carparking spaces to be in accordance with BCA Table D3.5.

Stair to comply with Clause 11 of AS1428.1 (2009), including:

- Minimum 1000mm unobstructed width;
- Handrails to both sides;
- Appropriate handrail extensions top and bottom of the stairway;
- TGSs to the top and bottom of the stairway (to AS 1428.4.1.2(2009));
- Opaque risers;
- No overhanging treads; and
- Luminance contrasting strips at the stair nosings, with a minimum slip resistance rating of X-R10 when dry, and W-R11 when wet.

Passenger lifts to comply with BCA Part E3.6:

- Minimum internal lift car dimensions to be 1100mm(W) x 1400mm(D) if the lift travels no more than 12m;
- Minimum internal lift car dimensions to be 1400mm(W) x 1600mm(D) if the lift travels more than 12m;
- Enhanced features are required to meet BCA 2012 / Premises Standard Clause E3.6 and AS1735:12 (1999).

Fire-isolated stairs to be provided with the following (BCA Clause D2.13, AS1428.1(2009) Clause 11.1 (f)(g), and Clause 12):

- 50-75mm wide luminance contrasting strip at the stair nosings;
- A minimum 30% luminance contrast is to be achieved between the stair nosing and the background;
- The area of luminance contrast must not extend down the riser more than 10mm; and
- Stair nosings to have a slip resistance rating of X-R10 when dry, and W-R11 when wet.



MANN ST

BAKER ST

GEORGIANA TC

Provide unisex accessible toilet and cubicles for people with ambulant disabilities, in accordance with AS1428.1 (2009) in this location.

Provide unisex accessible toilet and cubicles for people with ambulant disabilities, in accordance with AS1428.1 (2009) in this location.

Provide wheelchair seating spaces in accordance with BCA requirements.

Please confirm location of accessible path of travel between levels.

All stairs other than fire isolated stairs to comply with Clause 11 of AS1428.1 (2009), including:

- Minimum 1000mm unobstructed width;
- Handrails to both sides;
- Appropriate handrail extensions top and bottom of the stairway;
- TGSIs to the top and bottom of the stairway (to AS 1428.4.1:2009);
- Opaque risers;
- No overhanging treads; and
- Luminance contrasting strips at the stair nosings, with a minimum slip resistance rating of X:R10 when dry, and W:R11 when wet.
- Minimum setback of 900mm from the property boundary.

For commercial areas, provide access to and within all areas usually used by the occupants.

For retail tenancies, provide access to and within all areas usually used by the occupants.

Ensure a smooth transition between abutting surfaces. A construction tolerance of 3mm for vertical differences is allowable, or 5mm where edges are rounded or bevelled.

Fire-isolated stairs to be provided with the following (BCA Clause D2.13, AS1428.1(2009) Clause 11.1 (f)(g), and Clause 12):

- 50-75mm wide luminance contrasting strip at the stair nosings;
- A minimum 30% luminance contrast is to be achieved between the stair nosing and the background;
- The area of luminance contrast must not extend down the riser more than 10mm; and
- Stair nosings to have a slip resistance rating of X:R10 when dry, and W:R11 when wet.

Passenger lifts to comply with BCA Part E3.6:

- Minimum internal lift car dimensions to be 1100mm(W) x 1400mm(D) if the lift travels no more than 12m;
- Minimum internal lift car dimensions to be 1400mm(W) x 1600mm(D) if the lift travels more than 12m;
- Enhanced features are required to meet BCA 2012 / Premises Standard Clause E3.6 and AS1735.12 (1999).

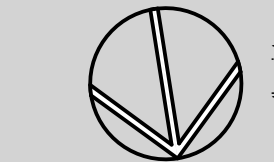
0m 2m 4m 10m 20m
1m 5m

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Key Plan



Client
Jian Lin WANG
New Hong Kong Macau Australian Pty Ltd
Shenyang, Liaoning
China

Project
1485 Waterside Mixed Use Development
Lot 1 DP 51513, Lot 1 DP 433339, Lot 1 & 3 DP 219639
50-70 Mann Street
Gosford, NSW 2250

CKOS ARCHITECTURE
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Layout
Plan
Ground Floor: Mann Street

Drawing Scale
1:250 @ A1
1:500 @ A3

Project Number
1485

Drawing Number
A-104

Date
28/01/2015

Issue
C

MAN STREET TOWER (29 STOREYS)

1 BED	2	58
2 BED	4	116
3 BED	2	58
TOTAL APARTMENTS		232

BAKER STREET TOWER (20 STOKES)
(NOTE: SIMILAR TO TOWER 01)

1 BED	2	52
2 BED	4	104
3 BED	2	52
TOTAL APARTMENTS		208

ADAPTABLE UNIT REQUIREMENTS:

Entrances / Doorways:

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.

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.

Circulation:

- 2250mm diameter clear space within living area to allow wheelchair access. Furniture arrangement will need modification.
- 1550mm clear to front of kitchen and laundry benches.
- turning space at foot of bed minimum 1540 mm wide and 2070mm long (in the direction of travel).
- door circulation in accordance with AS1428.1 (2009).

Visitable Toilet:

main) floor that complies with the requirements for sanitary facilities of AS4299.

2000mm x 1000mm to accommodate the WC pan, clear of door swings and fixtures including washbasins.

Bathroom:

adapted bathroom that will provide sufficient circulation space per AS 1428.1 (2009).

recommended at toilet and shower grab rail zones to allow for ease of installation of any future fixings.

post adaption layouts, thereby allowing fixtures to easily be relocated.

Kitchen:

between opposing walls, cabinets and appliances to facilitate completion of a 180 degree turn by a wheelchair user

potential of adaption including:

- 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.

Bedroom:

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.

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).

Laundry:

adjustment to cater for accessibility in the future; the post adaptation location will provide for a clear 1550mm approach to the facility.

The floor plan shows a semi-circular building layout with 108 units. Units are arranged in a grid-like pattern, with some units having 'BD' (Bedroom) and 'W01' to 'W05' (Bathroom) labels. A central staircase area is highlighted in green, and a central corridor area is highlighted in purple. Red arrows point from the text boxes at the bottom to the purple and green areas.

[illegible][illegible]

Client
Jian Lin WANG
 New Hong Kong Macau Australian Pty Ltd
 Shenyang, Liaoning
 China

CKOS ARCHITECTURE

Project
1485 Waterside Mixed Use Development
Lot 1 DP 511513, Lot 1 DP 433839, Lot 1 & 3 DP 219639
50-70 Mann Street
Gosford, NSW 2250

P.O. Box 4400
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Layout

Floorplate Plans

Apartment Plans - Mann

Street Tower

PHILIP CHUN
ACCESS CONSULTING

Ref: AN15-20482_Waterdale
Reviewed by: Lindsay Peiray
Date: 2/7/15

For residential component, a total of 86 adaptable apartments will be required (based on a total of 572 apartments) to satisfy Council requirements for 15% of all residential units to be adaptable / visible.

Adaptable apartments to be representative of the range of apartments available.



APPENDIX B

ACCESS COMPLIANCE REQUIREMENTS

B1 ACCESSIBLE CARPARKING

Accessible carparking to be a minimum of 2400mm wide with a shared area to one side of the space 2400mm wide. Circulation space can be shared between adjacent accessible carparks. For a single space, a total width of 4800mm is required. The car space and the shared zone should be a minimum of 5400mm long.

Provide a bollard to the shared circulation space as illustrated in AS2890.6 (2009), Figure 2.2.

The maximum allowable crossfall of an accessible carparking area is to be 1:33 (for outdoor spaces). This crossfall applies both parallel and perpendicular to the angle of parking.

For covered carparking, the clear height of the accessible carparking space to be 2500mm as illustrated in AS2890.6 (2009), Figure 2.7.

Designated accessible carparking is to be identified using the International Symbol for Access (ISA) – ground and vertical signage is required. Signage is to comply with AS1428.1.

B2 EXTERNAL 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 to 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 180°, landings to be 1540mm in length – refer to AS1428.1 (2009), Clause 10.8.

B3 KERB RAMPS

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

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

B4 STEP RAMPS

The configuration of the step ramps to comply with the requirements of AS1428.1 (2009), 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 (2009), 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.

B5 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 ramps, or a series of accessible ramps, are to have a maximum rise of 3.6m (BCA Part 3.11).

The ramp is 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.

The ramp is 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 and 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 AS1428.4.1 (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.

B6 PEDESTRIAN CROSSINGS

Where kerb ramps are to be provided at the roadway 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.

B7 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.

B8 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 as part of the accessible path of travel.

Door threshold are to be level to provide seamless entry as part of the accessible path of travel. 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.

B9 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.

B10 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)

B11 TACTILE INDICATORS

Installations of tactile indicators are 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.

B12 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 (2009) Clause 6.6.

B13 SIGNAGE

The BCA has requirements for Braille and tactile signage within Specification D3.6. This provides information for the provision of statutory signage. 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 both a standing and seated position.
- At changes in direction.
- At locations where directional decisions are made.
- As required to amenities and exits

B14 HEARING AUGMENTATION

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.

B15 PASSENGER LIFTS

Every passenger lift in an accessible building must be suitable for use by people with a disability. Typically, requiring the following 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 (2002).
- Minimum clear door opening complying with AS1735.12.
- Passenger protection system complying with AS1735.12.
- Lift landing doors at the upper landing.
- Lift car and landing control buttons complying with AS1735.12.
- Lighting in accordance with AS1735.12.

- 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.

B16 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 AS1428.1 (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.

B17 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.

B18 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 AS1428.1 (2009), 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 (2009), 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 (2009), 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 (2009), Figure 31.

Door hardware is 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.

B19 UNISEX ACCESSIBLE SHOWERS

Showers are to comply with AS 1428.1 (2009), 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 (2009), Figure 47.

B20 PEOPLE WITH AMBULANT DISABILITIES CUBICLES (PAD)

PAD cubicles within male and female toilets to be in compliance with AS1428.1 (2009), Clause 16.

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

Provide grabrails to PAD cubicles to comply with AS1428.1 (2009), Clause 17 and Figure 53A.

Doors are to have a minimum opening width of 700mm and comply with AS1428.1 (2009) Figure 53B.

Provide signage to the PAD cubicles to comply with AS1428.1 (2009), Clause 16.4.

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



APPENDIX C

BEST PRACTICE RECOMMENDATIONS

C1 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.

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.

C2 RECEPTION COUNTERS

We recommend the provision of accessible reception counters designed in accordance with AS1428.2 (1992), Part 24.1. Height of the counter is to be between 750mm (± 20) and 850mm (± 20) above the finished floor level and have foot and knee clearance under the counter as outlines in Figure 25. The minimum width of the accessible counter and clearance below is 900mm.

The level of access to be provided may be dependent upon the level of interaction intended, such as high level interaction, minimal and verbal and visual interaction only.

C3 SEATING TO PUBLIC AREAS

Where seating is located within public areas, a proportion of accessible seating should be provided offering compliance with AS1428.2 (1992) Clause 27.

C4 SIGNAGE

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).

C5 ACCESS CONTROLLED ENTRIES TO CAR PARKS

Where an entry to a car park is access control, the access or intercom pedestal should be position so that it is accessible by a driver who uses a wheelchair. The access /intercom pedestal to be positioned in accordance with AS2890.6 (2009) Appendix A4.

C6 DEPTH OF DOOR RECESS

Where the depth of the door recess (measured to the face of the door) exceeds 300mm, the door must be automated to enhance access.

C7 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.