



3D Access

Fire Safety | Acoustics | Access

25-27 Warriewood Road, Warriewood

Access Design Review report

Developers Approval Stage

25-27 Warriewood Road, Warriewood

Access Design Review report

Developers Approval Stage

Prepared for:

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Revision History

Doc.	Rev.	Date	Purpose	Prepared by:	Reviewed by:
ADR	0	07/07/2020	Initial DA Review	Adam Buzasi	Adam Buzasi
ADR	1	21/05/2020	Final DA Review	Adam Buzasi	Adam Buzasi
ADR	2	27/05/2020	Amended Final DA Review	Adam Buzasi	Adam Buzasi

Executive Summary

Knowles Group has appointed 3D Access Pty Ltd to undertake a design review of the project to assess the accessibility provisions during initial development of the design documentation at part of Development Approval (DA) at 25-27 Warriewood Road, Warriewood.

We understand the project comprises a four-storey apartment building comprising 32 sole occupancy units and 11 three storey townhouses. It should be noted that currently the Building Code of Australia and Premises Standards do not contain any access provisions for townhouses.

The body of this report (Section 3) contains the key areas for design adjustments in relation to the documentation reviewed, other mandatory access requirements that affect the design but are considered typical are detailed within Appendix A. This Appendix is intended to be used as a guide to assist with development of documentation. All references include applicable requirements from relevant Disability Access legislation.

This Access Report evaluates the access provisions against the National Construction Code (NCC), Building Code of Australia (BCA) 2019, Disability Discrimination Act (Australian Government, 1992), and the Disability (Access to Premises - Buildings) Standards – the “Premises Standards” (Australian Government, 2010).

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1 Introduction

1.1 Purpose

Knowles Group has appointed 3D Access Pty Ltd to undertake a design review of the project to assess the accessibility provisions during initial development of the design documentation at part of Development Approval (DA) at 25-27 Warriewood Road, Warriewood.

The main body of this report (Section 3) contains the key areas for design adjustments in relation to the documentation reviewed, other mandatory access requirements that affect the design but are considered typical are detailed within Appendix A. This Appendix is intended to be used as a guide to assist with development of documentation. All references include applicable requirements from relevant Disability Access legislation.

This Access Report evaluates the access provisions against the National Construction Code (NCC), Building Code of Australia (BCA) 2019, Disability Discrimination Act (Australian Government, 1992), and the Disability (Access to Premises - Buildings) Standards – the “Premises Standards” (Australian Government, 2010).

This report is only to be used for 25-27 Warriewood Road, Warriewood, with the design as described in the referenced documentation. The report is not to be used to support any other design scheme as changes to the design may affect the evaluation. 3D Access Ltd takes no responsibility for any issues associated with the misuse of this report.

1.2 Relevant Legislation

The primary legislation applicable to the development is the National Construction Code (NCC), Building Code of Australia (BCA) 2019, Disability Discrimination Act (Australian Government, 1992), and the Disability (Access to Premises - Buildings) Standards – the “Premises Standards” (Australian Government, 2010).

The BCA provides a set of Performance Requirements which must be complied with. The prescriptive deemed-to-satisfy (DTS) Provisions are also described in the BCA. A design that complies with the DTS Provisions is deemed to comply with the Performance Requirements. A Performance Solution is a design that does not comply with the DTS Provisions however is shown to comply with the Performance Requirements by way of an evaluation.

The objective of the Premises Standards (Australian Government, 2010) is to provide the building and design industry with detailed information about how they can design and construct their buildings in a way that meets their responsibilities under the Disability Discrimination Act (Australian Government, 1992).

It is acknowledged that there are limitations to these standards and their use exclusively, will not prevent a claim being made under the DDA. It is noted that the DDA is a complaints-based mechanism, whereby a claim of unlawful discrimination may be taken firstly to the Human Rights Commission and if unsuccessful to the Federal Court of Australia. This report offers a merit-based assessment of those designs and plans against the BCA Performance Requirements and referenced standards with respect to access for people with a disability.

1.3 Access to Premises Standard Limitations

People who design, build, own, lease, operate or manage a premise have a responsibility under the Disability Discrimination Act 1992 (DDA) not to discriminate against people with disabilities. While complying with the Premises Standards and BCA does not absolve discrimination or lodgement of a complaint with the Australian Human Right Commission, it is considered as reasonable defence.

Facility managers, lessees and property owners are advised that the Disability Discrimination Act 1992 (DDA) places duties on employers and service providers to consider barriers; both physical and non-physical, that people may encounter when trying to access a service or employment.

It is recommended that management implement a process of continued quality improvements with respect to maintaining safe and equitable access and to monitor the amenities to identify any unforeseen issues created by the proposed works.

1.4 Reference Documentation

The report is based on information contained in the following documents and drawings:

Table 1 Reference Documentation

Document	Prepared by	Issue
<u>Email</u> To: Adam Buzasi Subject: Fee proposal - DA Report	Janelle Pirone, Knowles Group	Thu 23/04/2020 6:04 PM
<u>Drawing Series</u> Warriewood Residential Development Job No.: 1510121 Drawing DA - 100 Proposed Apartment Ground Floor Plan / Dwelling Lower Level Floor Plan, Rev DA5 Drawing DA - 101 Proposed Apartment First Floor Plan / Dwelling Mid Level Floor Plan, Rev DA5 Drawing DA - 102 Proposed Apartment Second Floor Plan / Dwelling Upper Level Floor Plan, Rev DA4 Drawing DA - 105 Overall Floor Plan – Basement, Rev DA5	Via Architects	18/05/2020
<u>Drawing Series</u> <u>Landscape Plan – Composite Ground, First and Second Floor</u>	CDA Design Group	08/05/2020, Rev D-P7

1.5 Project Stakeholders

The project stakeholders are listed below:

Table 2 Relevant Stakeholders

Contact	Organisation	Role
Janelle Pirone	Knowles Group	Client
-	Via Architects	Architect
-	CDA Design Group	Landscape Architect
-	Northern Beaches Council	Approving Authority
Adam Buzasi	3D Access	Access Consultant

1.6 Report Limitations

The following limitations are applicable with respect to the access advice presented in this report:

- 3D Access has prepared this document for the sole use of the client and for the specific purpose expressly stated in the document. No other party should rely on this document without the prior written consent of 3D Access. 3D Access undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.
- The information contained in this document provides advice in relation to access and mobility only. No claims are made and no liability is accepted in respect of design and construction issues falling outside of the specialist field of access and mobility.
- Reports marked 'Draft' may be subject to change and are not released as final reports. 3D Access accepts no liability pending release of the final version of the report.
- In preparing this document 3D Access may have relied upon information provided by the client and other third parties, some of which may not have been verified. 3D Access accepts no responsibility or liability for any errors or omissions which may be incorporated into this document as a result.
- The recommendations, data and methodology documented in this report are based on the listed reference documentation. The recommendations apply specifically to the project under consideration, and must not be utilised for any other purpose. Any modifications or changes to the project from that described in the listed reference documentation may invalidate the advice provided in this document, necessitating a revision.
- Subject to the above conditions, this document may be transmitted, reproduced or disseminated only in its entirety.

2 Principal Building Characteristics

The building characteristics described below are informative only. The information is based on referenced documentation and is current at the time of writing this report. It is not intended to restrict or limit the design and is subject to clarification or change as the design develops.

It is the responsibility of the design team, services engineers and building surveyor to ensure compliance with all parts of the BCA DTS provisions.

2.1 Building Characteristics

We understand the project comprises a four-storey apartment building comprising 32 sole occupancy units and 11 townhouses. It should be noted that currently the Building Code of Australia and Premises Standards do not contain any access provisions for townhouses.

Table 3 Building Parameters

BCA Parameter	
Occupancy	Townhouses, Apartments, Carpark
BCA Classification	Class 1a/10a, Class 2, Class 7a
Extent of Access	<p><u>Class 1a</u></p> <p>It should be noted that currently the Building Code of Australia and Premises Standards do not contain any access provisions for townhouses.</p> <p><u>Class 2</u></p> <p><u>Common areas:</u></p> <p>From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level. To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area, or the like.</p> <p>Where a ramp complying with AS 1428.1 or a passenger lift is installed—</p> <p>(a) to the entrance doorway of each sole-occupancy unit; and</p> <p>(b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp.</p>

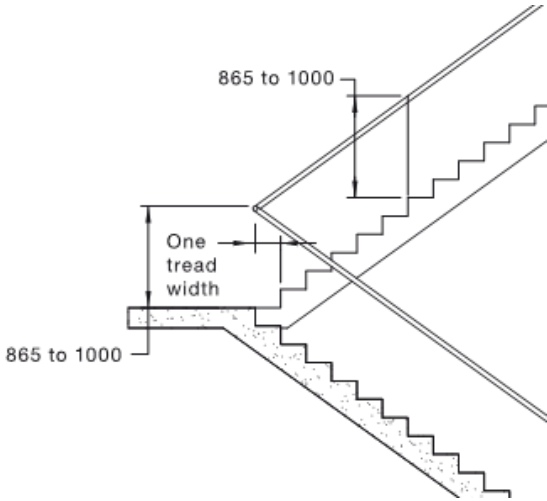
BCA Parameter	
	<p><u>Class 7a</u> To and within any level containing accessible carparking spaces. It is noted that the development is not provided with nor required to be provided with accessible carparking.</p>

With consideration to the use of particular spaces and understanding that they are off-limits to the public, the following areas have been deemed inappropriate and may be exempt from access under Clause D3.4, therefore these areas have not been included as part of this assessment:

- Services rooms

3 Access Design Review Findings

25-27 Warriewood Road, Warriewood		
Drawing no.	BCA DTS Provisions	Comment
DA – 100	<p>Accessible Carpark</p> <p>1. Accessible carparking to be provided in accordance with AS 2890.6.</p>	<ul style="list-style-type: none"> Technically there are no requirements for an accessible carpark for a Class 2 development, however we do note an accessible carpark has been nominated. For guidance to ensure compliance can be achieved with AS 2890.6 please refer to Appendix A).
	<p>1:22 Ramp</p> <p>2. The length of walkways with a gradient between 1:20 – 1:33 shall be obtained through linear interpolation (AS 1428.1, Clause 10.1 (b)(iii)).</p>	<ul style="list-style-type: none"> Ensure that the walkway containing a length of approximately 17m does not exceed a gradient steeper than 1:22.
	<p>1:14 ramps</p> <p>3. Ramp with a gradient between 1:14 and steeper than 1:20 shall be provided with accessible features in accordance with AS 1428.1, Clause 10.3.</p>	<ul style="list-style-type: none"> All 1:14 ramps to be provided with handrails on both sides, handrail extensions, TGSIs to the top and bottom landings, a surface with a slip rating of P4/R11 (Refer to Appendix A for guidance).
	<p>External Common Stairs leading to Apartment Porches.</p> <p>4. Every stair must comply with Clause 11 of AS 1428.1 (BCA, Clause D3.3 (a)(ii) and contain features such as handrails on both sides, TGSIs to top and bottom landings, non-slip contrasting nosing strips etc (Refer to Appendix A for further details).</p>	<ul style="list-style-type: none"> Where stairs fall under the common property, accessible features will be applicable. For guidance on the design of stair please refer to Appendix A.

Drawing no.	BCA DTS Provisions	Comment
	<p>Fire Isolated Stair (Applicable throughout)</p> <p>5. Fire isolated stairs to comply with Clause 11.1 (f) and (g) (non-slip contrasting nosing strips) (BCA, Clause D3.3 (a)(iii)).</p> <p>6. In a required exit serving an area required to be accessible, handrails are required to be designed to comply with Clause 12 of AS 1428.1.</p>	<ul style="list-style-type: none"> Provide non-slip contrasting nosing strips to the fire isolated stairs. Applicable throughout – Inner handrail on the intermediate landings is to extend one tread depth prior to continuing around the landing. Note that this is to maintain a consistent handrail height throughout the flight. (1428.1, Figure 28).  <p>Figure 1 Figure 28 from AS 1428.1</p> <p>Note, in lieu of compliance with the DTS Provisions the design may adopted a Performance Based Approach (Refer to Table 4).</p>
DA - 105	<p>Bike store and Refuse</p> <p>7. Where multiple doors occur one active leaf shall achieve a clear openable width of 850mm (BCA, Clause 3.2 (e)).</p>	<ul style="list-style-type: none"> Ensure that one leaf can achieve a clear openable width not less than 850mm.

25-27 Warriewood Road, Warriewood		
Drawing no.	BCA DTS Provisions	Comment
TP01D-P6	Drainage Grates 8. Slotted openings shall be not greater than 13 mm wide and be oriented so that the long dimension is transverse to the dominant direction of travel. (AS 1428.1, Clause 7.5).	<ul style="list-style-type: none"> Ensure that where draining grates are provided, slotted openings are no greater than 13mm.

3D Access has assessed the design documentation as part of the Developers Approval and advises that an initial level of compliance has been achieved. As documentation progresses, we believe that the design can readily demonstrate compliance with the with the National Construction Code (NCC), Building Code of Australia (BCA) and associated Disability Access Australian Standards.

4 Potential Design Variations

With consideration to the proposed use and design, we believe that there are opportunities to consider variations from the Deemed-to-Satisfy (DTS) Provisions through adopting a Performance-Based approach. These variations are itemised within Table 4 below and are at the discretion of the Building Certifier.

Table 4 Proposed Performance Solutions and Reference Criteria

Proposed Performance Solution	Building Code of Australia	
	DTS Provision	Performance Requirement
To provide technical justification to waive access to the resident restricted bicycle store on the Ground Floor.	D3.1, inter alia AS 1428.1, Figure 31 (d)	DP1 (a)

Prior to adopting any of the above variations, and proceeding further with design documentation, we strongly recommend seeking acceptance from the Building Certifier. Should you wish to proceed with these Performance Solutions, please contact us.

5 References

ABC. (2019). *National Construction Code Series Volume 1 - Building Code of Australia 2019*. Canberra: Australian Building Codes Board.

Australian Government. (1992). *Disability Discrimination Act*. Office of Legislative Drafting and Publishing.

Australian Government. (2010). *Disability (Access to Premises-Buildings) Standards*.

Standards Australia. (2009). *AS 2890.6-2009 Parking Facilities - Off-Street Parking for People with Disabilities*. Australia: Standards Australia.

Standards Australia. (2010). *AS 1428.1 - 2009 Design for Access and Mobility (Part 1: General requirements for access - New building work)(Incorporating Amendment No. 1 & 2)*.

Appendix A Supplementary Design Advice – Mandatory Considerations

This Appendix identifies accessibility elements that relate to the body of this report, they are intended to be used as a guide only to assist with development of documentation. All references include applicable requirements from relevant Disability Access legislation.

Category	Description	Legislative Requirement	
Accessible Carparking	1	Each angled type accessible car space is to have a 2400mm width x 5400mm length.	AS/NZS 2890.6 Clause 2.2.1(a)
	2	A shared area of 2400mm width x 5400mm length is to be provided to one side of each accessible car space Two accessible car spaces may share the same shared area.	AS/NZS 2890.6 Clause 2.2.1(b)
	3	An unmarked shared area of 2400mm width x 2400mm length is to be provided at the front or rear of the accessible car space	AS/NZS 2890.6 Clause 2.2.1(c)
	4	Accessible car spaces and shared areas must be at the same level, on a firm plane surface with maximum 1:40 fall in any direction (1:33 for bituminous seal).	AS/NZS 2890.6 Clauses 2.2.1(d) & 2.3.
	5	Vertical clearances must be provided as follows: <ul style="list-style-type: none"> ▪ Minimum 2200mm AFFL throughout the vehicular path of travel between the carpark entrance and accessible car parking spaces; and ▪ Minimum 2500mm AFFL within accessible car spaces and adjacent shared areas. This may be reduced above bonnet areas to allow for structural bulk-heads, pipe work, etc. 	AS/NZS 2890.6 Clause 2.4 AS/NZS 2890.6 Figure 2.7.
	6	Each accessible car space is to be identified with a white symbol of access on a blue square background Include dimensions re: the size and positioning of the symbol.	AS/NZS 2890.6 Clause 3.1
	7	The accessible car space is to be outlined with unbroken lines of 80 – 100 mm width on all sides excepting any side delineated by a kerb, barrier or wall	AS/NZS 2890.6 Clause 3.2(a)
	8	The adjacent shared area is to be outlined with unbroken lines of 80 – 100 mm width on all sides excepting any side delineated by a kerb, barrier or wall, and marked with 45 ± 10° angled stripes of 150 – 200mm width, set 200 – 300mm apart.	AS/NZS 2890.6 Clause 3.2(b)(ii)
	9	Pavement markings are to be yellow and slip-resistant.	AS/NZS 2890.6 Clause 3.2
External Pathways	10	The selected ground floor pavement materials will need to be an accessible slip-resistant surface with a texture that allows it to be traversable by a wheelchair and people with an ambulant or sensory disability.	AS 1428.1 Clause 7.1
	11	Cross-fall not to exceed 1:40.	AS 1428.1 Clause 10.1
	12	Any abutments between new paving materials or between new and existing ground surfaces are designed without a	AS 1428.1 Clause 7.2


Category	Description		Legislative Requirement	
		step or lip between these abutting surfaces Note that construction tolerances are permitted i.e. 3mm for vertical abutments and 5mm for rounded or bevelled abutments.		
	13	Stormwater grates installed within accessible paths or external courtyards must have slotted openings not exceeding 13mm in width and be orientated so that the long dimension is transverse to (across) the dominant direction of travel. Alternatively, circular openings can be used, provided that openings do not exceed 13mm in diameter.	AS 1428.1 Clause 7.5	
Walkways	14	The surface abutting sides of each walkway must comply with one of the following options: <ul style="list-style-type: none"> ▪ Provide a firm and level surface of a different material to that of the walkway and be at the same level of the walkway, follow the grade of the walkway and extend horizontally for a minimum of 600 mm; or ▪ Kerbs in accordance with Figure 18 of AS 1428.1; or ▪ Kerb rail and handrails in accordance with Figure 19 of AS 1428.1; or ▪ A wall not less than 450mm in height. 	AS 1428.1 Clause 10(a)	
Ramps (greater than 1900mm in length)	15	Ramps greater than 1900mm in length are simply referred to as 'ramps'.	AS 1428.1 Clause 10.3.	
	16	Ramp camber/cross-falls are to be level.	AS1428.1 Clause 10.1	
	17	Compliant ramp landings, including: <ul style="list-style-type: none"> ▪ Landing camber/cross-falls are to be no more than 1:40 (or 1:33 if bitumen surface). ▪ A compliant door landing (dependant on the door configuration) at the top of the step ramp and before any doorway (AS 1428.1 Figures 31 and 32). ▪ Sharp transitions at the change of grade between the landings and ramp. ▪ Intermediate landings as per AS 1428.1 Table C1, which requires a landing every 9m as a minimum. 	AS 1428.1 Clause 10.8.1	
	18	A slip-resistant surface is required on all ramps and landings.		BCA Table D2.14
		Application	Surface Condition	
			Dry Rating Wet Rating	
Ramp steeper than 1:20, but not steeper than 1:14		P3 or R10 P4 or R11		
Landing surface	P3 or R10 P4 or R11			
TGSIs installed on landings	P4 or R11 P5 or R12			
19	A ramp that intersects at a property boundary to be set back a minimum of 900mm.	AS 1428.1 Clause 10.3(f)		
20	A ramp that intersects at a corner to be set back a minimum of 400mm.	AS 1428.1 Clause 10.3(g)		

Category	Description		Legislative Requirement										
	21	The unobstructed width of accessible path of travel to be a minimum 1000mm width between handrails	AS 1428.1 Clause 6.3										
	22	Compliant handrails are required on both sides of ramp and landing, with compliant handrail 300mm long horizontal extensions over each landing.	AS 1428.1 Clause 10.3										
	23	Kerbs or kerb rails are required on both sides of each ramps and associated landings. A wall at least 450mm high may serve as a kerb rail.	AS 1428.1 Clause 10.3(i)										
	24	TGSIs are required at the lower landing and top landing of each ramp.	AS/NZS 1428.4.1 Clause 2.4										
Step Ramps (Less than 1900mm in Length)	25	Ramps less than 1900mm in length are considered to be 'step ramps'.	AS 1428.1 Clause 10.6										
	26	Step ramps may be used where a ramp is not greater than 1900mm long, but the profile of a step ramp must have a: <ul style="list-style-type: none"> ▪ Maximum rise of 190mm; ▪ Length not greater than 1900mm; ▪ Gradient not steeper than 1 in 10; ▪ Sharp transitions at the change of grade between the landings and ramp; and ▪ Edges of a step ramp must be protected to remove the chance of slips, trips and falls by a: <ul style="list-style-type: none"> ○ 450mm high wall or other suitable barrier, retaining garden bed walls, raised planter boxes or the like can achieve this requirement; ○ handrail and kerbrail; or ○ 45° splay on each edges (though this is not recommended in high traffic areas or smaller spaces) 	AS 1428.1 Clause 10.6										
	27	Step ramp camber/cross-falls are to be level.	AS 1428.1 Clause 10.1										
	28	Compliant ramp landings including: <ul style="list-style-type: none"> ▪ Landing camber/cross-falls are to be no more than 1:40 (or 1:33 if bitumen surface). ▪ A compliant door landing (dependant on the door configuration) at the top of the step ramp and before any doorway (AS 1428.1 Figures 31 and 32). ▪ Step ramp landings must not overlap each other (BCA D3.11(b)). 	AS 1428.1 Clause 10.8.2										
	29	A slip-resistant surface is required on all step ramp and landings. <table border="1"> <thead> <tr> <th rowspan="2">Application</th> <th colspan="2">Surface Condition</th> </tr> <tr> <th>Dry Rating</th> <th>Wet Rating</th> </tr> </thead> <tbody> <tr> <td>Ramp steeper than 1:14</td> <td>P4 or R11</td> <td>P5 or R12</td> </tr> <tr> <td>Step ramp steeper than 1:20, but not steeper than 1:14</td> <td>P3 or R10</td> <td>P4 or R11</td> </tr> </tbody> </table>	Application	Surface Condition		Dry Rating	Wet Rating	Ramp steeper than 1:14	P4 or R11	P5 or R12	Step ramp steeper than 1:20, but not steeper than 1:14	P3 or R10	P4 or R11
Application	Surface Condition												
	Dry Rating	Wet Rating											
Ramp steeper than 1:14	P4 or R11	P5 or R12											
Step ramp steeper than 1:20, but not steeper than 1:14	P3 or R10	P4 or R11											

Category	Description			Legislative Requirement	
		Landing surface	P3 or R10	P4 or R11	
Threshold Ramps (for Doorways)	30	The profile of a threshold ramp must have a: <ul style="list-style-type: none"> ▪ Maximum rise of 35mm; ▪ Length not greater than 280mm; ▪ Gradient not steeper than 1 in 8; ▪ Be located within 20mm of the door leaf which it serves' ▪ Edges of a threshold ramp must be protected to remove the chance of slips, trips and falls by: <ul style="list-style-type: none"> ○ A wall or other suitable barrier; or ○ A 45° splay on each edges 			AS 1428.1 Clause 10.5
	31	Landing camber/cross-falls are to be no more than 1:40 (or 1:33 if bitumen surface).			AS 1428.1 Clause 10.5
	32	A slip-resistant surface is required on all threshold ramps and landings.			BCA Table D2.14
		Application	Surface Condition		
			Dry Rating	Wet Rating	
	Ramp steeper than 1:14	P3 or R10	P5 or R12		
	Landing surface	P3 or R10	P4 or R11		
Floor Surfaces	33	The selected ground and floor finishes within accessible portions of the building need to be slip resistant and glare free.			AS 1428.1 Clause 7.1
	34	Any selected carpet within accessible areas need to have a short pile that is less than 6mm, as wheelchairs cannot traverse long-pile carpet.			AS 1428.1 Clause 7.4.1
	35	Any recessed matting needs to comply with AS 1428.1 Clause 7.4.2.			AS 1428.1 Clause 7.4.2
	36	All abutting surfaces between floor surfaces, door thresholds and the like must have no vertical edge exceeding 3mm or 5mm if they have rounded or bevelled edges.			AS 1428.1 Clause 7.2(a)&(b)
Doors	37	The clear openable width of all doorways in accessible parts of the building shall contain a minimum clear width of 850mm.			AS 1428.1 Clause 13.2
	38	The clear opening of ambulant toilet doorways must provide a minimum clear opening of 700mm.			AS 1428.1 Clause 16.3
	39	The threshold at all entry doors must incorporate a smooth transition without a step or lip (BCA Table D3.1 & D3.3). But, AS 1428.1 Clause 7.2 allows for some construction tolerance – 3mm for vertical abutments and 5mm for rounded or bevelled abutments.			BCA Table D3.1, Clause D3.2 AS 1428.1 Clause 7.2
	40	All door controls are to be located between 900–1100mm above the level of the finished floor.			AS 1428.1 Clause 13.5.3
	41	Snib locking/privacy devices throughout the project (not just to toilets) must have a minimum length of 45mm from the centre of the spindle.			AS 1428.1 Clause 15.2.9(b)

Category	Description	Legislative Requirement
	42 All accessible doors require door handles and controls to be in accordance with AS 1428.1 Clause 13.5. 'D' type lever door handles are preferred with a clearance behind the handle of 35 – 45mm.	AS 1428.1 Clause 13.5
	43 The force to open, close or hold open accessible doors must not exceed 20N – please note that hinged doors with closers should be provided adjustable closers that are compatible with the selected door to ensure that the force to open the door does not exceed 20N.	AS 1428.1 Clause 13.5.2(e)
	44 All accessible doorways require a minimum luminance contrast of 30% provided between at least one of the following: <ul style="list-style-type: none"> ▪ Door leaf and door jamb; ▪ Door leaf and adjacent wall; ▪ Architrave and wall; ▪ Door leaf and architrave; or ▪ Door jamb and adjacent wall. 	AS 1428.1 Clause 13.1
Electrical – General	45 All light switches and other door controls (e.g. BGA’s, card readers, security swipe card readers, push-to-exit buttons, automatic door controls, etc.) along accessible paths of travel need to be located in accordance with AS 1428.1 Clauses 14.1 and 13.5.3.	AS 1428.1 Clause 13.5.3, Clause 14.1
	46 Push-button door controls to have a minimum diameter of 25mm.	AS 1428.1 Clause 13.5.4
	47 All electrical switches and controls to be located between 900mm and 1100mm AFFL and no closer than 500mm from an internal corner. This includes heating and cooling thermostats, alarm panels, intercom systems and ceiling fan controls (or the like).	AS 1428.1 Clause 14.1
Luminance Contrast & Architectural Finishes	48 Luminance contrast is defined as ‘the light reflected from one surface or component, compared to the light reflected from another surface or component’. It is not the difference in the colour or the colour contrast, but the difference in the light reflective values (LRVs) of each colour.	AS 1428.1 Clause 4.11
	49 Ensure minimum luminance contrast requirements (%) can be achieved, as required to the following elements: <ul style="list-style-type: none"> ▪ Doorways – 30%; ▪ Contrast nosing strips against stairway treads – 30%; ▪ Warning TGSIs against background surface: <ul style="list-style-type: none"> ○ 30% for integrated type (i.e. TGSIs tiles in one colour) ○ 45% for discrete type (i.e. those cones that are individually installed and a different colour to the floor surface, but are in one colour throughout each cone) 	AS 1428.1 Clause 6.6, Clause 11.1(f)(h), Clause 13.1, Clause 15.2.3(e) AS/NZS 1428.4.1 Clause 2.2(b) BCA Spec D3.6(4)

Category	Description	Legislative Requirement
	<ul style="list-style-type: none"> ○ 60% for composite-discrete type (i.e. cones that are individually installed and a different colour to the floor surface, but the uppermost surface of each cone is a differing colour to the sides); ▪ Visual indicators to glazing against background surface within 2m of glazing on the opposite side – 30%; ▪ Signage against background surface on which the signage is mounted, and tactile characters and symbols against background surface on which the characters are mounted – 30%. 	
Passenger Lifts	<p>50</p> <p>The lift is to comply with BCA E3.6 and include all of the relevant access provisions outlined within BCA Table E3.6b, which includes the following provisions:</p> <ul style="list-style-type: none"> ▪ All lifts which travel more than 12m require a lift car floor dimension of not less than 1400mm x 1600mm ▪ All lifts which travel less than 12m require a lift car floor dimension of not less than 1100mm x 1400mm ▪ At least one 600mm long handrail complying AS 1735.12 ▪ Automatic clear door opening of 900mm minimum complying with AS 1735.12 ▪ Passenger protection system complying with AS 1735.12 Clause 4.2 ▪ Lift car and landing control buttons complying with AS 1735.12 Clause 7 ▪ Lift car buttons are required on the left and right side of the lift car where it has a width or depth less than 1400mm; ▪ Lighting in accordance with AS 1735.12 Clause 10 ▪ 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 ▪ For lifts serving more than 2 levels add the following <ul style="list-style-type: none"> ○ Automatic audible information within the lift car to identify the level each time the car stops, which needs to be in a range between 20–80 dbA at a maximum frequency of 1500Hz. ○ Audible and visual indication at each lift landing to indicate the arrival of the lift car, which needs to be in a range between 20–80 dbA at a maximum frequency of 1500Hz. ○ (note the building surveyor may advise you that one lift car is required to be a minimum of 2000mm long to accommodate a stretcher facility) 	<p>AS 1735.12 Clause 2, Clause 4.2, Clause 7, Clause 5.3.1, Clause 10</p> <p>BCA Clause E3.6</p> <p>BCA Table E3.6b</p>

Category	Description	Legislative Requirement
Signage	51 All statutory accessible signage needs to be designed and installed in accordance with BCA Specification D3.6/Premises Standards and AS 1428.1 Clause 8.	AS1428.1 Clause 8 BCA Spec D3.6
	52 Accessible signage is required adjacent to each required exit door (provided with an exit sign above). Each sign must indicate the word "Exit" and description of the level, for example "Level G". An example from 'Braille Sign Supplies' is provided below: 	BCA Clause D3.6 BCA Spec D3.6
Stairs	53 Stairways are considered to be a 'stair' when they have 2 or more steps and there is less than 750mm between the steps.	BCA Clause D2.13(a)(i), Clause D2.14(a)(i)
	54 Stairs that intersects at a property boundary shall be set back a minimum of 900mm.	AS 1428.1 Clause 11.1(a)
	55 Stairs that intersects at a corner shall be set back to ensure the handrails do not project into the transverse path.	AS 1428.1 Clause 11.1(b)
	56 Handrails shall be provided on both sides of the stairs with appropriate handrail terminations/extensions in accordance with AS 1428.1 Clauses 11.2, Clause 12(g), Figure 26(B), Figure 26C and Figure 28.	AS 1428.1 Clause 11.2, Clause 12(g), Figure 26(B), Figure 26C, Figure 28
	57 The minimum clear width between handrails must be 1000mm.	AS 1428.1 Figure 26(A)
	58 Handrails shall be installed directly above the nosing of the stairway tread or plane of the finished floor of the walkway, ramp or landing.	AS 1428.1 Clause 12(d)
	59 Provide TGSIs in accordance with AS/NZS 1428.4.1 to top and bottom landings of stairs.	AS/NZS 1428.4.1 Clause 2.4
	60 Contrasting strips required between 50mm and 75mm in depth, extending across the full width of each stair nosing with a minimum luminance contrast of 30% to the background in accordance with AS 1428.1 Clause 11.1(f) and Clause 11.1(g).	AS 1428.1 Clause 11.1(f)(g)
	61 Stairs not to have open or translucent risers.	AS 1428.1 Clause 11.1(c)
	62 Stairs to have first ascending stair tread (or going) set back one tread width from the mid-landings.	AS 1428.1 Figure 28(a)
	63 Stair nosings must not have any projections or overhangs and nosing profiles need to be appropriately designed.	AS 1428.1 Clause 11.1(d)(e)

Category	Description			Legislative Requirement	
	64	A slip-resistant surface is required on all stair treads and landings. This must comply with BCA Table D2.14, and this would include consideration for TGSIs on landings:		BCA Table D2.14	
		Application	Surface Condition		
			Dry Rating		Wet Rating
		Tread or landing surface	P3 or R10		P4 or R11
		Nosing or landing edge strip	P3		P4
TGSIs installed on landings	P4 or R11	P5 or R12			
Stairs (Fire-Isolated Stairs and Exit Stairs)	65	Fire-isolated stairs must have contrasting strips on each stair tread.		AS 1428.1 Clause 11.1(f)(g) BCA Clause D3.3(a)(iii)	
	66	Exit stairs (including fire-isolated stairs) must have at least one handrail compliant with Clause 12 of AS 1428.1.		AS 1428.1 Clause 12 BCA Clause D2.17(a)(vi)	
	67	Exit stairs (including fire-isolated stairs) must have handrail terminations that comply with one of the options provided in Figure 26(C) & 26(D) (they do not need to be extended 300mm horizontally like general stairways).		AS 1428.1 Figure 26(C) Figure 26(D)	
	68	A slip-resistant surface is required on all stair treads and landings. This must comply with BCA Table D2.14:		BCA Table D2.14	
Application		Surface Condition			
		Dry Rating	Wet Rating		
Tread or landing surface		P3 or R10	P4 or R11		
Nosing or landing edge strip	P3	P4			
Warning Tactile Ground Surface Indicators (TGSIs)	69	The design of warning type TGSIs must comply with AS/NZS 1428.4.1.		AS/NZS 1428.4.1	
	70	Warning type TGSIs must be installed: <ul style="list-style-type: none"> ▪ On the top and bottom landings of all ramps (between 1:14 and 1:20 grade): 300mm from the point of transition between the ramp and landing; ▪ On the top and bottom landings of stairways (other than fire-isolated stairways): 300mm from the vertical face of the lowest stair tread and 300mm from the edge of the upper most stair tread (where the handrails are continuous within the stairway); ▪ On intermediate landings of all stairs (other than fire-isolated stairways), where the handrails are non-continuous: 300mm from the vertical face of the ascending stair tread and 300mm from the edge of the descending stair tread; 		AS/NZS 1428.4.1 Clause 2.5, Clause 2.6, Clause A3.2 BCA Clause D3.8(a)(v)	

Category	Description	Legislative Requirement
	<ul style="list-style-type: none"> ▪ Where there is an overhead hazard with less than 2000 mm clearance and no other suitable barrier is provided, such as a handrail/kerbrail arrangement or seating; ▪ On kerb ramps at pedestrian crossing points (300mm from hazard). 	
	71 Note: TGSIs should not be installed unnecessarily, as they do not compensate for poor design. Good design practice should minimize the need for TGSIs.	AS/NZS 1428.4.1 Clause A3.1
Visual Indicators	72 Solid and non-transparent visual indicators are required on glass doors, side panels or other glazed areas, without a horizontal transom member, that are capable of being mistaken for doorways or opening. This includes any glazing being frosted or translucent.	AS 1428.1 Clause 6.6
	73 The dimensions for installation of the visual indicators should be provided on each applicable window in the drawings, or a typical detail should be prepared (i.e. 75mm wide for the full width, with the lower edge of the band located 900-1000mm above finished floor level).	AS 1428.1 Clause 6.6
Wall Set-Outs	74 The dimensions specified within the access standards (some of which are mentioned within this report), such as clear widths of accessible paths/corridors and door circulation spaces, need to be clear of any fixtures or fittings in accordance with AS 1428.1 Clause 6.3. Therefore, builders' wall set outs need to take into account all fixtures and finishes, skirting boards, architraves etc and not rely upon 'stud to stud' dimensions.	
Architectural Drawings	75 Internal elevations of all accessible toilets, accessible showers and ambulant toilets, should be provided in the next stage of documentation to ensure compliance with all requirements of Clause 15 and Clause 16 of AS 1428.1. Elevations should indicate relevant dimensions of fixtures and fittings. Drawings should make reference to AS 1428.1. Accessible toilets must be provided in combinations of RH and LH transfer options (BCA Clause F2.4(g)).	

Compliance Statement

Project	25-27 Warriewood Road, Warriewood
Subject	Access Design Review – Developers Approval Stage
Date	27/05/2020
Project Number:	171022
Contact	Janelle Pirone

Dear Janelle,

As requested, 3D Access has been engaged to undertake a Disability Access assessment of documentation as part of an application for Developers Approval. This assessment ensures consideration has been given to people with disabilities and compliance with statutory requirements had been adopted into the design.

Our assessment considered the following Access legislation:

- Disability Discrimination Act 1992;
- Disability (Access to Premises – Building) Standards 2010;
- National Construction Code Series – Building Code of Australia 2019;
- Australian Standards – (1428.1, 1428.4.1, 2890.6, 1735.12).

Documents that set out the design/formed part of our assessment includes:

Document	Prepared by	Issue
<u>Drawing Series</u> Warriewood Residential Development Job No.: 1510121 <ul style="list-style-type: none"> ▪ Drawing DA - 100 Proposed Apartment Ground Floor Plan / Dwelling Lower Level Floor Plan, Rev DA5 ▪ Drawing DA - 101 Proposed Apartment First Floor Plan / Dwelling Mid Level Floor Plan, Rev DA5 ▪ Drawing DA - 102 Proposed Apartment Second Floor Plan / Dwelling Upper Level Floor Plan, Rev DA4 ▪ Drawing DA - 105 Overall Floor Plan – Basement, Rev DA5 	Via Architects	18/05/2020
Access Design Review Report – Developers Approval	3D Access	27/05/2020, Rev 2

Following our assessment, we can confirm that an initial level of compliance with access requirements has been adopted into the design drawings. As documentation progresses, we believe that the design can readily demonstrate compliance with the with the Disability Discrimination Act (DDA), Disability (Access to Premises – Building) Standards, Building Code of Australia (BCA) and associated Access Australian Standards.

Should you have any queries please do not hesitate to contact me.

Sincerely yours,

Adam Buzasi

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Grad. Cert. Built Environment (Building Surveying)
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Signature

