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ACCESS REVIEW

PROPOSED GLOBAL SYDNEY SWITCH 2 - REVISED DESIGN PYRMONT STREET, ULTIMO NSW

REPORT NO ► 1321-15 ACCESS REV01
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PREPARED FOR ► GLOBAL SWITCH
PREPARED BY ► AE&D

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REVISION STATUS				
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EXECUTIVE SUMMARY AND RECOMMENDATIONS

This report provides a design review of the proposed Sydney 2 – Global Switch, located at Pyrmont Street, Ultimo). The primary purpose of this report is to identify the accessibility related non-compliances with the ‘deemed-to-satisfy’ requirements of the Building Code of Australia 2011 (BCA)¹ and associated Australian Standards in relation to the proposed works.

The development proposes the following accessibility features and facilities:

- Access will be provided through the principal public entrance at ground level to the reception areas.
- Interconnecting ramps shall be provided between the existing Global Switch 1, at level 2 and 3. The ramps will comply with BCA Clause D3.11.
- An accessible carparking space is provided within the designated carpark (which has less than 20 cars). The accessible car space appears to provide the required minimum width. Access to the building from the car space is via the main principal entrance via the footpath or via the rear dock and goods passageway.
- The building is provided with 4 lifts, 2 of which are passenger lifts and will be required to comply with BCA Part E3 in relation to accessibility. These lifts service all levels and provide the required access to all levels.
- The corridors through the building provide a clear width in excess of that required by the BCA and AS 1428.1-2009.
- Sanitary facilities will be provided on each level of the building as required by the BCA and AS 1428.1-2009.
- A breakout area is proposed at roof level, where access is to be provided via a passenger lift. Access will also be required to any common rooftop areas.

This is a preliminary report to demonstrate that compliance can be achieved with the BCA 2011 and AS 1428.1-2009.

¹ Australian Building Codes Board. “Building Code of Australia 2011”

1.0 INTRODUCTION

This report provides a design review of the proposed Sydney 2 – Global Switch, located at Pyrmont Street, Ultimo). The primary purpose of this report is to identify the accessibility related non-compliances with the 'deemed-to-satisfy' requirements of the Building Code of Australia 2011 (BCA) and associated Australian Standards in relation to the proposed works.

This report provides a Building Code of Australia 2011 (BCA) - Access compliance assessment of the design documentation provided for the proposed Global Sydney Switch 2 Extension, against the significant requirements of the BCA 2011.

The development comprises the construction of a major extension to the existing Global Sydney Switch Facility, located at 400 Harris Street, Ultimo NSW, which is located adjacent to an existing substation site as detailed below in Figure 1.0.



Figure 1.0: Existing and proposed Global Sydney Switch buildings

1.1 Basis of Report

The key basis of this report is to address compliance with the significant accessibility requirements of the Building Code of Australia (BCA) 2011. The scope of services is limited to Part D3, Clause F2.4 and Part E3 of the BCA (ie. those relating to access for people with disabilities).

This report is based on a desktop assessment of the Preliminary Design Prepared by DEM, with specific reference to the following:

- Architectural Plans prepared DEM – Drawing Numbers:
 - Drawing No ar-0200, Rev B02, dated 01/12/11 – Site Plan
 - Drawing No ar-1200, Rev B02, dated 01/12/11 – Floor Plan
 - Drawing No ar-1202 Rev B02, dated 01/12/11 – Floor Plan
 - Drawing No ar-1203 Rev B02, dated 01/12/11 – Ground Floor Plan
 - Drawing No ar-1204 Rev B02, dated 01/12/11 – First Floor Plan
 - Drawing No ar-1205, Rev B02, dated 01/12/11 – Second Floor Plan
 - Drawing No ar-1206 Rev B02, dated 01/12/11 – Third Floor Plan
 - Drawing No ar-1207 Rev B02, dated 01/12/11 – Fourth Floor Plan
 - Drawing No ar-1208 Rev B02, dated 01/12/11 – Fourth Floor Mezzanine Floor Plan
 - Drawing No ar-1209 Rev B02, dated 01/12/11 – Fifth Floor Plan
 - Drawing No ar-1211 Rev B02, dated 01/12/11 – Roof Plan
- The Building Code of Australia 2011 (BCA), prepared by the Australian Building Codes Board.
- The Guide to the BCA 2011, prepared by the Australian Building Codes Board.
- The report has been based on both of the sites identified in figure 1.0 above, being a single consolidated allotment of land.

The Disability (Access to Premises – Buildings) Standards 2010 commenced operation on 1 May 2011, in line with the adoption of the BCA 2011. The overall aim of the Premises Standards is twofold. First it is to provide the building and design industry with detailed information about how they can design and construct their buildings in a way that meets their responsibilities under the DDA. Second it is to improve access to buildings for people with a disability to ensure the greatest possible participation in the social, economic, cultural and political life of the community.

In general this Access Code tells those responsible for buildings when and where access is required and then refers to technical specification documents such as Australian Standard 1428.1-2009 to describe how to design and build in an accessible way.

1.2 Purpose of the Report

The purpose of this report is to assess the following:

- Assessment under the current Building Code of Australia 2011 and detail any significant departures from the BCA2011 in relation to accessibility.
- Provide recommendations to best address any significant departures from the requirements of BCA2011 in relation to accessibility.

1.3 Limitations of the Report

This report does not assess the following:

- The report is limited to a desktop assessment of the nominated development only and does not constitute assessment of the existing site limitations in any way. Assessment is strictly limited to those

works that have specifically been nominated within assessed documentation detailed in Section 1.1 of this report.

- This report does not provide any design advice and is limited to the provision of assessment of compliance with the BCA. The issues and matters identified by this report are to be considered by the design team for compliance with the BCA and any revision to the design must be carried out by the design team without advice from AE&D, other than for items of BCA compliance.
- Consideration of Energy Australia Design Requirements, which often exceed the minimum BCA requirements.
- Some requirements of the BCA are recognised as being interpretive in nature. Where these matters are encountered, interpretations are made in accordance with AE&D policy. Specific interpretations relevant to this assessment are included in Section 2.0 "BCA Assessment Data".
- Reporting on hazardous materials, OH&S matters or site contamination
- Assessment of mechanical plant operations, electrical systems or security systems
- Heritage significance
- Consideration of energy or water authority requirements
- Consideration of Council's local planning policies
- Environmental or planning issues
- Requirements of statutory authorities
- Pest inspection or assessment building damage caused by pests (general/visual pest invasion or damage will be reported, however invasive or intrusive inspections have not been carried out)
- Sections B "Structure" (subject to Structural Design) and "I" Maintenance" (superseded in NSW) of the BCA are not specifically assessed.
- Provision of any construction approvals or certification under Part 4A or Part 5 of the Environmental Planning & Assessment Act 1979.

1.4 The Building

The floor plans will not be repeated in this report. The relevant floor plans showing the size and type of building are shown in the plans listed within section 1.1 of this report.

1.5 BCA Assessment Data

Assessment data regarding the current Building Code of Australia:

BCA Building Classification/s:	Class 5 – Technical Data Areas Class 7b – Technical and other storage areas NB: Plant areas and the like have the same classification as the part of the building in which they are located.
Building rise in storeys:	7
Number of storeys contained:	8
Type of Construction:	A
General Floor area limitations:	Class 5 Parts - The building must have a floor area of not more than 8,000m ² and a volume of not more than 48,000m ³ Class 7b Parts - The building must have a floor area of not more than 5,000m ² and a volume of not more than 30,000m ³
Effective Height:	33.18m being greater than 25m but less than 50m.

BCA Assessment/Interpretation Notes:

- **Rise in Storeys** – assessed in accordance with C1.2 of the BCA, and it is noted that the roof breakout area is considered a storey.

- **The building has not been considered a ‘United Building’**, as this will require the existing building at 400 Harris Street to be considered as having an Effective Height of more than 25m. Therefore the buildings will be considered as two separate buildings on the same allotment of land.

1.6 Building Layout

The building comprises the following:

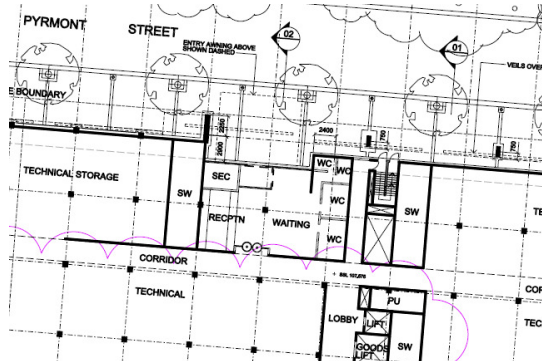
Level/Part	Approximate Occupant Numbers	Usage
Basement 1	Maximum 10-20	Plant and equipment
Ground Floor	Maximum 15-25	Technical data & storage space. Lobby and Reception areas
First Floor	Maximum 10-20	Technical data space.
Second Floor	Maximum 10-20	Technical data space.
Third Floor	Maximum 10-20	Technical data space.
Fourth Floor	Maximum 10-20	Technical data space.
Fifth Floor	0	Chillers and associated plant and equipment
Roof Level	20-30	Amenities and roof areas

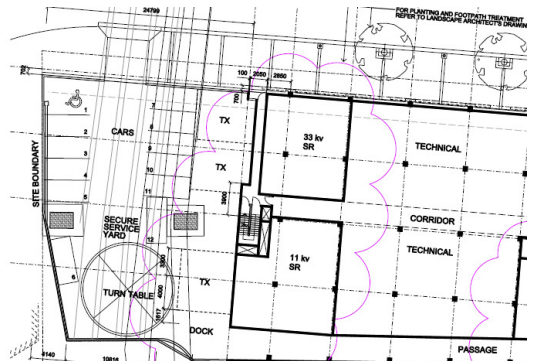
1.6 City of Sydney Council Access DCP

The building will achieve compliance with the Council DCP, as the building will comply with the BCA 2011.

TECHNICAL REVIEW ASSESSMENT SUMMARY (BCA)

The following table details the relevant accessibility provisions of the Building Code of Australia 2011 (BCA) compliance of the proposed facilities.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIANCE REQUIRED NA OR INFORMATIONAL DOES NOT COMPLY COMPLIES	COMMENTS
SECTION D		
ACCESS & EGRESS		
PART D3		
ACCESS FOR PEOPLE WITH DISABILITIES		
D3.1 <u>General building access requirements</u> Buildings and parts of buildings must be accessible as required by Table D3.1 as follows: <u>Class 5 & 7</u> - To and within all areas normally used by the occupants	X	<p>Access proposed via Pyrmont Street main entry, as detailed in the diagram below</p>  <p>The detailed design will demonstrate technical compliance with the Certification Stage.</p>
D3.2 <u>Access to Buildings</u> - An accessway must be provided to a building required to be accessible, from the main points of pedestrian entry at the allotment boundary and from any required accessible carparking space on the allotment. - Buildings required to be accessible, accessway through principal pedestrian entrance and not less than 50% of all entrances. - Doorways having multiple leaves, one leave must have clear opening of not less than 850mm in accordance with AS1428.1.	X	<p>All accessways will be compliant with AS 1428.1-2009. The corridors, doorways, pedestrian links and the like demonstrate high level compliance.</p> <p>The detailed design will demonstrate technical compliance with the Certification Stage.</p>
D3.3 <u>Parts of buildings to be accessible</u> In a building required to be accessible, - every ramp must comply with Clause 10 of AS1428.1 and every stairway must comply with Clause 11 of AS1428.1,	X	<p>All accessways will be compliant with AS 1428.1-2009. The corridors, doorways, pedestrian links and the like demonstrate high level compliance.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA OR INFORMATIONAL	COMPLIANCE REQUIRED	COMMENTS
- accessways must have passing spaces complying with AS1428.1 at max 20m intervals where a direct line of sight is not available.					The detailed design will demonstrate technical compliance with the Certification Stage.
<u>D3.4</u> <u>Exemptions</u> An area that access would be inappropriate because of the particular purpose for which the area is used is exempt from requiring to be accessible.			X		Non-accessible sanitary facilities and the cleaners store room are exempt, as are plant areas and storage tanks and the like.
<u>D3.5</u> <u>Accessible carparking</u> Accessible carparking spaces must be provided in accordance with Table D3.5 in a carparking area on the allotment and comply with AS2890.6. 1 space required per 100 provided.	X				The accessible carparking areas shown are considered appropriate and compliant. 
<u>D3.6</u> <u>Signage</u> Accessible buildings must have signage in accordance with AS1428.1 - <ul style="list-style-type: none"> - braille and tactile signage incorporating the international symbol of access or deafness to sanitary facilities and a space with hearing augmentation, - signage incorporating the international symbol of deafness to room with hearing augmentation identifying the type, the area covered and location of receivers, - signage to accessible sanitary facilities identifying left or right handed, - signage to ambulant accessible facility must be on the door, - directional signage where a pedestrian entrance is not accessible, - directional signage where sanitary facilities are not provided with an accessible facility. 				X	Details to form part of the construction documentation in relation to the proposed new facilities.
<u>D3.7</u> <u>Hearing augmentation</u> Hearing augmentation system must be provided where an inbuilt amplification system (other than emergency warning) is installed in a Class 9b building or ticket office and the like where public is screened from the service provider.			X		No hearing augmentation proposed or required.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	INFORMATIONAL	NA OR REQUIRED	COMMENTS
<u>D3.8</u> <u>Tactile Indicators</u> Accessible buildings must have TGSI's to warn blind or vision impaired people of approaching stairways, escalators, ramps (other than step or kerb ramp), any overhead obstruction less than 2m and an accessway meeting a vehicular way in accordance with AS1428.4.1				X	All accessways will be compliant with AS 1428.1-2009. The corridors, doorways, pedestrian links and the like demonstrate high level compliance. Tactile indicators to be shown in more detailed design stages. The detailed design will demonstrate technical compliance with the Certification Stage.
<u>D3.9</u> <u>Wheelchair seating spaces in Class 9b assembly buildings</u> Where fixed seating is provided in a Class 9b assembly building, wheelchair seating spaces complying with AS 1428.1 must be provided in accordance with Table D3.9.			X		No Class 9b part proposed.
<u>D3.10</u> <u>Swimming pools</u> Not less than one means of accessible water entry/exit in accordance with Spec D3.10 must be provided for each swimming pool required by Table D3.1 to be <i>accessible</i>			X		No swimming pool proposed.
<u>D3.11</u> <u>Ramps</u> On an accessway a series of connected ramps must not have a combined vertical rise of more than 3.6 m; and a landing for a step ramp must not overlap a landing for another step ramp or ramp.	X				No ramps proposed over 3.6m in rise.
<u>D3.12</u> <u>Glazing on an accessway</u> On an <i>accessway</i> , 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 AS 1428.1				X	Details to form part of the construction documentation where new full height glazing proposed.
<u>SPECIFICATION D3.6</u> <u>Part 2</u> <u>Braille and tactile signs</u> Signage must be designed and installed: - Braille and tactile located not less than 1.2m or greater than 1.6m, - Single line signs to have tactile characters not less than 1.25m or greater than 1.35m, - Signs identifying room features or facilities located on wall on the latch side of the door with edge of sign 50mm to 300mm from the architrave (or on the door itself is not possible adjacent to it).				X	Details to form part of the construction documentation.
<u>SPECIFICATION D3.6</u> <u>Part 3</u>				X	Details to form part of the construction documentation.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	INFORMATIONAL	NA OR REQUIRED	COMMENTS
<u>Braille and tactile sign specification</u> <ul style="list-style-type: none"> - Tactile characters to be raised or embossed to a height between 1mm and 1.5mm. - Sentence case must be used, with 15mm to 50mm high characters for capitals and 50% high for the lower case. - Tactile characters, symbols and the entire sign / frame to have rounded edges. - The entire sign including characters, background, negative space or fill of signs to be matt or low gloss finish, - Min. letter spacing to be 2mm, - Min. word spacing to be 10mm, - Thickness of letter strokes between 2mm and 7mm and of Arial typeface, - Tactile text to be left justified (excluding single words). 					
<u>SPECIFICATION D3.6</u> <u>Part 4</u> <u>Luminance contrast</u> <ul style="list-style-type: none"> - Background, negative space and fill to be min. 30% luminance contrast to the mounted surface, - Tactile characters, icons and symbols to be min. 30% luminance contrast to the background or mounted surface, - Luminance contrasts must be met under the lighting conditions of its surrounds. 				X	Details to form part of the construction documentation where new doors / doorways are proposed.
<u>SPECIFICATION D3.6</u> <u>Part 5</u> <u>Lighting</u> Braille and tactile signs must be illuminated to ensure luminance contrast requirements are met at all times during which the sign is required to be read.				X	Details to form part of the construction documentation.
<u>SPECIFICATION D3.6</u> <u>Part 6</u> <u>Braille</u> Braille must be: <ul style="list-style-type: none"> - Grade 1 braille (uncontracted) as per Australian Braille Authority, - Raised and domed, and left justified, - Located 8mm below bottom line of text, - Solid arrow, if arrow provided, - On signs with multiple lines, semicircular braille locator at the left margin must be horizontally aligned with the first line of braille text. 				X	Details to form part of the construction documentation.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA OR INFORMATIONAL	COMPLIANCE REQUIRED	COMMENTS
SECTION E					
SERVICES AND EQUIPMENT					
PART E3					
LIFT INSTALLATIONS					
<p><u>E3.6</u> <u>Passenger Lifts</u> In an <i>accessible</i> building, every passenger lift must— (a) be one of the types identified in Table E3.6a, subject to the limitations on use specified in the Table; and (b) have <i>accessible</i> features in accordance with Table E3.6b; and - (c) not rely on a constant pressure device for its operation if the lift car is fully enclosed.</p>				X	<p>Both passenger lifts must comply and appear to comply at this high level design review.</p> <p>Details to form part of the construction documentation.</p>
SECTION F					
HEALTH AND AMENITY					
PART F2					
SANITARY AND OTHER FACILITIES					
<p><u>F2.4</u> <u>Accessible sanitary facilities</u> In a building required to be accessible: - Accessible unisex sanitary compartments must be provided as per Table F2.4(a), - Accessible unisex showers must be provided as per Table F2.4(b), - A bank of toilets containing an accessible unisex sanitary compartment, a sanitary compartment suitable for a person with an ambulant disability must be provided for use by males and females, - an accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate disposal of sanitary towels, - circulation spaces, fixtures and fittings of all accessible sanitary facilities must comply with AS1428.1, - an accessible unisex facility must be located so that it can be entered without crossing an area reserved for one sex, - left and right handed mirror image facilities to be even where 2 or more accessible unisex facilities provided, - where male and female facilities are separate, a unisex facility is only required at one location,</p>				X	<p>The building is provided with at least one accessible sanitary facility at each level, except the basement, where access for people with disabilities is considered in inappropriate.</p> <p>The detail of fitout must comply with AS 1428.1-2009 and be detailed to form part of the construction documentation.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA OR INFORMATIONAL	COMPLIANCE REQUIRED	COMMENTS
<ul style="list-style-type: none"> - accessible unisex sanitary compartment or shower need not be provided on a storey that is not required to be provided with a lift or ramp access. <p>Table F2.4(a)</p> <ul style="list-style-type: none"> - containing compartments or where more than 1 bank of compartments provided, not less than 50% of those banks <p>Table F2.4(b)</p> <ul style="list-style-type: none"> - Class 5 not less than 1 per every 10 showers provided, 					



3.0 CONCLUSION & RECOMMENDATIONS

This report has provided a design review of the proposed Sydney 2 – Global Switch, located at Pyrmont Street, Ultimo). The primary purpose of this report is to identify the accessibility related non-compliances with the 'deemed-to-satisfy' requirements of the Building Code of Australia 2011 (BCA)² and associated Australian Standards in relation to the proposed works.

Subject to the recommendations contained in this report, as summarized below, the proposed design can readily comply with the relevant requirements of the BCA.

- The detailed design must detail compliant circulation spaces to and within the building.
- Grades of ramps that link the buildings are to be confirmed and form part of the construction documentation.
- Details of signage in relation to the proposed new facilities to form part of the construction documentation.
- Details indicating tactile indicators, to form part of the construction documentation.
- Details relating to full height glazing to form part of the construction documentation where glazing is proposed.
- Details relating to illuminance contrast to form part of the construction documentation where new doors / doorways are proposed.
- Details relating to the layouts and fixtures and fittings within proposed accessible and ambulant facilities in accordance with AS1428.1-2009 are to form part of the construction documentation.
- Circulation spaces to doorways to comply with the circulation requirements of AS1428.1-2009.
- Detail to proposed provision for access through security features are to form part of the construction documentation.

Where a building solution does not comply with the Deemed to Satisfy Provisions of the BCA, Alternative Solutions can be developed to meet the Performance Requirements.

 <p>Report by: Anthony Banham DIRECTOR for AE&D Access</p> <p>Associate Member – AACA BPB Access Advisory Committee Member Accredited Certifier / PCA (Building) - Grade A1 (Unrestricted) BPB 0020</p>	 <p>Reviewed By: Nathan Halstead for AE&D Access</p> <p>MAIBS, Grad Dip Fire Eng (VU), M Build Surv (UWS) Accredited Certifier/PCA (Building) - Grade A1 AIBS National - Accredited Building Surveyor</p>
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² Australian Building Codes Board. "Building Code of Australia 2011"