

Job No: IAC-333

14 September 2016

**SYDNEY OPERA HOUSE
BENNELONG POINT
GPO BOX 4274 SYDNEY NSW 2001**

Reference: Ballet Rehearsal Room – Access Report
Development Application

Attention: Mr Chris Barling

Dear Chris,

We have prepared this Access Report for the proposed Ballet Rehearsal Room at the Sydney Opera House.

The output of our consultancy is a DDA Report for the purpose of DA submission for the proposed new Ballet Rehearsal Room located at the Sydney Opera House.

Please feel free to contact the writer should you wish to discuss any aspect of this Access Report.

Yours sincerely,



RICHARD SEIDMAN

M.PropDev, BArch (Hons),
ARB Reg No 4700,
ACAA (Associate No 330)
Livable Housing Registered Assessor 10041





**BALLET REHEARSAL ROOM
SYDNEY OPERA HOUSE**



iAccess Consultants

A division of Seidman & Associates Pty Ltd

ABN 37 002 648 615

14 September 2016

Revision [-]



ACCESS REPORT DEVELOPMENT APPLICATION



DOCUMENT CONTROL

Project: Sydney Opera House
Ballet Rehearsal Room
Document Type: Access Report – Development Application
Report Number: IAC-333

The following report register documents the development and issue of this and each subsequent report(s) undertaken by iAccess Consultants.

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Revision History:

Our Reference	Rev	Remarks	Issue Date
IAC-333	-	Access report prepared and issued to client	14 September 2016

Richard Seidman

ARB Reg No 4700,
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ACAA (Associate No 330)



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1. EXECUTIVE SUMMARY

1.1. Overview

This report is for the assessment of the Development Application documentation for the proposed new Ballet Rehearsal Room of the Sydney Opera House Renewal Project to assess compliance with the provisions of the Disability Discrimination Act 1992, the Disability (Access to Premises – Buildings) Standard and the National Construction Code together with the relevant Australian Standards.

The implementation of the proposed works associated with the new Ballet Rehearsal Room provides accessible access to work spaces and facilities for personal hygiene as nominated in the NCC Performance Requirement DP1.

The content in the report following demonstrates compliance with the statutory requirements of the Disability (Access to Premises – Buildings) Standard and provides a checklist of compliance for the architects when documenting these works.

The Ballet Rehearsal Room is located at Ground Floor level on the western side of the Central Passage. The Ballet Rehearsal Room is accessed from a passage connecting to the Western Foyers or from the lift lobby (GL13 & 18) located to the southern side of the Central Passage. This route forms the accessible path of travel to and from the Ballet Rehearsal Room.

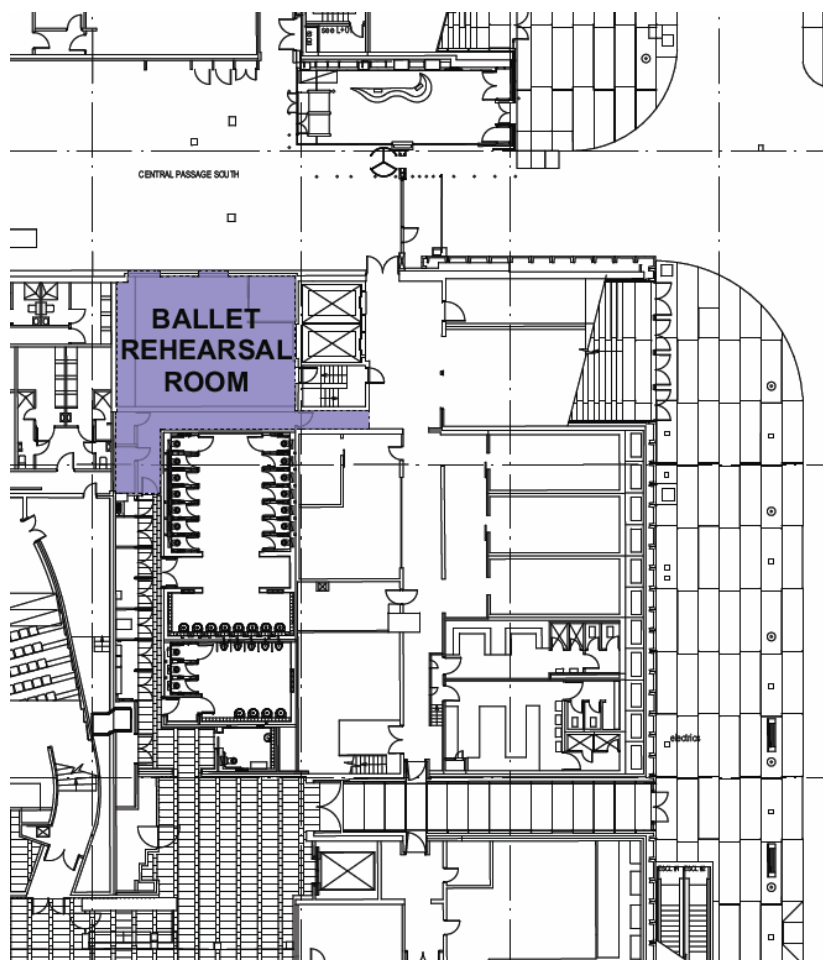


Figure 1 Location of the Ballet Rehearsal Room



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A service door connects the Ballet Rehearsal Room. This service door is for the transfer of equipment and instruments between the Central Passage (south) and the Ballet Rehearsal Room. This service door does not form part of the accessible path of travel.

The following extract from the architectural plans indicates the designated accessible path of travel within the Ballet Rehearsal Room.

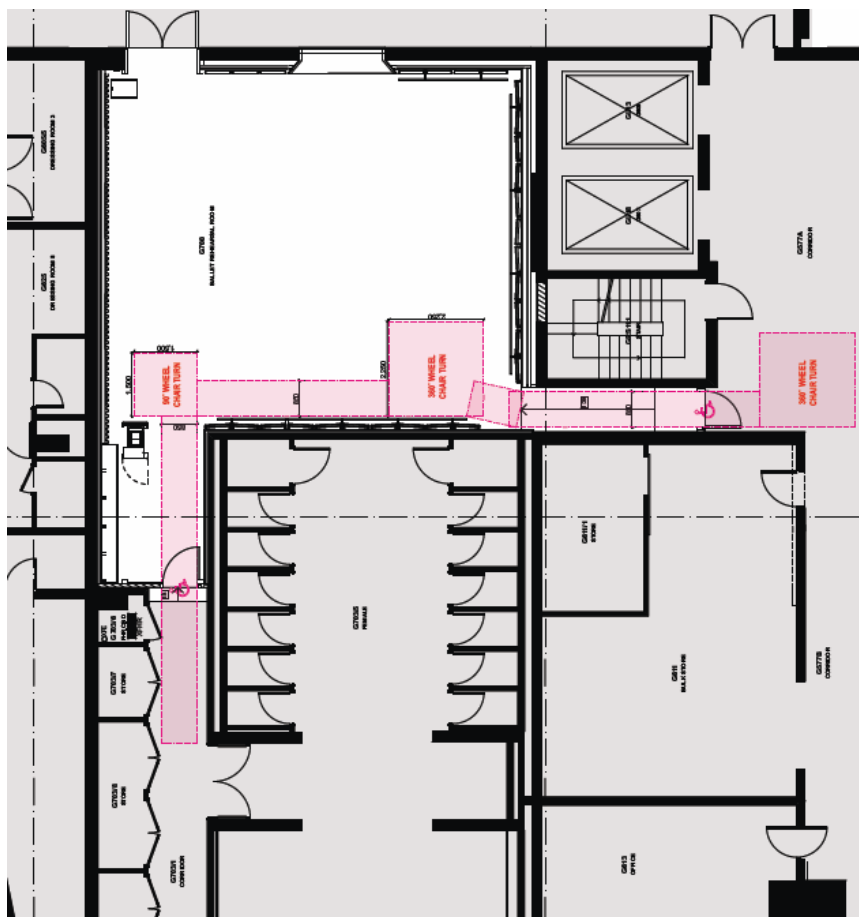


Figure 2 Accessible path of travel

This access report relies on the Performance Solution prepared by iAccess Consultants addressing the use of a threshold ramp associated with Door GR-03. The detail of the threshold ramp relies on the provisions for threshold ramps noted in AS1428.1:2001 in lieu of AS1428.1:2009. The main difference between the differing versions of the Australian Standard relate to the maximum height permitted by the 1:18 threshold ramp. The substantiation for the reliance on the AS1428.1:2001 provisions relate to the acceptable reach range provisions of Clause 22 of AS1428.2:1992.

The passage connecting the Ballet Rehearsal Room with the lift lobby (GL13 & 18) does not provide the latchside clearances required by Clause 13 of AS1428.1:2009. To address this constraint, it is proposed to install a door assist device such as the DORMA PORTEO to Door GR-02. Push button switches will be provided within the Ballet Rehearsal Room and the lift lobby to operate door GR-02. A similar approach is adopted elsewhere within the Opera House where required clearances are not available.

If the works are constructed in accordance with this proposal, accessibility compliance will have been achieved.



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1.2. PROJECTS

The projects covered by the Front of House redevelopment project as identified in the Accessibility Master Plan (AMP) prepared by Scott Carver.

1.3. NATIONAL CONSTRUCTION CODE – NON-COMPLIANCE

The following items noted at Table 1 have been identified by Group DLA as being non-compliant with the provisions of the National Construction Code and may require further review against the detail design, or may be able to be justified by way of an Alternative Design Solution.

Table 1 – Schedule of accessible issues to be addressed

NO	QUERY OR DTS NON-COMPLIANCE	SUGGESTED RESOLUTION	NCC CLAUSE	NCC PERFORMANCE REQUIREMENT
1.	Proposed handrails require further design considerations as it is understood that there may be designed to match the existing handrails	A justifiable alternative design solution may be required to be prepared	D3 .1, D3 .3	DP2

In order for iAccess Consultants to confirm the design for the Ballet Rehearsal Room complies with the provisions of the Disability (Access to Premises – Buildings) Standard the following items listed in Table 2 require further clarification and confirmation.

Table 2 Access to Premises

ITEM NO.	ITEM	COMMENT	NCC CLAUSE
1.	Principal Pedestrian Entrance	The DAP plan identifies several paths of travel to access the various elements of the Sydney Opera House. The overlap between the lead consultants requires monitoring to ensure that the continuous accessible path of travel can be achieved and maintained	
2.	Egress	National Construction Code Performance Requirements DP4 and DP6 require evacuation to be considered when addressing the egress provisions. A fire engineered solution is proposed to be undertaken. Details of the strategies have yet to be finalised.	DP4, DP6

1.4. CHIEF GUIDING DOCUMENTS

The access review has been limited to the works associated with the Ballet Rehearsal Room Project as identified on the drawings prepared by Tonkin Zulaikha Greer Architects.

iAccess Consultants has participated in the Lead Consultant project meetings.

The report prepared is based on a review of the documentation provided and the information provided by the client and is intended for their use only.



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1.5. Current Legislation

- The legislation addressing accessibility is documented in the following Act, Code and Standards:
- Disability Discrimination Act 1992
- Disability (Access to Premises - Buildings) Standards 2010
- National Construction Code (NCC 2015)
- AS1428.1:2009 Design for access and mobility - General requirements for access - New building work
- AS1428.2:1992 Design for access and mobility - Enhanced and additional requirements - Buildings and facilities
- AS1428.4.1:2009 Design for access and mobility - Means to assist the orientation of people with vision impairment - Tactile ground surface indicators
- AS1428.5:2010 Design for access and mobility - Communication for people who are deaf or hearing impaired

1.6. Premises Standard

As of 1 May 2011 new buildings and existing buildings being refurbished have to comply with the Disability (Access to Premises – Building) Standards (“Premises Standards”) under the Commonwealth Disability Discrimination Act 1992.

The main requirement to come from the Premises Standard relates to the upgrading of the affected part, including the principal pedestrian entrance and the paths to the area of new works. The definition of affected part is limited to the area between (and including) the principal pedestrian entrance and the new work. This may include the requirement to upgrade the following existing areas:

- Entrances
- Accessible sanitary facilities.
- Lifts to upper storeys, either upgrade or provide lifts if they are not existing.
- Passing and turning spaces in corridors.

Various concession or relaxations do apply to certain items mentioned above.

A consideration for upgrade via the Premises Standard is applicable to the following existing building situations:

- Where an application for a Construction Certificate (“CC”) or Complying Development Certificate (“CDC”) has been received and the applicant for the works is the building owner or building manager; or
- Where an application for a CC or CDC has been received and the building is leased & occupied by a single tenant; or
- The works as deemed Crown development.

1.7. Assumptions

It has been assumed that accessible access has been provided along a continuous accessible path of travel identified as part of the Accessibility Master Plan to the Ballet Rehearsal Room noted in this access report.

No comment is provided within this access report on the Accessible Path of Travel other than to identify the Path of Travel as relevant to the Ballet Rehearsal Room.



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1.8. Access requirements yet to be considered

The following access requirements have yet to be considered by the project team:

- handrail designs
- handrail locations
- balustrade designs
- tactile ground surface indicators (TGSIs)
- floor finishes
- nosing details to stairs
- lighting levels
- luminance contrast at doorways
- door hardware
- Braille tactile signage
- evacuation policy in conjunction with the fire engineered solution
- Lighting to the stairs of the eastern and western foyers
- Interior design (Detail)

1.9. Equitable Egress Strategy - NCC Clauses DP4 & DP6

The strategies for equitable egress to address compliance with the provisions of NCC Clauses DP4 & DP6 are being developed by ARUP.

For the purposes of our access assessment we have relied upon the Equitable Emergency Egress Report and the conclusions noted prepared by ARUP.

1.10. Accessible Path of Travel – Sydney Opera House

The provision of external accessible paths of travel are achieved as follows:

- Pedestrian accessible paths of travel are provided along the upper and lower concourses from the roundabout at the boundary with Macquarie Street.
- Authorised Vehicle and taxis access is provided from the boundary with Macquarie Street to the designated Principal Pedestrian Entrance,
- The Principal Pedestrian Entrance is located at the area identified as “Under the stairs” from which there are paths of travel to the respective lobbies, theatres, foyers and other facilities of the Sydney Opera House including the Ballet Rehearsal Room.

Accessible paths of travel within the Sydney Opera House are identified in the Accessibility Master Plan.



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2. BALLET REHEARSAL ROOM

The area of the new Ballet Rehearsal Room is identified by the plan following.

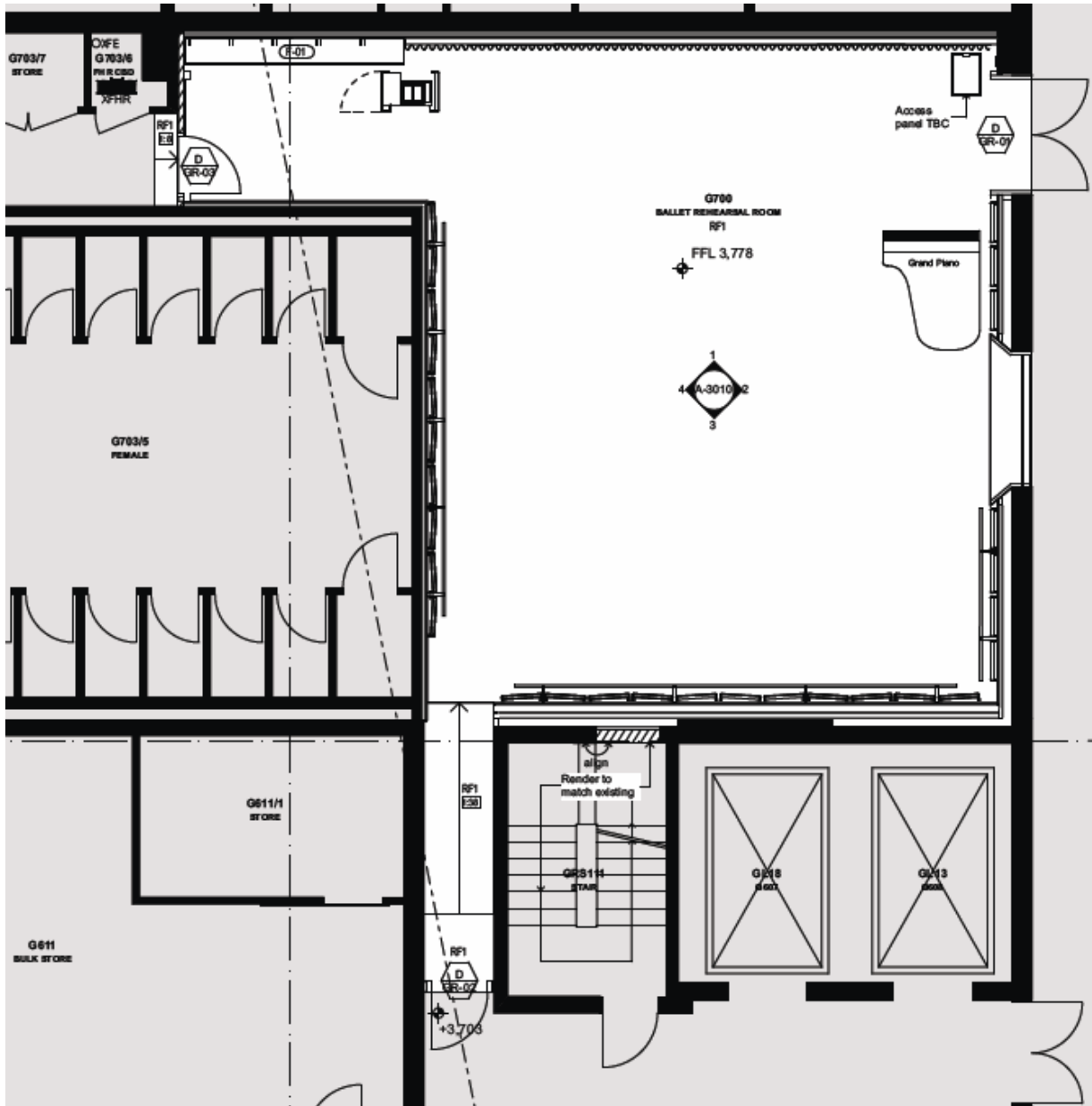


Figure 3 Ballet Rehearsal Room - Plan

The main access related issues relate to the following:

- Accessible access from the Western Foyers
- Accessible access to the Central Passage
- Access to WC facilities
- Wayfinding and signage
- Lighting levels



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3. EXCLUSION FROM SCOPE OF WORKS

The scope of these works is defined by the Figure 3 above. The following areas are specifically excluded from the scope and consideration of this report:

- The Western Foyers
- The Central Passage
- Lifts 13 & 18
- Public WC facilities located to the west of the Ballet Rehearsal Room.

4. ACCESSIBLE PATH OF TRAVEL

Accessible paths of travel are provided to both the Western Foyer and the Central passage.

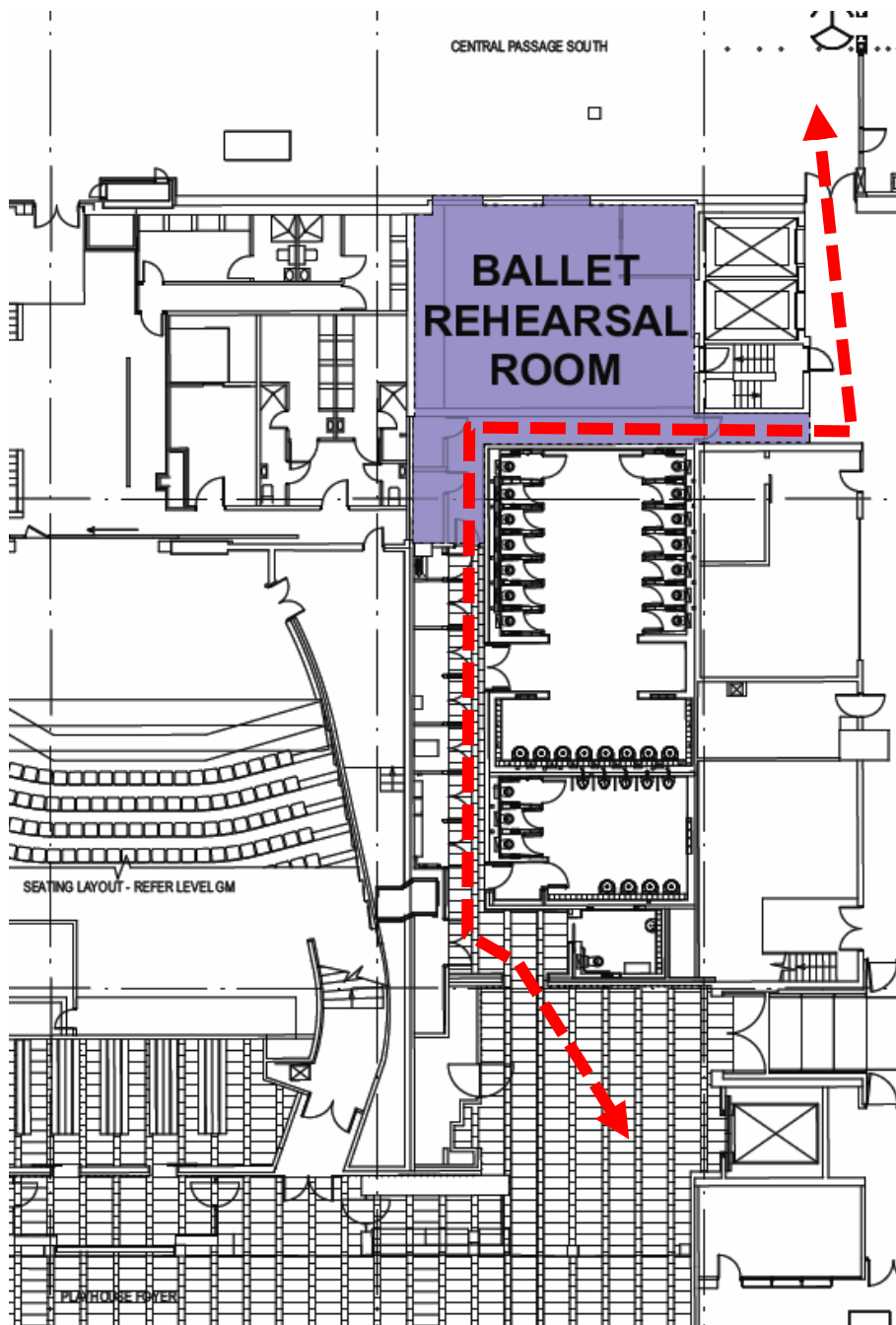


Figure 4 Ballet Rehearsal Room – Path of travel



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Accessible access from the change rooms located adjacent to the Green room is provided by the lifts connecting the Green room level with the Central Passage.

A door assist device is proposed to be installed to door GR-02 where reduced latchside clearances exits due to structural constraints.

A threshold ramp compliant to the provisions of AS1428.1:2001 is associated with door GR-03. A Performance Solution has been prepared to address the use of this form of threshold ramp.

5. WAYFINDING

An appropriate wayfinding system to navigate to the Ballet Rehearsal Room will need to be developed. The resultant solution may include audio as well as braille tactile information.

Wayfinding details have yet to be developed.

6. FLOOR FINISHES

It is intended that the flooring to the Ballet Rehearsal Room will be a sprung timber floor.

The works to the Ballet Rehearsal room involve the infilling of a void in the floor structure. As a result, there is a change in level in relation to the floor levels of the Western Foyer and the Central Passage. Transitions are addressed by way of a 1:38 walkway to the Lift Lobby and a 1:8 threshold Ramp to the Western Foyer.

7. LIGHTING

The following minimum lighting levels will need to be achieved to satisfy the requirements of AS1428.2:1992:

- Passageways and walkways 150lx

8. WC FACILITIES

Existing male, female and unisex accessible WC facilities are located to the west of the Ballet Rehearsal Room located off the passage connecting to the Western Foyer. These are public WC facilities. The proposed Ballet Rehearsal Room works do not impact on the function of these existing WC facilities.

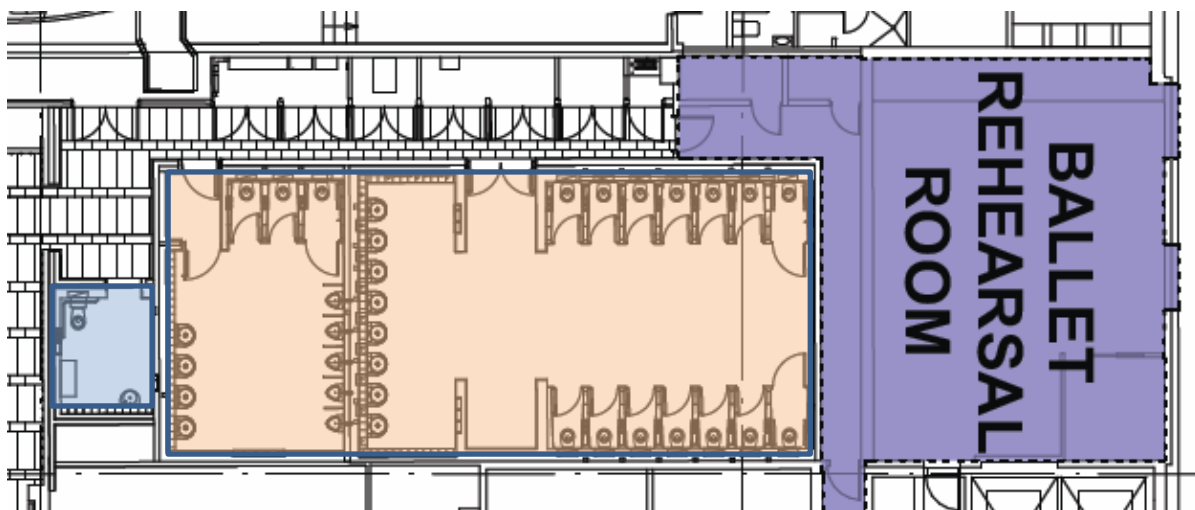


Figure 5 Ballet Rehearsal Room – WC Facilities



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9. DOORS

The design requires the provision of two pedestrian doors associated with the Accessible path of travel and a service door connecting directly to the Central Passage.

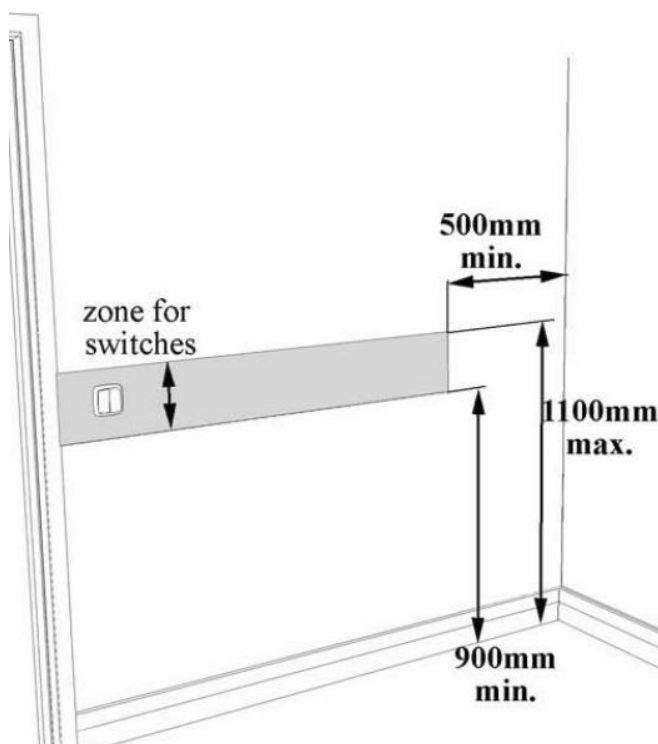
As door GR-03 is fitted with a door closer the maximum force to operate the door is not to be greater than 20N force.

As a result of the reduced latchside clearance to door GR-02 a door assist device is proposed to be installed. The operation of the door is to be by a push button. The size of the button is to be the large format mushroom style of button.

AS1428.1:2009 compliant lever door hardware is to be provided to the new doors.

10. SWITCHES AND ACCESS CONTROL

Any light switches, door release buttons or access control switches will need to be installed between 900-1100mm AFFL and not closer than 500mm to an internal corner.



11. HEARING AUGMENTATION

The design for the Ballet Rehearsal Room incorporates a built in TV screen.

As part of these works a hearing augmentation system satisfying to the provisions of NCC Clause D3.7 – Hearing Augmentation will need to be provided. It is expected that a portable FM or Infra-red system would provide the Sydney Opera House with maximum flexibility.

Details of the proposed hearing augmentation system will need to be provided as part of the construction documentation.

ACCESS REPORT – BALLET REHEARSAL ROOM

12. ACCESS REPORT

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE / ACTION / COMMENT
A4.1	Classifications Class 9b — an assembly building,	Note
DP1	Performance requirement Access must be provided, to the degree necessary, to enable: a) people to: i. approach the building from the road boundary and from any <i>accessible</i> carparking spaces associated with the building; and	Satisfied
	ii. approach the building from any accessible associated building; and	Not Applicable
	iii. access work and public spaces, accommodation and facilities for personal hygiene; and	Satisfied
	b) Identification of accessways at appropriate locations which are easy to find.	Satisfied
DP4	Performance requirement <i>Exits</i> must be provided from a building to allow occupants to evacuate safely, with their number, location and dimensions being appropriate to: a) the travel distance; and b) the number, mobility and other characteristics of occupants; and c) the function or use of the building; and d) the height of the building; and e) Whether the <i>exit</i> is from above or below ground level.	Satisfied

ACCESS REPORT – BALLET REHEARSAL ROOM

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE / ACTION / COMMENT
DP6	Performance requirement So that occupants can safely evacuate the building, <i>accessways to exits</i> must have dimensions appropriate to: <ul style="list-style-type: none"> a) the number, mobility and other characteristics of occupants; and b) the function or use of the building. 	Satisfied
DP8	Performance requirement Carparking spaces for use by people with a disability must be: <ul style="list-style-type: none"> a) provided, to the degree necessary, to give equitable access for carparking; and b) designated and easy to find. 	Not Applicable
DP9	Performance requirement An inbuilt communication system for entry, information, entertainment, or for the provision of a service, must be suitable for occupants who are deaf or hearing impaired.	Satisfied
D3.1	General Building Access Requirements Class 5	
Table D3.1	Assembly Building To and within all areas normally used by the occupants	Satisfied
D3.2	Access to Buildings	
	(1) An <i>accessway</i> must be provided:	Satisfied
	(a) to a building <i>required</i> to be <i>accessible</i> ;	
	(b) from the main points of a pedestrian entry at the allotment boundary; and	Satisfied
	I. from another <i>accessible</i> building connected by a pedestrian link; and	Not Applicable
	II. from any required accessible carparking space on the allotment.	Not Applicable


ACCESS REPORT – BALLET REHEARSAL ROOM

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE / ACTION / COMMENT
	<p>(2) In a building <i>required</i> to be <i>accessible</i>, an <i>accessway</i> must be provided through the principal pedestrian entrance, and:</p> <ul style="list-style-type: none"> a. through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and b. in a building with a total <i>floor area</i> more than 500sqm, a pedestrian entrance which is not <i>accessible</i> must not be located more than 50 m from an <i>accessible</i> pedestrian entrance; <p>Except for pedestrian entrances serving only areas exempted by clause D3.4.</p>	Satisfied
D3.3	Parts of buildings to be accessible	
	<p>In a building <i>required</i> to be <i>accessible</i>:</p> <p>a) every ramp and stairway, except for ramps and stairways in areas exempted by clause D3.4, must comply with:</p>	
	<ul style="list-style-type: none"> i. for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and 	Not Applicable
	<ul style="list-style-type: none"> ii. for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1; 	Not Applicable
	<ul style="list-style-type: none"> iii. for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1; 	Not Applicable
	b) every passenger lift must comply with clause E3.6;	Not Applicable
	<p>c) <i>accessways</i> must have:</p> <ul style="list-style-type: none"> i. passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an <i>accessway</i> where a direct line of sight is not available; and ii. turning spaces complying with AS 1428.1: <ul style="list-style-type: none"> A. within 2m of the end of <i>accessways</i> <i>where</i> it is not possible to continue travelling along the <i>accessway</i>; and B. at maximum 20 m intervals along the <i>accessway</i>; 	Not Applicable

ACCESS REPORT – BALLET REHEARSAL ROOM

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE / ACTION / COMMENT										
	d) an intersection of <i>accessways</i> satisfies the spatial requirements for a passing and turning space;	Satisfied										
	e) a passing space may serve as a turning space;	Satisfied										
	f) a ramp complying with AS 1428.1 or a passenger lift need not be provided to serve a <i>storey</i> or level other than the entrance <i>storey</i> in a Class 5, 6, 7b or 8 building- (i) containing not more than 3 <i>storeys</i> ; and (ii) with a <i>floor area</i> for each <i>storey</i> , excluding the entrance <i>storey</i> , of not more than 200sqm.	Not Applicable										
D3.5	Carparking	Not Applicable										
D3.6	Signage	<p>The signage documentation has yet to be prepared.</p> <p>The detail of the Braille Tactile signage to be installed will need to be documented as part of the detailed documentation associated with the Construction Documentation phase / stage.</p> <p>The signage detailing will need to comply with the provisions of Clause D3.6 and Specification D3.6 of the BCA as well as Clauses 16.3 and 17 of AS1428.2 which addresses the size of the pictogram as well as the height of lettering.</p> <p>16.3 Size of international symbols for access and deafness access The size of the international symbols for access and deafness access shall be not less than that given in Table 1.</p> <table><caption>TABLE 1 SIZE OF INTERNATIONAL SYMBOLS FOR ACCESS AND DEAFNESS FOR VARYING VIEWING DISTANCES</caption><tr><th>Required viewing distance m</th><th>Minimum size of symbol mm</th></tr><tr><td>≤7</td><td>≥ (60 x 60)</td></tr><tr><td>>7 ≤18</td><td>≥ (110 x 110)</td></tr><tr><td>>18</td><td>≥ (200 x 200)</td></tr><tr><td></td><td>≥ (450 x 450)</td></tr></table>	Required viewing distance m	Minimum size of symbol mm	≤7	≥ (60 x 60)	>7 ≤18	≥ (110 x 110)	>18	≥ (200 x 200)		≥ (450 x 450)
Required viewing distance m	Minimum size of symbol mm											
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>18	≥ (200 x 200)											
	≥ (450 x 450)											

ACCESS REPORT – BALLET REHEARSAL ROOM

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE / ACTION / COMMENT
D3.6	Signage	<p>Specific attention is directed to the requirements of Clause D3.6(a)(ii) of the BCA. Subject to the advice of Group DLA Braille Tactile Exit signage may be required to be installed with doors GR02 & GR-03.</p> <p>(ii) identify each door <i>required</i> by E4.5 to be provided with an <i>exit</i> sign and state—</p> <p>(A) "Exit"; and</p> <p>(B) "Level" followed by the floor level number; and</p> <p>The image below is an example of the type of Braille Tactile signage to be installed.</p> 
D3.7	Hearing Augmentation	<p>The plans indicate a TV screen to be built into the design of the ballet rehearsal Room.</p> <p>It is probable that a flexible portable hearing augmentation system will be most advantageous. It is recommended that a portable hearing augmentation policy be developed and that procedures be developed by the Opera House to address the management of this requirement.</p>
D3.8	Tactile Indicators	Not Applicable

ACCESS REPORT – BALLET REHEARSAL ROOM

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE / ACTION / COMMENT
D3.12	Glazing on an accessway On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with Clause 6.6 of AS 1428.1.	Not Applicable
Part D4	Braille & Tactile Signs	The detail of the Braille Tactile signage to be installed will need to be documented as part of the detailed documentation associated with the Construction Documentation phase / stage. The signage detailing will need to comply with the provisions of Clause D3.6 and Specification D3.6 of the BCA as well as Clauses 16.3 and 17 of AS1428.2 which addresses the size of the pictogram as well as the height of lettering.
Part E3	Lift Installation	Not Applicable
Part F2	Sanitary and other facilities	Not Applicable