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Access for People with Disabilities

Design Compliance Report – DA Level Documentation



Upper Australia & Nocturnal House

Taronga Zoo, Bradleys Head Road, Mosman NSW

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Contents

EXECUTIVE SUMMARY & RECOMMENDATIONS	-----	4
1.0 INTRODUCTION	-----	5
▪ <i>Assessed Information</i>		
▪ <i>Purpose of Report</i>		
▪ <i>Limitations of Report</i>		
2.0 BUILDING CHARACTERISTICS	-----	7
3.0 ACCESS ASSESSMENT & RECOMMENDATIONS	-----	8
4.0 CONCLUSION	-----	48



Executive Summary & Recommendations

This report has assessed the **Development Application Stage** design documentation for the **proposed Upper Australia & Nocturnal House Refurbishment at Taronga Zoo – Bradleys Head Road NSW** under the relevant Regulations relating to “Access for People with Disabilities”.

The primary purpose of the report is to assess the proposed/new development works against the Access Regulations, identify any non-compliance matters and to provide suitable recommendations to ensure the compliance of the design.

The development demonstrates an ability to comply with the relevant provisions relating to the provision of access and facilities for people with disabilities, subject to the recommendations as detailed below:

- Significant matters, being those with the ability to affect the design have been included in the Table 1.0 in the Executive Summary.
- All other informational or minor recommendations are included in Table 3.0 of this report.

The recommendations of the report should be considered by the relevant stakeholders and addressed where relevant.

TABLE 1.0 – Significant Recommendations

NA – there are no ‘significant recommendations’ applicable for the DA stage documentation. Refer to minor recommendations and comments in Section 3.0 for items that need to be addressed at CC stage.
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1.0 Introduction

This report has assessed the **Development Application Stage** design documentation for the **proposed Upper Australia & Nocturnal House Refurbishment at Taronga Zoo – Bradleys Head Road NSW** under the relevant Regulations relating to “Access for People with Disabilities”.

1.1 Assessed Information

This report is based on the following:

- Desktop assessment of DA Level Architectural Plans prepared Lahznimmo Architects
(*Insert Transmittal Reference*)

1.2 Purpose of Report

The purpose of this report is to identify the extent to which the architectural design documentation complies with the following and to provide recommendations where necessary:

- Part D3 “Access for People with Disabilities”, Clause F2.4 “Accessible Sanitary Facilities” & Clause E3.6 “Passenger Lifts” of the Building Code of Australia (National Construction Code) 2019 – Volume 1 as relevant to the proposal.
- The Guide to the Building Code of Australia - National Construction Code 2019– Volume 1.
- Relevant clauses of AS1428.1-2001/2009 “Design for Access and Mobility – Part 1: General Requirements for Access New Building Works” published by Standards Australia.
- Commonwealth Disability (Access to Premises) Standards 2010. This standard typically requires compliance with the BCA and Australian Standards for new works, but also contains additional provisions for the upgrade of existing buildings in which new works are being undertaken.

1.3 Limitations of Report

- Any parts of the access regulations that are not directly referenced in Section 1.2 of this Report.
- The assessment is limited to a desktop assessment only and has not included physical measurement of the property or building in any way.



- Some access requirements are recognised as being interpretive in nature. Where these matters are encountered, interpretations are made in accordance with MSA policy. Specific relevant interpretations relevant to this assessment are included in Section 2.0 "BCA Assessment Data".



2.0 Building Characteristics

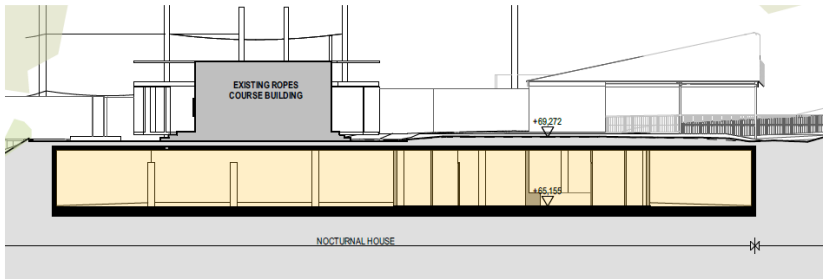
2.1 Building Description

The proposed works primarily comprise:

- Internal refurbishment of the existing nocturnal house
- Construction of 'tree house' and elevated Koala Tree walk
- Construction of external walkways and accessible ramps
- Associated animal exhibits and landscaping

2.2 BCA Assessment Data

The following BCA assessment data is relevant to the proposal under the current BCA:

BCA Clause		Description
A1.1	Classification/Use	5 – Staff Areas of Nocturnal House and – Ticketing Office & Storeroom 9b – Nocturnal House – Public Areas
A3.2	Rise in Stories	<p>Ticketing Office/Tree House – 1 Nocturnal House – Assumed* 1</p> <p><i>Note that the 'Ropes Course Building' sits partially over the Nocturnal House. Details for the Ropes Course Building have not been provided and it is assumed that this portion of the building comprises only a single storey above ground at any point along the external walls.</i></p> 
-	Interpretation	

3.0 ACCESS ASSESSMENT & RECOMMENDATIONS

Items are nominated as follows:


- **"Complies"** – the design documentation indicates clear compliance with the requirement
- **"Does Not Comply"** – there is a clear non-compliance indicated on the design documentation
- **"NA or Informational"** – the clause provides compliance direction only or is not applicable to the subject development
- **"Compliance Required"** – the current level of detail is insufficient to determine full compliance. These items are flagged for the ongoing information of the design team as relevant. Compliance with these requirements can typically be addressed at Construction Certification (CC) stage without major deviation from the current design. Note Construction Certification will be carried out under a EP&A Act Section 6.28 Certificate.

The following compliance assessment table is divided into the following key access-related considerations:

- 3.1 ACCESS TO BUILDINGS & ENTRANCES
- 3.2 PARTS OF A BUILDING THAT MUST BE ACCESSIBLE
- 3.3 THE ACCESSIBLE PATH
- 3.4 FLOOR FINISHES
- 3.5 DOORWAYS & GLAZING
- 3.6 WALKWAYS
- 3.7 RAMPS
- 3.8 STEP, KERB + THRESHOLD RAMPS
- 3.9 STAIRWAYS
- 3.10 TACTILE GROUND SURFACE INDICATORS FOR HAZARDS
- 3.11 TACTILE GROUND SURFACE INDICATORS – DIRECTIONAL (*NOT USED*)
- 3.12 LIFTS
- 3.13 LIGHTING
- 3.14 SIGNAGE
- 3.15 SANITARY FACILITIES
- 3.16 HEARING AUGMENTATION
- 3.17 CARPARKING
- 3.18 ACCESS TO PREMISES STANDARD (UPGRADE OF EXISTING BUILDINGS)



3.1 ACCESS TO BUILDINGS & ENTRANCES

#	Accessibility Requirement	Comment/Recommendation
3.1.1	<p>Access from Boundary</p> <p>An accessway must be provided from the main points of a pedestrian entrance at the allotment boundary to the subject building.</p> <p><i>BCA D3.2(a)(i)</i></p>	<p>Pedestrian entrances at the allotment boundary are generally proposed to be accessible (as shown below in green)</p> 
3.1.2	<p>Access from other Buildings</p> <p>An accessway must be provided from another accessible building connected by a pedestrian link to the subject building</p> <p><i>BCA D3.2(a)(ii)</i></p>	<p>An accessway is generally proposed between the subject buildings.</p>
3.1.3	<p>Access from Carparking</p> <p>An accessway must be provided from any required accessible carparking space on the allotment to the subject building</p> <p><i>BCA D3.2(a)(iii)</i></p>	<p>There is no carparking affected by the proposed development (accessways between the existing carparking and the subject building(s) are proposed to be retained as existing).</p>
3.1.4	<p>Access Via Principle Entrance</p> <p>The accessway must be through the principle public entrance</p> <p><i>BCA D3.2(b)</i></p>	<p>Access is provided via the principle pedestrian public entrance as required.</p>



3.1.5	<p>Number of Accessible Entries</p> <p>Not less than 50% of all pedestrian entrances to the building.</p> <p><i>BCA D3.2(b)(i)</i></p>	Each 'building' is provided with a single entrance (which is proposed to be accessible).
3.1.6	<p>Accessible Entry Locations</p> <p>In a building over 500m², an accessible entrance must be within 50m of any non-accessible entrance. <i>This does not apply to pedestrian entrances to areas that are exempt from requiring access under D3.4</i></p> <p><i>BCA D3.2(b)(ii)</i></p>	For the purposes of this assessment it is assumed that all pedestrian entrances will be accessible.
3.1.7	<p>Entrance Doorways</p> <p>Where up to 3 doorways are provided at the entrance, not less than 1 must be accessible (850mm clear opening with compliant circulation space)</p> <p>Where more than 3 doorways are provided at the entrance, not less than 50% of those doorways must be accessible (850mm clear opening with compliant circulation space)</p> <p>Where multiple doorway sets are provided, each set must provide an accessible door if the doorsets are more than the width of the widest doorway away from each other</p> <p><i>BCA D3.2(c)</i></p>	Each 'entrance' comprises a single doorway.

3.2 BUILDINGS & PARTS OF BUILDINGS THAT MUST BE ACCESSIBLE

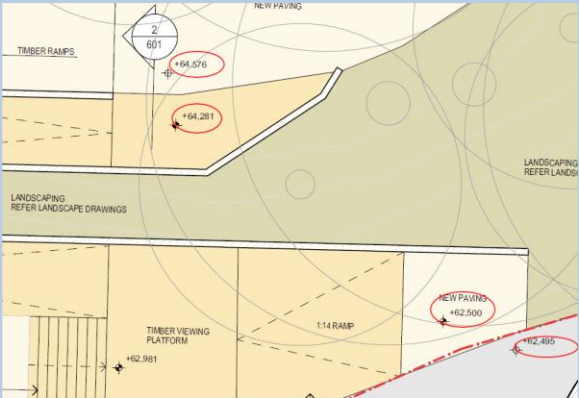
#	Accessibility Requirement	Comment/Recommendation
3.2.1	<p>Building Parts to be Accessible</p> <p>BCA Table D3.1 provides the requirements for Access to buildings – primary based on Classification. Areas required to be accessible are typically required to comply with AS1428.1. Requirements are summarised as follows:</p> <ul style="list-style-type: none"> Class 2, 3 & 9c buildings – Common areas - Access must be provided from a pedestrian entrance required to be accessible to at least one floor containing sole occupancy units and to the entrance doors of each sole occupancy unit on that level and where levels are served by a passenger lift, to all unit entrances and common areas of the levels served by a lift. Access must also be provided to one of each type of common room/space for use by residents (kitchens, gyms, pools, laundries, lounge rooms and the like). Class 3 & 9c – SOUS (Accessible SOUs must be provided in accordance with Table BCA D3.1 – the number is calculated on the total number of SOU's provided. Accessible SOU's must be representative of the rooms available and not more than 2 accessible SOUs can be provided adjacent one another. 	Access is considered to be provided to and within the buildings as required – noting comments below in relation to exemptions in the Nocturnal House.



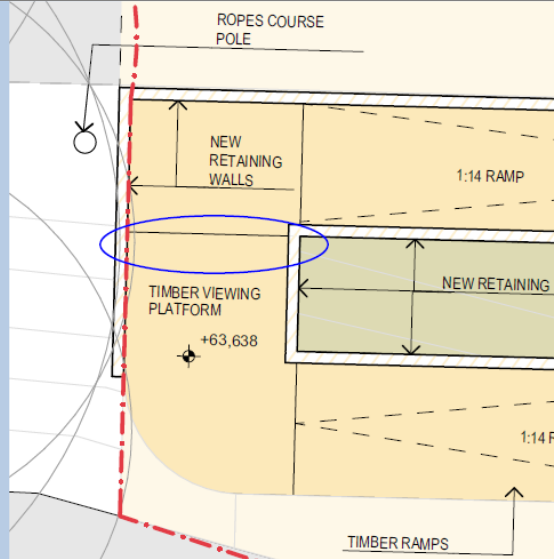
	<ul style="list-style-type: none"> Class 5, 6, 7b, 8, 9a & 9b buildings – Access must be provided to and within all areas normally used by the occupants (additional requirements apply to Class 9b buildings which are not schools). Class 7a buildings – Access must be provided to and within any level containing accessible carparking spaces. <p>BCA D3.1</p>	
3.2.2	<p>Access to Buildings</p> <p>An Access way must be provided to the building from:</p> <ul style="list-style-type: none"> the main points of pedestrian entry at the allotment boundary from another accessible building connected by a pedestrian link any accessible carparking space on the allotment <p>Access must be provided through the 'principal pedestrian entrance' and not less than 50% of all entrances. Where the floor area of the building exceeds 500m², a non-accessible entrance must not be located more than 50m from an accessible entrance.</p> <p>BCA D3.2</p>	For the purposes of this assessment it is assumed that all pedestrian entrances will be accessible.
3.2.3	<p>Exemption for Access to Small Storeys</p> <p>In relation to staff areas, ramped or lift access need not be provided to storeys other than the entrance storey of Class 5, 6, 7b or 8 building that-</p> <ul style="list-style-type: none"> -contains not more than 3 storeys, and - where each storey (other than the entrance storey) is not more than 200m² <p><i>IMPORTANT NOTE: Although ramped or lift access is not required to the <200m² storeys, the storeys <u>must still be otherwise be provided with accessible paths of travel and features under AS1428.1 to ensure any future provision of lift or ramped access would be to a level that is otherwise compliant</u></i></p> <p>BCA D3.3</p>	NA to subject building
3.2.4	<p>Other Exemptions for Access</p> <p>The following areas are exempt from needing to be accessible:</p> <ul style="list-style-type: none"> -an area that would be inappropriate because of its particular use -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 listed above <p>BCA D3.4</p>	<p>It is considered that the back of house areas in the Nocturnal House which primarily contains animal holding, kitchen/laundry facilities (for animals), plantrooms and storage areas may be subject to an exemption (on the assumption that the staff in these areas would typically need to be able bodied for work health and safety reasons)</p> <p>The Zoo will need to confirm this prior to the issue of a CC.</p>



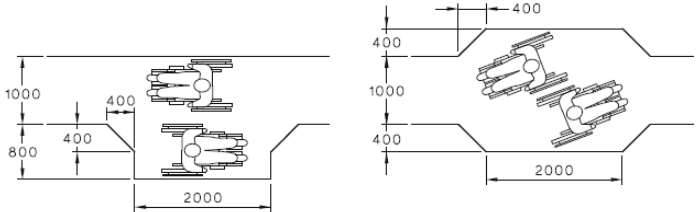
3.3 THE ACCESSIBLE PATH

#	Accessibility Requirement	Comment/Recommendation
3.3.1	<p>Accessway Width</p> <p>Accessways should be a minimum unobstructed width of 1000mm (clear of handrails or other obstructions)</p> <p>BCA D3.2 and AS1428.1-2009</p>	The scaled dimensions indicate general compliance.
3.3.2	<p>Accessway Height</p> <p>Accessways must be a minimum of 2000mm in unobstructed height</p> <p>AS1428.1-2009</p>	As above.
3.3.3	<p>Obstructions in Accessways</p> <p>Accessways must not include steps, stairways, turnstiles, revolving doors, escalators, moving walkways or other impediments</p> <p>6.1 of AS1428.1-2009</p>	<p>Accessways appear generally free of steps – however the following spot levels (as shown in red below) are to be confirmed. Differences in levels to comply with AS1428.1.</p>  <p>Note - It is assumed that the line shown in blue below does not represent a step.</p>



#	Accessibility Requirement	Comment/Recommendation
		 <p>The diagram is a site plan showing a timber viewing platform and surrounding infrastructure. Key features include: <ul style="list-style-type: none"> ROPES COURSE POLE at the top. NEW RETAINING WALLS on the left and right. 1:14 RAMP on the right side. TIMBER VIEWING PLATFORM in the center, with a level marker of +63,638. NEW RETAINING WALLS below the platform. 1:14 RAMP at the bottom right. TIMBER RAMPS at the bottom. A blue oval highlights a specific area on the timber viewing platform.</p>
3.3.4	<p>Manoeuvring Areas For Wheelchair Turns</p> <p>Manoeuvring areas of the following dimensions must be provided allow the following turns:</p> <ul style="list-style-type: none"> - 60° to 90° – 1.5m x 1.5m with splay - 30° to 60° – 0.5m x 0.5m internal splay, if less than 1200mm width - 90° to 180° – 2.07m long x 1.54m wide - 360° – 2.45m x 2.45m <p>See Figures 4 & 5 of AS1428.1-2009</p> <p><i>BCA D3.1, 6.5 of AS1428.1-2009</i></p>	<p>Manoeuvring areas appear generally compliant, with details for the final layout of the Nocturnal House to be provided for assessment.</p> <p><i>Full details to be provided at CC stage.</i></p>
3.3.5	<p>Passing Space for Wheelchairs</p> <p>Two way accessways less than 1800mm wide, must be provide with passing areas every 6m for <u>public</u> areas, and every 20m for <u>staff</u> areas</p> <p>Width to be 1600mm x 1800mm if space is to be on one side and 1800mm x 2000mm if the space is distributed equally on both sides of the path</p>	<p>Passing spaces generally not applicable in the proposed base building layout – on the <u>assumption that accessways are will achieve a minimum width of 1800mm.</u></p>



#	Accessibility Requirement	Comment/Recommendation
	 <p>BCA D3.3(c)</p>	
3.3.6	<p>Crossfall</p> <p>The camber or crossfall of paths of travel must not exceed 1:40, or 1:33 if the surface is a bituminous seal</p> <p>10.1(d) of AS 1428.1-2009</p>	Details to be provided at CC stage.
3.3.7	<p>Construction tolerances for abutment of surfaces</p> <p>Provide a smooth transition between abutting surfaces. A construction tolerance of 3mm for vertical differences is allowable or 5mm where edges are rounded or bevelled. Gaps must not exceed 5mm in width</p> <p>7.2 of AS 1428.1-2009</p>	Details to be provided at CC stage.
3.3.8	<p>Changes in Level >5mm</p> <p>When the changes in level are greater than 5mm one of the following shall be provided:</p> <ul style="list-style-type: none"> (a) threshold ramp (max gradient 1:8, max rise 35mm) (b) step ramp (max gradient 1:10, max rise 190mm) (c) kerb ramp (max gradient 1:10, max rise 190mm) (d) ramp (max gradient 1:14) (e) walkway (max gradient 1:20) (f) lift <p>AS1428.1-2009</p>	Details to be provided at CC stage.

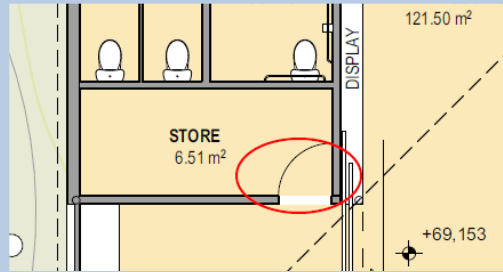


3.4 FLOOR FINISHES

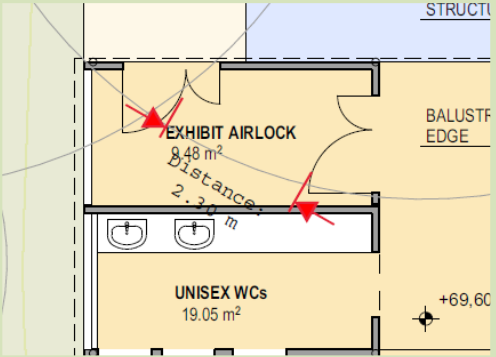
#	Accessibility Requirement	Comment/Recommendation
3.4.1	<p>Surface Finishes & Slip Resistance</p> <p>Ground and floor surfaces shall comply with the requirements for floor surfaces in AS 1428.1. The followings finishes are considered satisfactory:</p> <p>Wet locations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Concrete with abrasive finish; <input type="checkbox"/> Concrete with exposed aggregate finish; <input type="checkbox"/> Bituminous concrete; <input type="checkbox"/> Natural stone with rough finish; <input type="checkbox"/> Paving bricks with abrasive finish. <input type="checkbox"/> Slip resistant tiles. <p>Dry locations</p> <ul style="list-style-type: none"> <input type="checkbox"/> All materials suitable for wet locations; <input type="checkbox"/> Short piled carpet <input type="checkbox"/> Smooth flooring materials that do not have a high gloss or slippery finish or have been treated appropriately. <p>Surfaces provided on access paths and circulation areas must be slip resistant and suitable for people with disabilities.</p> <p>The minimum slip resistant ratings should be in accordance with HB 197.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Internal Corridors, Walkways and Stairs - X & R10 <input type="checkbox"/> External colonnade, walkways - W & R10 <input type="checkbox"/> External Ramps - V & R11 <input type="checkbox"/> External Stairs - W & R11 <p><i>Clause 12 of AS 1428.1 2001, AS 4586:2004 and HB 197</i></p>	<p><i>Details to be provided at CC stage.</i></p>
3.4.2	<p>Grates</p> <p>Grates to have circular openings no greater than 13mm and slotted openings no greater than 8mm wide in the direction of travel or 13mm when perpendicular</p> <p><i>7.5 of AS1428.1-2009</i></p>	<p><i>Details to be provided at CC stage.</i></p>



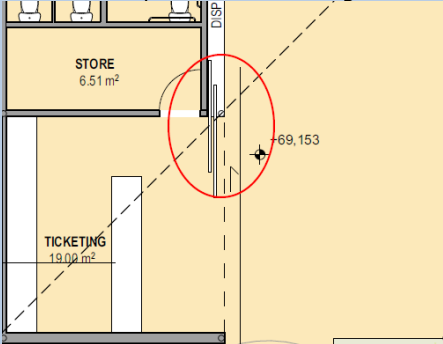
3.5 DOORWAYS & GLAZING

#	Accessibility Requirement	Comment/Recommendation
3.5.1	<p>Doorways</p> <p>Doorways in accessible areas must comply with the following provisions as relevant</p> <p><i>BCA D3.1</i></p>	See below.
3.5.2	<p>Clear Opening of Doorways</p> <p>All doors required to be accessible must have a minimum clear opening width of 850mm</p> <p><i>BCA D3.2(e) and 13.2 of AS1428.1-2009</i></p>	<p><i>Details to be provided at CC stage.</i></p> <p><i>It is recommended that the doorway serving the storeroom in the treehouse be min 850mm wide.</i></p> 
3.5.3	<p>Double leaf doors</p> <p>In the instance of double-leaf doors, the active leaf of the door must meet the general requirements for access, inclusive of clear opening width, circulation space and door hardware</p> <p><i>BCA D3.2(e)</i></p>	There are no double leaf doors proposed.
3.5.4	<p>Door Circulation Space - Generally</p> <p>Doorways must have clear circulation spaces around them dependant on door type, swing and direction of approach. The circulation space must be free of obstruction and not be steeper than 1:40 grade to allow operation of the doors by a wheelchair user.</p> <p>See Figures 31, 32, 33 and 34 of AS1428.1-2009 for full details.</p>	It is recommended that compliant circulation space be provided to the doorway(s) in the ticketing office in the tree house.



#	Accessibility Requirement	Comment/Recommendation
	13.3 of AS1428.1-2009	Details demonstrating compliance to be provided at Construction Certificate (CC) stage.
3.5.6	<p>Circulation space at automated doors</p> <p>The circulation spaces required generally under AS1428.1-2009 are applicable on approach to an automatic door – See Figures 31-34 of AS1428.1.</p> <p>Clause 13.3 of AS1428.1-2009</p>	<p>Details for proposed automated doors are not provided on the current plans.</p> <p>Details to be provided at CC stage (where applicable)</p>
3.5.7	<p>Circulation space at airlock or successive doors</p> <p>The distance between doorways provided within passageways, vestibules, airlocks or other similarly enclosed spaces must be no less than 1450mm and increased by the door leaf width where doors encroach into this space</p> <p>Clause 13.4 of AS1428.1-2009</p>	<p>The circulation space to the 'airlocks' appears >1450mm as required.</p> 
3.5.8	<p>Circulation space for depth of door recess</p> <p>The depth of the door recess, measured to the face of the door, must be no greater than 300mm. Where this cannot be achieved, the door may be automated or circulation space to either side of the door must be increased by the depth of the door reveal</p> <p>Clause 13.3.3.3 of AS1428.1-2009</p>	Details to be provided at CC stage.



#	Accessibility Requirement	Comment/Recommendation
3.5.9	<p>Circulation space at surface mounted sliding door</p> <p>In the instance of a surface-mounted sliding door, the door must be automated or the circulation space to either side of the door must be increased by the depth of the door reveal. This increase in space is applicable only to the opposite side of the surface-mounted door</p> <p><i>Clause 13.3.3.3 of AS1428.1-2009</i></p>	<p><i>Details to be provided at CC stage.</i></p> 
3.5.10	<p>Door finishes/Contrast of doorway</p> <p>All doors forming part of an accessible path of travel shall have a 30% luminance contrast of at least 50mm between:</p> <ul style="list-style-type: none"> <input type="checkbox"/> the door and door jamb; <input type="checkbox"/> door and adjacent wall; <input type="checkbox"/> architrave and wall; <input type="checkbox"/> door and architrave. <p><i>Clause 13.1 of AS1428.1-2009</i></p>	<p><i>Details to be provided at CC stage.</i></p>
3.5.12	<p>Door hardware</p> <p>The door handle and related hardware for accessible doors must allow for the door to be unlocked and opened with one hand</p> <p><i>Clause 13.5.2 of AS1428.1-2009</i></p>	<p><i>Details to be provided at CC stage.</i></p>
3.5.13	<p>Door hardware</p> <p>All door hardware must enable adequate grip for people with limited hand dexterity and shall not require tight grasping, pinching or twisting of the wrist.</p> <p><i>Clause 13.5.2 of AS1428.1-2009</i></p>	<p><i>Details to be provided at CC stage.</i></p>
3.5.14	<p>Height of door hardware</p> <p>Door handles and related hardware to be generally located at a height between 900mm and 1100mm</p>	<p><i>Details to be provided at CC stage.</i></p>



#	Accessibility Requirement	Comment/Recommendation
	BCA D3, AS1428.1-2009	
3.5.15	<p>Clearance to door hardware</p> <p>Lever handles or D-pull handles and push panels to be installed on both sides of all manual hinged doors with a clearance of between 35mm and 45mm required between the rear face of the handle and the face of the door</p> <p><i>Clause 13.5.2 of AS1428.1-2009</i></p>	<i>Details to be provided at CC stage.</i>
3.5.16	<p>Clearance to handles on sliding doors</p> <p>On manual sliding doors, D-type handles to be installed no less than 60mm from the door jamb lining when in the open or closed position</p> <p><i>Clause 13.5.2 of AS1428.1-2009</i></p>	<i>Details to be provided at CC stage.</i>
3.5.17	<p>Door snibs</p> <p>Door snibs and locks which are a lever design with a length of no less than 45mm (measured from the centre of the spindle) are preferred</p> <p><i>Clause 13.5.2 of AS1428.1-2009</i></p>	<i>Details to be provided at CC stage.</i>
3.5.18	<p>Door closers</p> <p>It is proposed to alter door operating forces required to provide an achievable level without further compromising access provision. These include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 20N to initially open the door; <input type="checkbox"/> 20N to hold the door open; and <input type="checkbox"/> 20N to swing the door. <input type="checkbox"/> Where environmental forces prohibit this, door must be automated <p><i>Clause 13.5.2 of AS1428.1-2009</i></p>	<i>Details to be provided at CC stage.</i>
3.5.19	<p>Visual Indicators on Glazing</p> <p>Where there is no chair rail, handrail or transom, all frameless or fully glazed doors, side lights and any glazing capable of being mistaken for a doorway or opening must be clearly marked in accordance with AS1428.1 as follows:</p> <ul style="list-style-type: none"> <input type="checkbox"/> a solid contrasting line not less than 75mm wide at a height of between 0.9m and 1.0m above finished floor level must be provided <input type="checkbox"/> The line to be min. 30% luminance contrast when viewed against surface within 2m of the glazing on the opposite side 	<i>Details to be provided at CC stage.</i>

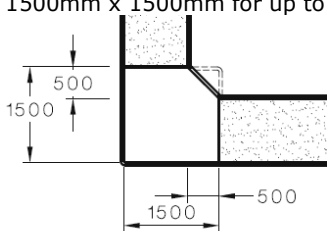


#	Accessibility Requirement	Comment/Recommendation
	<input type="checkbox"/> Transparent, translucent or broken lines are NOT acceptable as visual indicators <i>Clause 6.6 of AS1428.1-2009</i>	

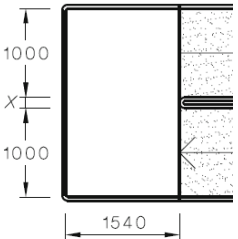
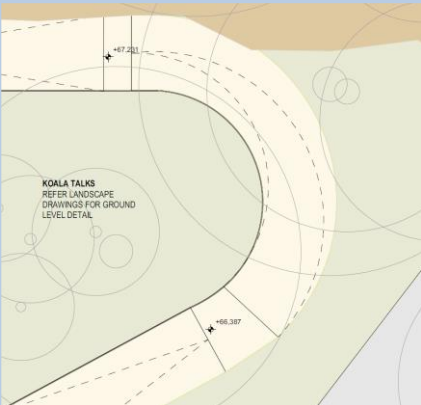
3.6 WALKWAYS

#	ACCESS REQUIREMENT	COMMENTS
3.6.1	Walkway Width The minimum unobstructed width of a walkway must be 1000mm <i>AS1428.1-2009</i>	The proposed walkways appear to be at least 1m wide as required.
3.6.2	Walkway Gradients Walkways that are accessible must not have gradients which exceed 1:20, otherwise the path is considered a 'ramp' and subject to separate requirements (see below). <i>AS1428.1-2009</i>	1:20 gradient indicated as required.
3.6.3	Walkway Gradients Walkways shallower than 1:33 must be provided with crossfall of no less than 1:40, or 1:33 for bitumen surfaces to allow for water to shed <i>Clause 10.1(d) of AS1428.1-2009</i>	<i>Crossfalls to be indicated at CC stage.</i>
3.6.4	Landing Frequency to Walkways Walkways must be provided with landings at the following intervals: <ul style="list-style-type: none"> <input type="checkbox"/> Gradients of 1:20, landings at 15m intervals; <input type="checkbox"/> Gradients of 1:33, landings at 25m intervals. 	Design complies as required.

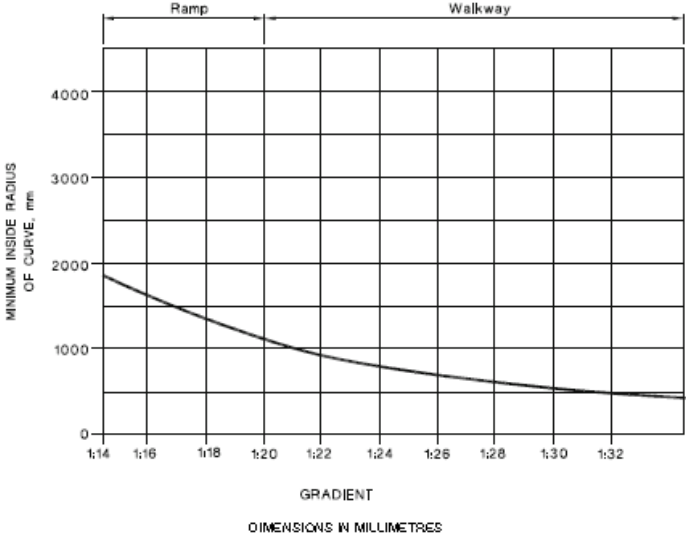


#	ACCESS REQUIREMENT	COMMENTS
	<p>For walkways with gradients between 1:20 and 1:33 landings shall be obtained by linear interpolation.</p> <p><i>Clause 10.2 of AS1428.1-2009</i></p>	
3.6.5	<p>Constant Gradients to Walkways</p> <p>The gradient of walkways between landings must be constant</p> <p><i>Clause 10.2 of AS1428.1-2009</i></p>	As above.
3.6.6	<p>Landing increase if protection provided</p> <p>Intervals between landings in walkways may be increased by 30% where at least one side is protected by a kerb and handrail, or a wall and handrail</p> <p><i>Clause 10.2 of AS1428.1-2009</i></p>	Noted
3.6.7	<p>Where no protection is provided to walkway</p> <p>The side of the walkway or the ground abutting the side of the walkway must extend horizontally for 600mm, following the grade of the walkway unless one of the following is provided:</p> <ul style="list-style-type: none"> <input type="checkbox"/> kerb and handrail <input type="checkbox"/> wall no less than 450mm high <input type="checkbox"/> Walkways need not otherwise be provided with handrails, kerbs or tactile ground surface indicators <p><i>Clause 10.2 of AS1428.1-2009</i></p>	<i>Details for kerb rail to be provided at CC stage.</i>
3.6.8	<p>Landing dimensions to Walkways</p> <p>Landings to walkways must have a minimum depth of 1200mm, except for the following situations:</p> <ul style="list-style-type: none"> - 1500mm x 1500mm for up to 90 degrees (internal corner can be splayed) 	<i>The landings appear to be compliant, however full dimensions to be provided at CC stage.</i>



#	ACCESS REQUIREMENT	COMMENTS
	<ul style="list-style-type: none"> - Min 1540mm x 2100mm for 180 degrees  <ul style="list-style-type: none"> - Landings at doorways must be the size of the required circulation space <p><i>Clause 10.8 of AS1428.1-2009</i></p>	
3.6.9	<p>Curved Walkways</p> <p>Curved walkways must be at least 1500mm, with their length measured along the centre line.</p> <p>Walkway must be provided with a minimum inside radius as below:</p>	<p>Grade of curved accessway to be confirmed.</p> 



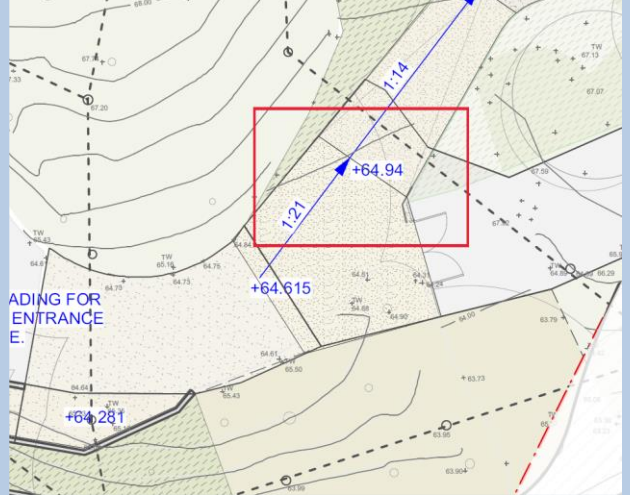
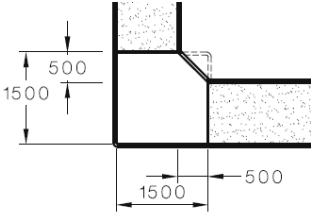
#	ACCESS REQUIREMENT	COMMENTS
	 <p> The graph plots the minimum inside radius of a curve (mm) against the gradient. The y-axis is labeled 'MINIMUM INSIDE RADIUS OF CURVE, mm' and ranges from 0 to 4000 in increments of 1000. The x-axis is labeled 'GRADIENT' and shows values from 1:14 to 1:32 in increments of 0:02. A curve starts at approximately 1900 mm for a 1:14 gradient and decreases to about 500 mm for a 1:32 gradient. The graph is divided into 'Ramp' and 'Walkway' sections. </p> <p> DIMENSIONS IN MILLIMETRES FIGURE 20 CURVED RAMP AND WALKWAY GRADIENTS </p> <p> <i>10.4 of AS1428.1-2009</i> </p>	



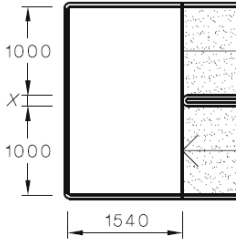
3.7 RAMPS

#	ACCESS REQUIREMENT	COMMENTS
3.7.1	<p>Ramps</p> <p>Where walkways are steeper than 1:20, they are considered ramps and must be no steeper than 1:14.</p> <p>Also, where a ramp exceeds 1900mm in length or a rise of greater than 190mm, it is no longer considered a kerb ramp or step ramp and must be no steeper than 1:14.</p> <p><i>See Section 3.8 of this report for step, kerb and threshold ramp requirements.</i></p> <p><i>Clause 10.3 of AS1428.1-2009</i></p>	<p>The grade of the ramps where indicated, do not exceed 1:14.</p>
3.7.2	<p>Ramp Width</p> <p>Ramps must be a minimum of 1000mm in width</p> <p>AS1428.1-2009</p>	<p>Clear width of the ramp (are not currently dimensioned, but appear >1m as required)</p>
3.7.3	<p>Ramp Landings</p> <p>Ramps must be provided with 1200mm deep landings at appropriate intervals:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Gradients of 1:14, landings at 9m intervals; <input type="checkbox"/> Gradients of 1:19, landings at 15m intervals. <input type="checkbox"/> For ramps with gradients between 1:20 and 1:14 landings shall be obtained by linear interpolation <p><i>Clause 10.3 of AS1428.1-2009</i></p>	<p>Ramp landings appear adequately spaced (dimensions required for ramp landings at CC stage), with the following specific issues noted:</p> <p>A landing will need to be provided between the walkway and ramp as shown below.</p>

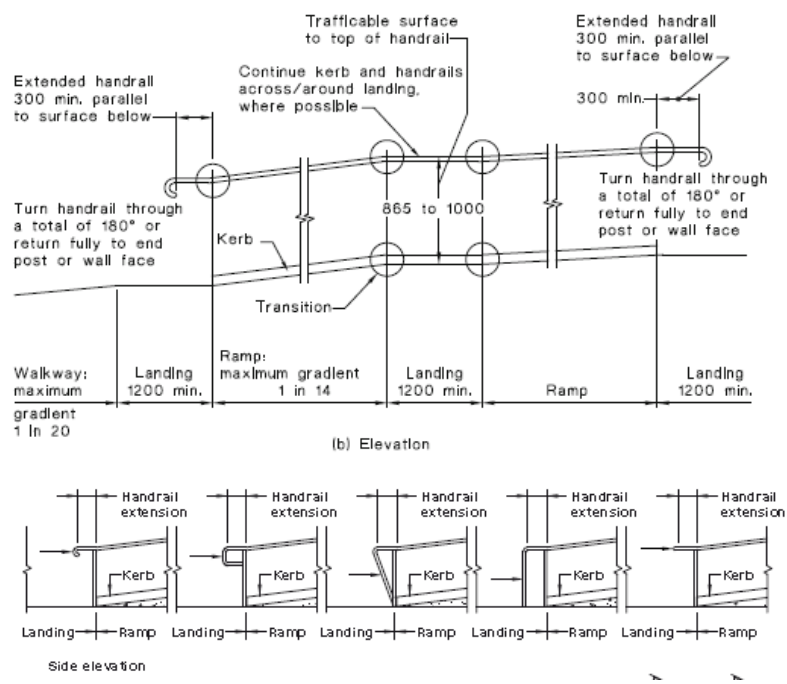


#	ACCESS REQUIREMENT	COMMENTS
		
3.7.4	<p>Landing dimensions to ramps</p> <p>Landings must be increased in size where the ramp also changes direction at the landing as follows:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1500mm x 1500mm for up to 90 degrees (internal corner can be splayed) 	<p>The design appears to provide sufficient turning space at the top and base of the ramps (noting comments above) - dimensions should be confirmed at CC stage.</p> <p>Note that the required handrail extensions (for both the stair and ramp - not currently shown) must not encroach into the required turning space.</p>

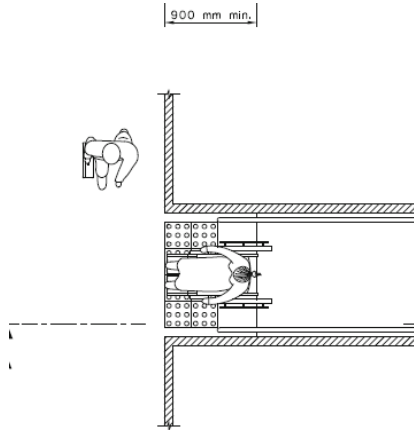


#	ACCESS REQUIREMENT	COMMENTS
	<p><input type="checkbox"/> Min 1540mm x 2100mm for 180 degrees</p>  <p><input type="checkbox"/> Landings at doorways must be the size of the required circulation space for the doorway</p> <p><i>Clause 10.8 of AS1428.1-2009</i></p>	
3.7.5	<p>Required Features to Ramps</p> <p>General ramps that are 1:14 to 1:20 are required to be provided with the following features:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Accessible Handrails to both sides (see below) <input type="checkbox"/> Kerb, kerb rail or wall to both sides (see below) <input type="checkbox"/> Tactile Ground Surface Indicators (see separate TGSI section of this report) <input type="checkbox"/> The above does not apply to kerb or step ramps (see separate section of this report) <p><i>Clause 10.3 of AS1428.1-2009</i></p>	Details not currently shown. <i>To be provided at CC stage</i>
3.7.6	<p>Handrails to Ramps</p> <p>Ramps (except kerb and step ramps) must have accessible handrails with the following features:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Handrails to be provided to both sides of the ramp <input type="checkbox"/> Handrails to extend 300mm past the commencement and conclusion of the ramp except where the inner handrail is continuous at an intermediate landing <input type="checkbox"/> Handrails to be installed at a continuous height of between 865mm and 1000mm above the surface of the ramp <input type="checkbox"/> Where a balustrade is required at greater height, both shall be provided <input type="checkbox"/> Provide circular or elliptical handrails with a diameter of 30-50mm for not less than 270° around the uppermost surface <input type="checkbox"/> Handrails must be securely fixed and rigid with the ends turned downwards through an angle of 180° for a minimum of 100mm, return to an end post or returned away to side wall 	The current plans do not show details for handrail locations. <i>To be provided at CC stage</i>

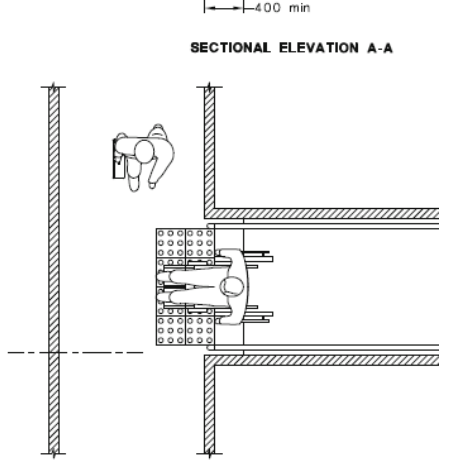


#	ACCESS REQUIREMENT	COMMENTS
	<ul style="list-style-type: none"> <input type="checkbox"/> Exposed edges and corners of handrails must be finished with a safety radius of not less than 5mm <input type="checkbox"/> Provide a clearance of not less than 50mm between the handrail and adjacent wall or other obstruction. This clearance to extend above the handrail by no less than 600mm <input type="checkbox"/> Handrails must be constructed and fixed with no obstruction to the passage of a hand along the length of the rail <input type="checkbox"/> Handrails must not encroach into circulation spaces such as at doorways <p><i>Clause 10.3 and Clause 12 of AS1428.1-2009</i></p>  <p><i>Clause 10.3 of AS1428.1-2009</i></p>	
3.7.7	<p>Ramps to be setback from the path of travel</p> <p>Ramps to be set back to ensure they do not encroach into paths of travel as follows:</p>	The design shows general compliance.

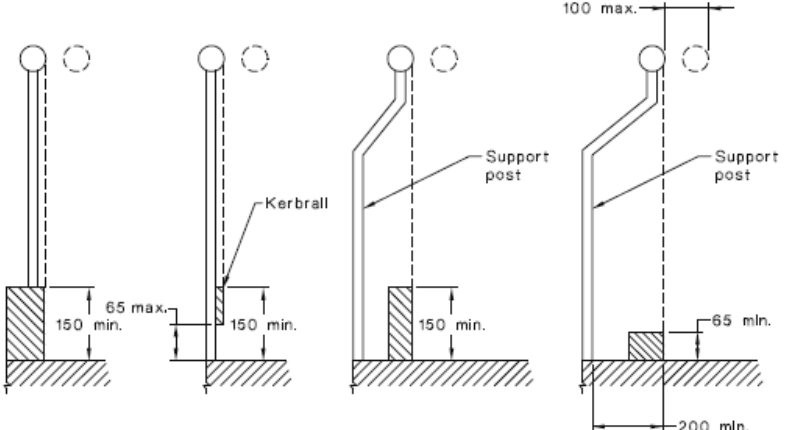


#	ACCESS REQUIREMENT	COMMENTS
	<p><input type="checkbox"/> Property Boundary – must be setback 900mm to ensure the handrails and tactile ground surface indicators do not protrude into the public domain.</p>  <p><input type="checkbox"/> Internal Corner – must be setback 400mm to ensure the handrails do not protrude into the transverse path of travel</p>	

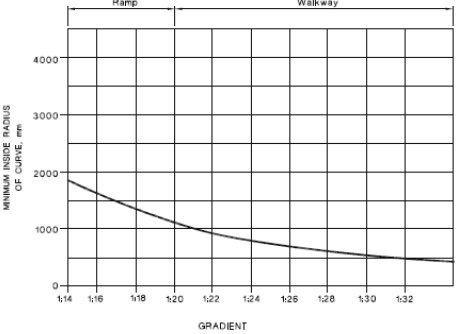


#	ACCESS REQUIREMENT	COMMENTS
	 <p>SECTIONAL ELEVATION A-A</p> <p>400 min</p> <p><input type="checkbox"/> Where the handrail protrudes into a path of travel, the handrail must be protected by means of a wall, kerb, balustrade or end post</p> <p><i>Clause 10.3 of AS1428.1-2009</i></p>	
3.7.8	<p>Kerb height</p> <p>Kerbs or kerb rails are required on ramps and landings where there is no balustrade or wall provided. Kerb or kerb rails must comply with the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A minimum height of 65mm; <input type="checkbox"/> The height to the top of the kerb or kerb rail must <u>not</u> be between 75mm and 150mm; <input type="checkbox"/> Perforations greater than 20mm must not be provided in the kerb or kerb rail between 75mm and 150mm. <p><i>10.3(i) of AS1428.1-2009</i></p>	<i>Details to be provided at CC stage.</i>
3.7.9	<p>Kerb location</p> <p>Kerbs or kerb rails and handrails must be provided with the following relationship:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The ramp-side face of the kerb or kerb rail must flush with the ramp-side face of the handrail; or <input type="checkbox"/> Be located so that the ramp-side face of the kerb or kerb rail is no greater than 100mm behind the ramp-side face of the handrail 	<i>As above.</i>



#	ACCESS REQUIREMENT	COMMENTS
	<ul style="list-style-type: none"> <input type="checkbox"/> Where the handrail incorporates a support post, the height of the kerb or kerb rail must be no less than 150mm in height; or <input type="checkbox"/> Where the kerb or kerb rail is between 65mm and 75mm in height, the support post must be located a minimum of 200mm from the ramp-side face of the kerb or kerb rail <p><i>10.3(j) of AS1428.1-2009</i></p>  <p><i>Clause 10.3 of AS1428.1-2009</i></p>	
3.7.10	<p>Curved Ramps</p> <p>Curved ramps must be at least 1500mm wide, with their length measured along the centre line.</p> <p>Ramp must be provided with a minimum inside radius as below:</p>	<p>Curved ramps appear to be sufficient width, with further dimensions to be provided at CC stage.</p>



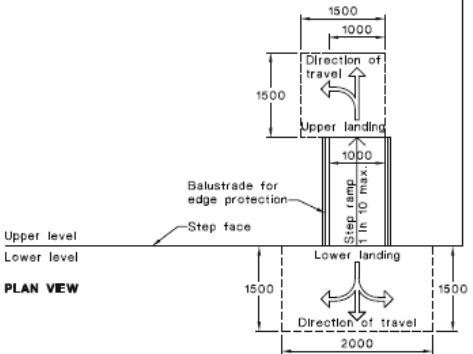
#	ACCESS REQUIREMENT	COMMENTS
	 <p>MINIMUM INSIDE RADIUS OF CURVE, mm</p> <p>GRADIENT</p> <p>DIMENSIONS IN MILLIMETRES</p> <p>FIGURE 20 CURVED RAMP AND WALKWAY GRADIENTS</p> <p>10.4 of AS1428.1-2009</p>	



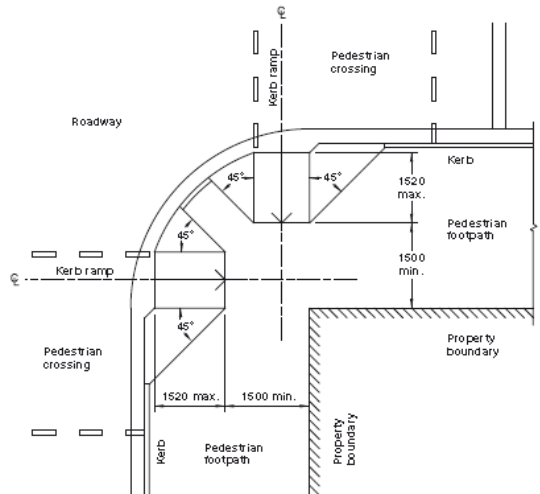
3.8 STEP, KERB + THRESHOLD RAMPS

#	ACCESS REQUIREMENT	COMMENTS
3.8.1	<p>Step Ramps</p> <p>Step ramps shall have</p> <ul style="list-style-type: none"> <input type="checkbox"/> A maximum rise of 190mm <input type="checkbox"/> A maximum gradient of 1:10 <input type="checkbox"/> A maximum length of 1900mm <input type="checkbox"/> Slip resistant surface <p><i>Clause 11.7 of AS 1428.1-2009</i></p>	There are no step ramps or kerb ramps currently proposed.
3.8.2	<p>Splayed sides to step ramps</p> <p>Where there is cross traffic, step ramps shall:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Have splayed sides at 45° angles <input type="checkbox"/> a suitable barrier is provided at a minimum height of 900mm, and kerb rail if open <p><i>Clause 10.6.1 of AS 1428.1-2009</i></p>	As above.
3.8.3	<p>Width of step ramps</p> <p>Step ramp shall provide an unobstructed width of 1000mm</p> <p><i>AS 1428.1-2009</i></p>	As above.
3.8.4	<p>Landings to step ramps</p> <p>Landings at the top or bottom of step ramps shall:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <u>Not</u> overlap with the landings of other step/kerb ramps (BCA D3.11) <input type="checkbox"/> 1200mm deep where there is no change in direction <input type="checkbox"/> 1500mm x 1500mm where there is a potential 90 degree turn <input type="checkbox"/> 1500mm deep x 2000mm width where a T junction occurs <input type="checkbox"/> The size of the required door circulation where necessary 	As above.

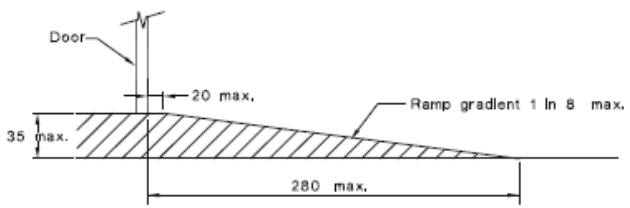


#	ACCESS REQUIREMENT	COMMENTS
	 <p style="text-align: center;">PLAN VIEW</p>	
3.8.5	<p>Kerb Ramps</p> <p>Kerb ramps shall have:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A maximum rise of 190mm <input type="checkbox"/> A gradient no steeper than 1:8 and located within or attached to a kerb <input type="checkbox"/> A maximum length of 1520mm <input type="checkbox"/> Be flush with the roadway <input type="checkbox"/> Splayed sides of 45° angle where transverse traffic is likely; <input type="checkbox"/> Slip resistant surface <p><i>Clause 10.7 of AS1428.1-2009</i></p>	As above.
3.8.6	<p>Splayed sides to kerb ramps</p> <p>Where there is cross traffic, kerb ramps shall:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Have splayed sides at 45° angles <input type="checkbox"/> Be flush with the roadway <p><i>Clause 10.6.1 of AS 1428.1-2009</i></p>	As above.
3.8.7	<p>Width of kerb ramps</p> <p>Kerb ramps shall provide an unobstructed width of 1000mm</p> <p><i>AS 1428.1-2009</i></p>	As above.



#	ACCESS REQUIREMENT	COMMENTS
3.8.8	<p>Landings to kerb ramps</p> <p>Landings at the top or bottom of kerb ramps shall:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <u>Not</u> overlap with the landings of other step/kerb ramps (BCA D3.11) <input type="checkbox"/> Be 1200mm deep where there is no change in direction <input type="checkbox"/> Be 1500mm x 1500mm where there is a single 90 degree turn <input type="checkbox"/> Be 1500mm deep x 2000mm width where a T junction occurs <input type="checkbox"/> The size of the required door circulation where necessary 	As above.
3.8.9	<p>Align kerb ramps</p> <p>Kerb ramps on opposing sides of crossing points to be aligned &/or perpendicular to the path of travel.</p>  <p>NOTES:</p> <ol style="list-style-type: none"> 1 Centre-line of kerb ramps and pedestrian refuges shall align across the road or vehicular driveway within the building/property allotment. 2 Top and bottom of kerb ramps shall be aligned at 90° to path of travel. 3 Top and bottom of kerb ramps shall have a sharp gradient transition. 4 For requirements for tactile ground surface indicators see AS 1428.4.1. 5 For requirements for pedestrian lights and push-button assemblies see AS 1742.14. <p>(a) 90° road intersection</p>	As above.



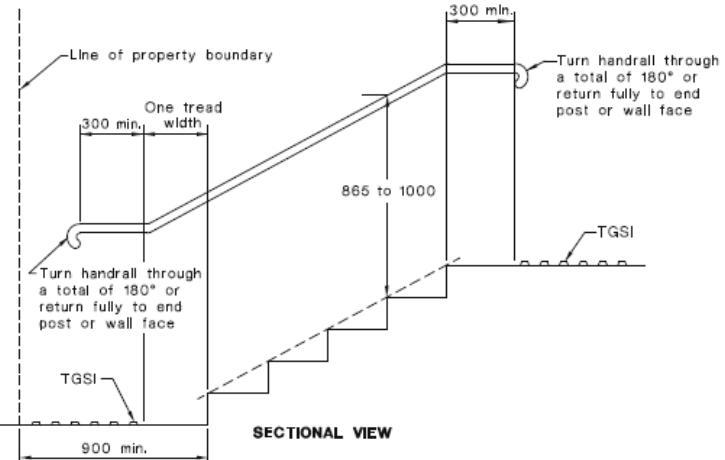
#	ACCESS REQUIREMENT	COMMENTS
	<i>10.7.1 of AS1428.1-2009</i>	
3.8.10	<p>Kerb ramps not complying with Clause 5.8</p> <p>Where kerb ramps form part of a continuous accessible path of travel and do not meet the requirements of AS 1428.1.2009, warning tactile ground surface indicators (TGSIs) to be installed perpendicular to the path of travel. TGSIs to be located on the trafficable surface of the ramp, setback 300mm (+/- 10mm) from the roadway edge with a depth of 600mm – 800mm and extending the full width of the path of travel</p> <p><i>AS 1428.4.1-2004</i></p>	As above.
3.8.11	<p>Threshold Ramps</p> <p>Threshold ramps shall have:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A maximum rise of 35mm <input type="checkbox"/> A gradient no steeper than 1:8 and located within or attached to a kerb <input type="checkbox"/> A maximum length of 280mm <input type="checkbox"/> Splayed sides of 45° angle where not abutted by a wall <input type="checkbox"/> Slip resistant surface <input type="checkbox"/> Be Within 20mm of the door leaf it serves  <p style="text-align: center;">DIMENSIONS IN MILLIMETRES</p> <p style="text-align: center;">FIGURE 21 THRESHOLD RAMP</p> <p><i>Clause 10.7 of AS1428.1-2009</i></p>	<p>Where threshold ramps are proposed, they must comply with this clause.</p> <p><i>Details to be provided as required (at CC stage).</i></p>



3.9 STAIRWAYS

#	ACCESS REQUIREMENT	COMMENTS
3.9.1	<p>Stairs must not be only access</p> <p>Stairs must not be the sole means of access to areas <i>required</i> to be accessible.</p> <p><i>Clause 13.1 of AS1428.2</i></p>	Noted
3.9.2	<p>Stair Width</p> <p>Stairs must be no less than 1m in unobstructed width</p> <p><i>AS1428.1-2009</i></p>	The scaled dimensions indicate general compliance.
3.9.3	<p>Stair setback</p> <p>Stairs to be set back a minimum of 900mm from any transverse path of travel, ensuring the handrails and tactile ground surface indicators do not protrude into that path of travel. Where the handrail protrudes into a path of travel, the handrail must be protected by means of a wall, kerb, balustrade or end post</p> <p><i>Clause 11.1(a) of AS1428.1-2009</i></p>	The design shows general compliance.
3.9.4	<p>Stair Handrails</p> <p>Stairs must have accessible handrails with the following features:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Handrails to be provided to both sides of the stair (except in a fire isolated stair) <input type="checkbox"/> Handrails to extend 300mm past the top riser, parallel to the floor. At the base of the stairs, handrails must extend one tread width, continuing the angle of the handrail, plus 300mm <input type="checkbox"/> Handrails to be installed at a continuous height of between 865mm and 1000mm above the nosing of the stairs <input type="checkbox"/> Where a balustrade is required at greater height, both shall be provided <input type="checkbox"/> Provide circular or elliptical handrails with a diameter of 30-50mm for not less than 270° around the uppermost surface <input type="checkbox"/> Handrails must be securely fixed and rigid with the ends turned downwards through an angle of 180° for a minimum of 100mm, return to an end post or returned away to side wall <input type="checkbox"/> Exposed edges and corners of handrails must be finished with a safety radius of not less than 5mm <input type="checkbox"/> Provide a clearance of not less than 50mm between the handrail and adjacent wall or other obstruction. This clearance to extend above the handrail by no less than 600mm <input type="checkbox"/> Handrails must be constructed and fixed with no obstruction to the passage of a hand along the length of the rail <input type="checkbox"/> Handrails must not encroach into circulation spaces such as at doorways 	<i>Stair handrail details to be provided at CC stage.</i>



#	ACCESS REQUIREMENT	COMMENTS
	 <p>Clause 10.3 of AS1428.1-2009</p>	
3.9.6	<p>Stair Dimensions</p> <p>Stair dimensions must be as follows:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Risers (R) between 110mm-190mm <input type="checkbox"/> Going (G) between 250mm and 355mm <input type="checkbox"/> A 'constant' ratio calculated by $2R + G$ of 550-700mm <input type="checkbox"/> Each R or G dimension must be constant throughout the flight <p>BCA D2.13</p>	<p><i>Details to be provided at CC stage.</i></p>
3.9.7	<p>Stair Treads & Nosings</p> <p>Stair treads must have</p> <ul style="list-style-type: none"> <input type="checkbox"/> A non-slip contrasting strip with a minimum luminance contrast of 30% to the background <input type="checkbox"/> The strip must be not less than 50mm and not greater than 75mm on the tread nosing, and returning a maximum of 10mm down the vertical face of the riser <input type="checkbox"/> Stairs must have opaque risers. Open risers are a hazardous for cane users and can be disorientating 	<p><i>As above.</i></p>



#	ACCESS REQUIREMENT	COMMENTS
	<input type="checkbox"/> Stair nosings must have a sharp intersection, be rounded up to 5mm radius or chamfered up to 5mm x 5mm <i>Clause 11.1(e) of AS1428.1-2009</i>	
3.9.8	<p>BCA Restrictions</p> <p>Stairs must meet the following restrictions detailed in the BCA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Stairs must have not more than 18 risers to prevent fatigue for users <input type="checkbox"/> Stairs must have at least 2 risers (ie single steps are prohibited) <input type="checkbox"/> Stairs used for exits must <i>not</i> contain winders in lieu of a landing <input type="checkbox"/> Treads of solid construction, where connecting more than 3 stories <input type="checkbox"/> In Class 9b buildings, a 30 degree change in direction must be provided where there are more than 36 risers in consecutive flights <p>BCA Clause D2.13</p>	As above.



3.10 TACTILE GROUND SURFACE INDICATORS FOR HAZARDS

#	ACCESS REQUIREMENT	COMMENTS
3.10.1	<p>Hazard Tactile Indicators</p> <p>Type B (Domed/Hazard) Tactile Ground Surface Indicators are required in accordance with AS1428.4-1992 in the following locations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> On an access path to indicate overhead obstructions below a height of 2000mm (see below) <input type="checkbox"/> Ramps (see below) <input type="checkbox"/> Stairs (see below) <input type="checkbox"/> Escalators (see below) <input type="checkbox"/> Pedestrian crossings at roadways & carparks <p>TGSIs are NOT typically required at the following locations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Walkways at a grade shallower than 1:20 <input type="checkbox"/> Step, kerb or threshold ramps <input type="checkbox"/> Within fire isolated stairs <p><i>BCA D3.8, AS1428.1-2009 and Clause 18.1 of AS1428.2-1992</i></p>	<p>TGSI's should be provided at the top & base of all new stairs and ramps (but are not required for walkways)</p> <p>Note TGSI's will also need to be provided to overhead obstructions (e.g. to the underside of stairs) where the height is less than 2m above the floor.</p> <p><i>Details to be provided at CC stage.</i></p>
3.10.2	<p>Luminance contrast</p> <p>Tactile ground surface indicators must achieve luminance contrast in accordance with the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Integrated tiles, where the raised indicators and background surface are the same colour, not less than 30% luminance contrast to be achieved with the base surface in which it is installed; <input type="checkbox"/> Discrete indicators, where the raised indicators and background surface are different in colour, not less than 45% luminance contrast to be achieved with the base surface in which it is installed; <input type="checkbox"/> Two-tone discrete indicators, where the raised indicators are constructed with different colour to the upper and splayed surfaces, not less than 60% luminance contrast to be achieved between the upper surface and the base surface in which it is installed. <p><i>BCA D3.8, AS1428.1-2009 and AS1428.4-1992</i></p>	<p><i>Details to be provided at CC stage.</i></p>
3.10.3	<p>Overhead Obstruction TGSIs</p> <p>Tactile ground surface indicators or other suitable barrier must be provided where there are impediments or hazards at a height less than 2000mm above the floor.</p> <p><i>BCA D3.8, AS1428.1-2009 and AS1428.4-1992</i></p>	<p><i>Details to be provided at CC stage.</i></p>



#	ACCESS REQUIREMENT	COMMENTS
3.10.4	<p>Ramp TGSIs</p> <p>A pad of Type B TGSIs must be provided at the top and bottom of ramps:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Setback 300mm from the ends of the ramp <input type="checkbox"/> 600mm-800mm deep <input type="checkbox"/> Extend the full width of the ramp <input type="checkbox"/> They are not required at mid-landings should the handrail be continuous throughout the landing. Otherwise a 300mm deep pad setback 300mm from the ramp is required at the mid-landing. <p><i>BCA D3.8, AS1428.1-2009 and AS1428.4-1992</i></p>	As above.
3.10.5	<p>Stair TGSIs</p> <p>A pad of Type B TGSIs must be provided at the top and bottom of stairs:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Setback 300mm from the end of the ramp <input type="checkbox"/> Be 600-800mm deep <input type="checkbox"/> Extend the full width of the ramp <input type="checkbox"/> They are not required at mid-landings should the handrail be continuous throughout the landing. Otherwise a 300mm deep pad setback 300mm from the ramp is required at the mid-landing <p><i>BCA D3.8, AS1428.1-2009 and AS1428.4-1992</i></p>	As above.
3.10.6	<p>Escalator TGSIs</p> <p>Type B Warning TGSIs should be installed to the cover plates at the top and bottom of escalators per AS1428.4-1992</p> <p><i>AS1428.4-1992</i></p>	There are no escalators proposed.

3.11 TACTILE GROUND SURFACE INDICATORS – DIRECTIONAL (NOT USED)



3.12 LIFTS (NOT USED)

3.13 LIGHTING

#	ACCESS REQUIREMENT	COMMENTS																		
3.13.1	<p>Lighting levels</p> <p>Any lighting provided must comply with AS1680.0 and it is recommended that lighting also meet the requirements of 19.1 of AS1428.2-1992 for various room uses as follows:</p> <table border="0"> <tr> <td>Entrances</td> <td></td> </tr> <tr> <td>Passageways and walkway</td> <td>≥150 lx</td> </tr> <tr> <td>Stairs</td> <td>150 lx</td> </tr> <tr> <td>Ramps</td> <td>150 lx</td> </tr> <tr> <td>Lifts</td> <td>See AS 1735.12</td> </tr> <tr> <td>Toilet and locker rooms</td> <td>200 lx</td> </tr> <tr> <td>Counter tops</td> <td>250 lx</td> </tr> <tr> <td>General displays</td> <td>200-300 lx</td> </tr> <tr> <td>Telephones</td> <td>200 lx</td> </tr> </table> <p><i>Clause 19.1 of AS1428.2</i></p>	Entrances		Passageways and walkway	≥150 lx	Stairs	150 lx	Ramps	150 lx	Lifts	See AS 1735.12	Toilet and locker rooms	200 lx	Counter tops	250 lx	General displays	200-300 lx	Telephones	200 lx	<p><i>Details to be provided at CC stage.</i></p>
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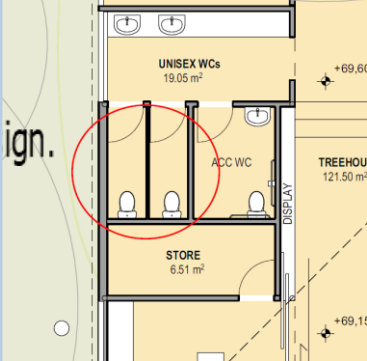


3.14 SIGNAGE

#	ACCESS REQUIREMENT	COMMENTS
3.14.1	<p><i>In a building required to be accessible—</i></p> <p><i>(a) braille and tactile signage complying with Specification D3.6 must—</i></p> <p><i>(i) incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 and identify each—</i></p> <p><i>(A) sanitary facility, except a sanitary facility within a sole-occupancy unit in a Class 1b or Class 3 building; and</i></p> <p><i>(B) space with a hearing augmentation system; and</i></p> <p><i>(ii) identify each door required by E4.5 to be provided with an exit sign and state—</i></p> <p><i>(A) "Exit"; and</i></p> <p><i>(B) "Level"; and either (aa) the floor level number; or (bb) a floor level descriptor; or</i></p> <p><i>(cc) a combination of (aa) and (bb); and</i></p>	<p><i>Details to be provided at CC stage.</i></p>
3.14.2	<p><i>(b) signage including the international symbol for deafness in accordance with AS 1428.1 must be provided within a room containing a hearing augmentation system identifying—</i></p> <p><i>(i) the type of hearing augmentation; and</i></p> <p><i>(ii) the area covered within the room; and</i></p> <p><i>(iii) if receivers are being used and where the receivers can be obtained; and</i></p>	<p><i>As above.</i></p>
3.14.3	<p><i>(c) signage in accordance with AS 1428.1 must be provided for accessible unisex sanitary facilities to identify if the facility is suitable for left or right-handed use; and</i></p>	<p><i>As above.</i></p>
3.14.4	<p><i>(d) signage to identify an ambulant accessible sanitary facility in accordance with AS 1428.1 must be located on the door of the facility; and</i></p>	<p><i>As above.</i></p>
3.14.5	<p><i>(e) where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access, in accordance with AS 1428.1 must be provided to direct a person to the location of the nearest accessible pedestrian entrance; and</i></p>	<p><i>NA to subject design.</i></p>
3.14.6	<p><i>(f) where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary facility.</i></p>	<p><i>NA to subject design.</i></p>



3.15 SANITARY FACILITIES (BCA F2.4)

#	ACCESS REQUIREMENT	COMMENTS				
3.15.1	<p>F2.4 Accessible sanitary facilities In a building required to be accessible—</p> <p>(a) accessible unisex sanitary compartments must be provided in accessible parts of the building in accordance with Table F2.4(a); and</p> <table border="1"> <tr> <td>Class 5, 6, 7, 8 or 9 — except for within a</td> <td>Where F2.3 requires closet pans—</td> </tr> <tr> <td>ward area of a Class 9a health-care building</td> <td>(a) 1 on every storey containing sanitary compartments; and (b) where a storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks.</td> </tr> </table>	Class 5, 6, 7, 8 or 9 — except for within a	Where F2.3 requires closet pans—	ward area of a Class 9a health-care building	(a) 1 on every storey containing sanitary compartments; and (b) where a storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks.	Accessible sanitary facilities are proposed in the Treehouse amenities as required.
Class 5, 6, 7, 8 or 9 — except for within a	Where F2.3 requires closet pans—					
ward area of a Class 9a health-care building	(a) 1 on every storey containing sanitary compartments; and (b) where a storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks.					
3.15.2	(b) accessible unisex showers must be provided in accordance with Table F2.4(b) ; and	NA to subject design.				
3.15.3	(c) at each bank of toilets where there is one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females; and	<p>It is recommended that the male and female (or unisex) WC's be suitable for use by people with an ambulant disability.</p> 				
3.15.4	(d) an accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary towels; and	<i>Fitout details to be provided at CC stage.</i>				



#	ACCESS REQUIREMENT	COMMENTS
3.15.5	(e) the circulation spaces, fixtures and fittings of all accessible sanitary facilities provided in accordance with Table F2.4(a) and Table F2.4(b) must comply with the requirements of AS 1428.1; and	<i>Fitout details to be provided at CC stage.</i>
3.15.6	(f) an accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and	Design generally complies
3.15.7	(g) 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;	NA to subject design.
3.15.8	(h) where male sanitary facilities are provided at a separate location to female sanitary facilities, accessible unisex sanitary facilities are only required at one of those locations; and	Noted.
3.15.9	(i) an accessible unisex sanitary compartment or an accessible unisex shower need not be provided on a storey or level that is not required by D3.3(f) to be provided with a passenger lift or ramp complying with AS 1428.1. "	Noted.



3.16 HEARING AUGMENTATION

#	ACCESS REQUIREMENT	COMMENTS
3.16.1	<p>D3.7 Hearing augmentation</p> <p>(a) A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed—</p> <p>(i) in a room in a Class 9b building; or</p> <p>(ii) in an auditorium, conference room, meeting room or room for judicatory purposes; or</p> <p>(iii) at any ticket office, teller's booth, reception area or the like, where the public is screened from the service provider.</p>	<p><i>Zoo to confirm whether inbuilt amplification systems are proposed ion the Nocturnal House.</i></p>
	<p>(b) If a hearing augmentation system <i>required</i> by (a) is—</p> <p>(i) an induction loop, it must be provided to not less than 80% of the <i>floor area</i> of the room or space served by the inbuilt amplification system; or</p> <p>(ii) a system requiring the use of receivers or the like, it must be available to not less than 95% of the <i>floor area</i> of the room or space served by the inbuilt amplification system, and the number of receivers provided must not be less than—</p> <p>(A) if the room or space accommodates up to 500 persons, 1 receiver for every 25 persons or part thereof, or 2 receivers, whichever is the greater; and</p> <p>(B) if the room or space accommodates more than 500 persons but not more than 1000 persons, 20 receivers plus 1 receiver for every 33 persons or part thereof in excess of 500 persons; and</p> <p>(C) if the room or space accommodates more than 1000 persons but not more than 2000 persons, 35 receivers plus 1 receiver for every 50 persons or part thereof in excess of 1000 persons; and</p> <p>(D) if the room or space accommodates more than 2000 persons, 55 receivers plus 1 receiver for every 100 persons or part thereof in excess of 2000 persons.</p>	<p><i>As above.</i></p>



#	ACCESS REQUIREMENT	COMMENTS
	(c) The number of persons accommodated in the room or space served by an inbuilt amplification system must be calculated according to D1.13 .	Noted.
	(d) Any screen or scoreboard associated with a Class 9b building and capable of displaying public announcements must be capable of supplementing any public address system, other than a public address system used for emergency warning purposes only.	NA to subject design (assumed).

3.17 CARPARKING (NOT USED)

3.18 ACCESS TO PREMISES STANDARD

#	ACCESS REQUIREMENT	COMMENTS
3.18.1	<p>General</p> <p>Buildings to which Standards apply</p> <ul style="list-style-type: none"> a <i>new</i> building, to the extent that the building is a (specified) Class 1b, Class 2 building (short-term rent) or a Class 3, 5, 6, 7, 8, 9 or 10 building. a new part, and any <i>affected part</i> (see definitions below) of a building, to the extent that the building is a (specified) Class 1b, Class 2 building (short-term rent) or a Class 3, 5, 6, 7, 8, 9 or 10 building. <p>A part of a building is a <i>new part</i> of the building if it is an extension to the building or a modified part of the building (refer to the Access to Premises Standards for full details).</p> <p>An <i>affected part</i> is:</p>	The entrances to the existing buildings have been designed to be accessible as required.



#	ACCESS REQUIREMENT	COMMENTS
	<p>(a) the principal pedestrian entrance of an existing building that contains a new part; and (b) any part of an existing building, that contains a new part, that is necessary to provide a continuous accessible path of travel from the entrance to the new part.</p>	
3.18.2	<p>Lessee Concession</p> <p>Lessees</p> <p>(1) If the lessee of a new part of a building submits an application for approval for the building work, the following people do not have to ensure that the affected part of the building complies with these Standards:</p> <ul style="list-style-type: none"> (a) the building certifier; (b) the building developer; (c) the building manager. <p>(2) Subsection (1) does not apply if a building with a new part is leased to only 1 person.</p>	NA – lessee concession not applicable to subject building works.
3.18.3	<p>Existing Lift Upgrade/Concessions</p> <p>Lift concession</p> <p>The requirement in Table E3.6 (b) of the Access Code that a lift is to have a floor dimension of not less than 1 400 mm x 1 600 mm does not apply to an existing passenger lift that is in a new part, or an affected part, of a building, if the lift:</p> <ul style="list-style-type: none"> (a) travels more than 12 m; and (b) has a lift floor that is not less than 1 100 mm by 1 400 mm. 	NA - lift concession not applicable to subject building works.
3.18.4	<p>Existing Toilet Upgrade/Concessions</p> <p>(1) Paragraphs F2.4 (c) and (e) of the Access Code, to the extent that they require compliance with AS 1428.1—2009, <i>Design for access and mobility, Part 1: General requirements for access—New building work</i>, do not apply to the following:</p> <ul style="list-style-type: none"> (a) existing accessible sanitary compartments; (b) existing sanitary compartments suitable for use by people with a disability. 	NA- this concession is not proposed to be used.



#	ACCESS REQUIREMENT	COMMENTS
	<p>(2) For subsection (1) to apply, a sanitary compartment mentioned in paragraph (a) or (b) must:</p> <ul style="list-style-type: none"> (a) comply with AS 1428.1—2001, <i>Design for access and mobility, Part 1: General requirements for access—New building work</i>; and (b) be located in either a new part, or an affected part, of a building. 	

3.19 ADAPTABLE HOUSING (NOT USED)



4.0 CONCLUSION

This report has assessed the **Development Application Stage** design documentation for the **proposed Upper Australia & Nocturnal House Refurbishment at Taronga Zoo – Bradleys Head Road NSW** under the relevant Regulations relating to “Access for People with Disabilities”.

The primary purpose of the report is to assess the proposed/new development works against the Access Regulations, identify any non-compliance matters and to provide suitable recommendations to ensure the compliance of the design.

Subject to the recommendations of this report, the development demonstrates an ability to comply with the relevant provisions relating to the provision of access and facilities for people with disabilities:

- Significant matters, being those with the ability to affect the design have been included in the Table 1.0 in the Executive Summary.
- All other informational recommendations are included in Table 3.0 of this report.

The design team should review the recommendations of this report and ensure the design documentation adequately addresses the recommendations of this report. Further reviews by MSA can/will be undertaken on the documentation as directed by our client.

