



STEVE WATSON
& PARTNERS

Victoria Cross Over Station Development

BCA Assessment Report

Report 2019/0506 R1.4

Prepared for Lendlease
July 2019



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SWP Quality System

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Author: Joshua Hawke (B. Const Tech & Grad Dip. B Surv)
Verifier: Anthony Ljubicic (A1 Accredited Certifier - BPB 0233)

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Author: Joshua Hawke (B. Const Tech & Grad Dip. B Surv)
Verifier: Anthony Ljubicic (A1 Accredited Certifier - BPB 0233)

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Revision Details: Updated report to document changes after 3rd party reviews
Author: Joshua Hawke (B. Const Tech & Grad Dip. B Surv)
Verifier: Anthony Ljubicic (A1 Accredited Certifier - BPB 0233)

Disclaimer:

This report is based on a desktop audit of preliminary documentation only.
Details contained in the report address issues of significance to broad BCA compliance relevant to this stage of design resolution.

This report is based on a review of the design documentation only. It represents a compliance report for “documentation to this point in time” and will be subject to amendment and expansion as project documentation develops



Executive Summary

This report has been prepared to accompany a detailed State Significant Development (SSD) development application (DA) for a commercial mixed-use Over Station Development (OSD) above the new Sydney Metro Victoria Cross Station. The detailed SSD DA is consistent with the Concept Approval (SSD 17_8874) granted for the maximum building envelope on the site, as proposed to be modified.

The Minister for Planning, or their delegate, is the consent authority for the SSD DA and this application is lodged with the NSW Department of Planning, Industry and Environment (NSW DPIE) for assessment.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 6 May 2019.

This report has also been prepared in response to the conditions of consent for the State Significant Development Concept (SSD 8874) for the OSD,

The detailed SSD DA seeks development consent for:

- Construction of a new commercial office tower with a maximum building height of RL 230 or 168 metres (approximately 42 storeys).
- The commercial tower includes a maximum GFA of approximately 61,500sqm, excluding floor space approved in the CSSI
- Integration with the approved CSSI proposal including though not limited to:
 - Structures, mechanical and electronic systems, and services; and
 - Vertical transfers;
- Use of spaces within the CSSI 'metro box' building envelope for the purposes of:
 - Retail tenancies;
 - Commercial office lobbies and space;
 - 161 car parking spaces within the basement for the purposes of the commercial office and retail use;
 - End of trip facilities; and
 - Loading and services access.
- Utilities and services provision.
- Signage locations (building identification signs).
- Stratum subdivision (staged).

The Site

The site is generally described as 155-167 Miller Street, 181 Miller Street, 187-189 Miller Street, and part of 65 Berry Street, North Sydney (the site). The site occupies various addresses/allotments and is legally described as follows:

- 155-167 Miller Street (SP 35644) (which incorporates lots 40 and 41 of Strata Plan 81092 and lots 37, 38 and 39 of Strata Plan 79612)
- 181 Miller Street (Lot 15/DP 69345, Lot 1 & 2/DP 123056, Lot 10/DP 70667)
- 187 Miller Street (Lot A/DP 160018)
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- Formerly part 65 Berry Street (Lot 1/DP 1230458)

Figure 01 – Site Aerial



Sydney Metro Description

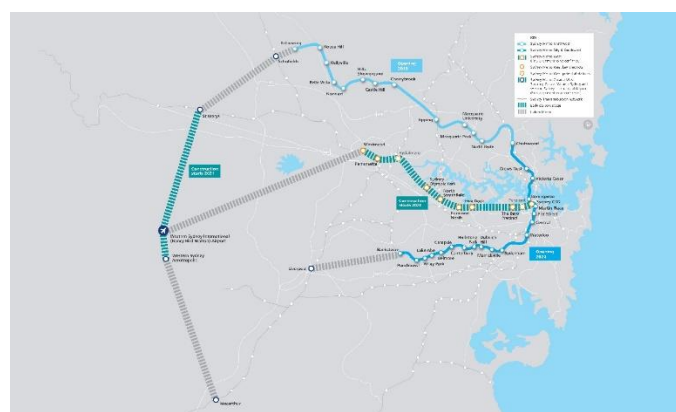
Sydney Metro is Australia's biggest public transport project. Services started in May 2019 in the city's North West with a train every four minutes in the peak. Metro rail will be extended into the CBD and beyond to Bankstown in 2024. There will be new metro railway stations underground at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Waterloo and new metro platforms under Central.

In 2024, Sydney will have 31 metro railway stations and a 66km standalone metro railway system – the biggest urban rail project in Australian history. There will be ultimate capacity for a metro train every two minutes in each direction under the Sydney city centre. The Sydney Metro Project is illustrated in the Figure below.

On 9 January 2017, the Minister for Planning approved the Sydney Metro City & Southwest - Chatswood to Sydenham project as a Critical State Significant Infrastructure project (reference SSI 15_7400) (CSSI Approval). The terms of the CSSI Approval includes all works required to construct the Sydney Metro Victoria Cross Station, including the demolition of existing buildings and structures on both sites. The CSSI Approval also includes construction of below and above ground works within the metro station structure for appropriate integration with the OSD.

With regards to CSSI related works, any component of the detailed design that is contained within the "metro box envelope" and public domain will be pursued in satisfaction of the CSSI conditions of approval and do not form part of the scope of the detailed SSD DA for the OSD.

Figure 02 – Sydney Metro Alignment Map



Source: Sydney Metro



An assessment of the proposed design of the over station development described above has been undertaken against the Deemed-to-Satisfy (DTS) provisions of the relevant sections of the Building Code of Australia and the applicable Building Regulations.

This report details the non-compliances identified that can be satisfied through means of a performance solution, to satisfy the Performance Requirements of the BCA.

Summary of BCA Parameters:

Building Use:	Podium & Commercial Office Space, Retail & Basement Car parking
Class of Occupancy	Class 5, 6 & 7a
Type of Construction Required	Type A
Rise Storeys:	44 Storeys
Number of Storeys:	55 Storeys
Effective Height:	164.55m (Level 41 RL224.3 - Level 00 Denison Street RL 59.75)

SSDA OSD Areas

The following are the main issues proposed to be addressed by the Fire Safety Engineer via a Performance Solution:

1. Protection of openings associated with the property boundaries (Clause C3.2);
2. Extended travel distances throughout the building – Distance to a point of choice, Distance to the nearest exit and distance between alternative exits (Clause D1.4 & D1.5);
3. A reduced egress width to the mid-rise office levels (Clause D1.6);
4. Discharge provisions associated with fire isolated exits (Clause D1.7); and
5. The location and access provisions associated with the fire control room (Clause E1.8); and

CSSI 'metro-box' areas forming part of the OSD uses

1. Rationalisation to building FRLs (Clause C1.1);
2. Single exit to the podium office building to where 2 exits are technically required (Clause D1.2);
3. Extended travel distances throughout the building – Distance to a point of choice, Distance to the nearest exit and distance between alternative exits (Clause D1.4 & D1.5);
4. Reduced egress width through occupant barriers to the OSD lift lobby (Clause D1.6);
5. Discharge provisions associated with fire isolated exits (Clause D1.7);
6. Use of a discontinuous stair as a means of travel within the plant areas (Clause D1.9);
7. Operation of the main entries to the OSD lobby being push to exit in lieu of failing open (Clause D2.19);
8. Omission of Fire Hose Reels to the small retail tenancies (Clause E1.4);
9. Omission of separation requirements between sprinkler protected and non-sprinkler protected areas (Clause E1.5);
10. The location and access provisions associated with the fire control room (Clause E1.8); and
11. Implementation of non-conforming smoke hazard management systems (Clause E2.2 & Spec E2.2a & Associated Standards).



The design is capable of complying with the requirements of the relevant sections of the Environmental Planning Assessment Act 1979, the Environmental Planning and Assessment Regulations 2000 and the Building Code of Australia 2019. Compliance is subject to resolution of the identified areas of non-compliance and compliance with the recommendations provided within the report.

Further detailed regulatory reviews will need to be progressively undertaken as designs advance and become more resolved to ensure compliance is achieved.

Whilst not precluding the issue of a Construction Certificate, it is noted that many detailed design issues are not indicated on the drawings. These issues are designated “Compliance Readily Achievable” in the “*Status*” column of the assessment in Section 14 of the report and should be resolved prior to construction.



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1. Introduction

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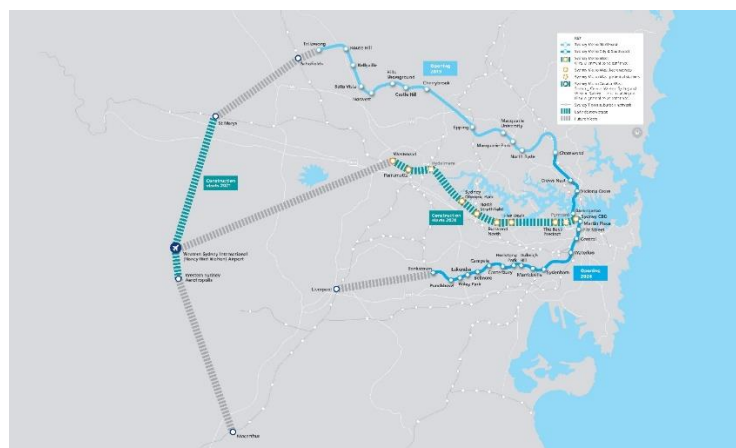
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With regards to CSSI related works, any component of the detailed design that is contained within the "metro box envelope" and public domain will be pursued in satisfaction of the CSSI conditions of approval and do not form part of the scope of the detailed SSD DA for the OSD.

Figure 02 – Sydney Metro Alignment Map



Source: Sydney Metro



2. Purpose

The purpose of this report is to provide an assessment of the design documentation against the current requirements of the BCA.

The assessment is undertaken for the purpose of, and to the extent necessary for, submission to the Department of Planning & Environment under a state Significant Development (SSD) development application (DA) for a commercial mixed-use Over Station Development (OSD) above the new Sydney Metro Victoria Cross Station.

3. Scope and Limitations

3.1. Scope

The scope of this assessment is limited to the the design documentation referenced in Appendix A of this report.

3.2. Limitations

The following limitations apply to the assessment:

- The report considers matters of a significant nature only and should not be considered exhaustive.
- The plans are assessed to the extent necessary to issue a construction certificate under Part 6 of The Act. This means the design has been assessed to be capable of complying with the BCA without necessarily having all the detailed design completed at this stage.
- Details in regard to access for people with disabilities have been assessed to the extent of the deemed-to-satisfy provisions of the BCA/Premises Standard only. A detailed assessment against AS 1428 series, AS/NZS 2890.6 – 2009 and AS 4299 – 1995 is outside the scope of this report
- Generally, the assessment does not incorporate a detailed assessment of the requirements of the Australian Standards.
- Structural and services documentation have not been reviewed.
- Appraisals are limited to the provisions of the BCA and the Premises Standards. Other legislative requirements have not been considered. It does not address additional or specific requirements stipulated under other areas such as Safety in Design, Construction Safety, Disability Discrimination, Planning and Environment, Occupational Health and Safety, Health, Dangerous Goods, etc, which may impact on the design and use of the building. It is recommended that appropriate advice from suitably qualified consultants should be obtained for further information on these areas.

4. National Construction Code 2019 –Volume 1: Building Code of Australia Class 2 to Class 9 Buildings

The National Construction Code (NCC) is a uniform set of technical provisions for the design and construction of buildings, structures and plumbing/drainage systems which is separated into 3 volumes. Volume 1 of the NCC is the Building Code of Australia (BCA) for Class 2 to 9 buildings which is the document to which the assessment in this report has been undertaken against. The BCA is legislated under The Act and specifies the Performance Requirements for the design and construction of Class 2 to 9 buildings that must be satisfied to achieve compliance. The Performance Requirements can only be satisfied by a Performance Solution, Deemed-to-Satisfy (DTS) solution or a combination of both.



5. Performance Solutions

The BCA is written in a performance format which allows performance based buildings. This has allowed for innovation and variation from the prescriptive deemed-to-satisfy requirements of the BCA, whilst maintaining the principle levels of health, safety and amenity of building occupants.

Performance solutions are generally adopted when a nominated deemed-to-satisfy provision appears inappropriate for the design, or when a proposed design varies from the prescriptive requirements of the BCA. Subsequently, a performance solution supported by Fire Engineering analysis can determine whether a proposed design that varies from prescriptive requirements, will satisfactorily meet the performance provisions of the BCA. Ultimately, it is with the discretion of the relevant building surveyor whether to accept a deviation from the prescriptive code requirements.

Utilising the performance provisions may result in more economical and safer building, however alternative solutions may require additional on-going maintenance. It is in this instance that all parties, such as the building owner, insurance companies, proposed tenants, etc., are aware of this decision making process and are kept informed of any additional requirements needed to maintain the level of safety.

6. Statutory Framework

The following table summarises the key statutory issues relating to fire safety and the BCA in relation to the certification of new building works.

Issue	Legislative reference	Comment
New Work	EPAR 145	All new works must comply

6.1. New Work

Clause 145 of the EPAR requires that all new work comply with the current requirements of the BCA.

This means that all works proposed in the plans are required to comply but that existing features of an existing building need not comply with the BCA unless required to under other clauses of the legislation.

7. Methodology

7.1. Process adopted

The following method of assessment has been used in the preparation of this report:

- 1) Determine the basic assessment data for the building.
- 2) Assess the design of the building against the current Deemed-to-Satisfy requirements of Sections B, C, D, E, F, G, H and J of the BCA. Establish the status of each clause into the following categories:
 1. Clause is administrative information only (**Noted**);
 2. Clause is or is not relevant to the proposed work (**Applicable or N/A**)
 3. The proposed work complies with the requirements of the clause (**Complies**);
 4. Compliance with the requirements of the clause is unable to be determined from the documentation provided (**Compliance Readily Achievable**). A recommendation in the "Comments" column will indicate what is required to achieve compliance. The design and construction teams are responsible to ensure compliance is achieved;
 5. Compliance with the requirements of the clause is unable to be determined from the documentation provided. Additional details or relevant information required to verify compliance (**Additional Details Required**);



6. Proposed work does not comply with the requirements of the clause **(Does Not Comply)**. An indication will be given in the Comments field as to the nature of the issue and whether an alternative solution has been proposed to address the issue;
7. Proposed work is to be addressed on a performance basis via an Alternative Solution satisfying the relevant Performance Requirements. **(Performance Solution)**;
- 3) Nominate the status of the design against each BCA requirement;
- 4) Provide comments against each BCA requirement as appropriate.

8. Description of Proposed Development

The detailed SSD DA seeks development consent for:

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9. Assessment Data Summary

The following basic assessment data has been drawn from the provisions of the BCA2016 (Amendment 1) for the CSSI 'metro-box' areas forming part of the OSD uses & BCA 2019 for SSDA OSD Areas.

9.1. Assumptions

Assumptions that have been made in the preparation of this report are listed below:

1. Due to the transitional period applicable for section J it has been assumed that a substantial construction certificate will be applied for and as such will lock in the BCA 2016 (amendment 1) version of section J for the project;
2. Bicycle parking has been determined to fall outside the requirements associated with a class 7a due to its definition. As such the bicycle parking is considered to be a Class7b (Storage);
3. Populations and restrictions for retail premises have been provided by correspondence issued by Lendlease on the 29th May 2019; and
4. The shortfall associated with the patron and staff numbers is proposed to be absorbed by amenities provided within retail tenancy 27 per the retail amenity strategy prepared by Lendlease dated May 2019.

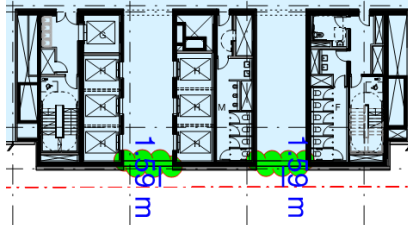
9.2. Interpretations

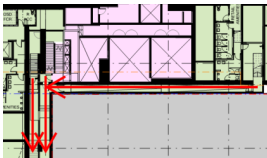
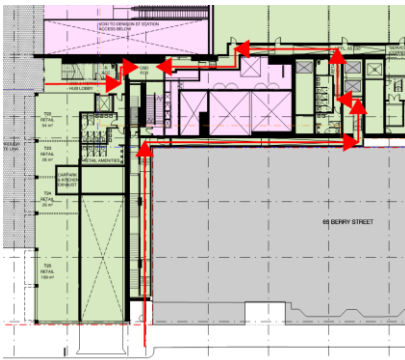
A number of issues within the BCA are recognised to be interpretive in nature. Where these issues are encountered, interpretations are made that are consistent with Standard Industry Practise and/or Steve Watson & Partners policy formulated in regard of each issue.

10. Issues Requiring Resolution

10.1. Performance solutions required – SSDA OSD Areas – Commercial Tower

It is proposed to satisfy the following non-compliances via performance solutions:

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
1.	Protection of openings in external walls	C3.2	<p>Unprotected glazed elements are proposed to service the eastern façade associated with the lift lobbies on levels 16 – 39 that are located within 3m (1.55m) of a fire source feature (site boundary).</p>  <p><i>Note – All other openings within proximity to fire source features are being protected by a method documented within clause C3.4 and as such will comply</i></p>	CP1, CP2 & CP8
2.	Exit Travel Distances	D1.4	<p>The following travel distances are applicable to all of the buildings associated within the OSD. These distances are required to be implemented within a performance solution addressed by the projects fire engineer:</p> <ul style="list-style-type: none"> 30m to a Point of Choice / Exit in lieu of 20m <p>The following travel distances are applicable to the OSD. These distances are required to be implemented within a performance solution addressed by the projects fire engineer:</p> <ul style="list-style-type: none"> 60m to the nearest available exit through a point of choice in lieu of 40m. <p><i>Please note that these distances occur throughout the development and take into consideration a single tenant per floor.</i></p>	DP4 & EP2.2
3.	Distance Between alternative exits	D1.5	<p>The following travel distances are applicable to the OSD. These distances are required to be implemented within a performance solution addressed by the projects fire engineer:</p> <ul style="list-style-type: none"> 90m between alternative exits in lieu of 60m <p><i>Please note that these distances occur throughout the development and take into consideration a single tenant per floor.</i></p>	DP4 & EP2.2
4.	Dimensions of exits and paths of travel to exits	D1.6	<p>The following levels currently are not provided with an adequate means of egress width and are required to be addressed through the projects fire engineer-</p> <ul style="list-style-type: none"> Mid Rise – Levels 16 to 28 (0.5m short in width) 	DP4 & DP6
5.	Travel Via Non-Fire Isolated Exits	D1.7	<p>The following elements of discharge are required to be documented as part of a performance solution through the projects fire engineer:</p> <ul style="list-style-type: none"> The OSD discharge path currently converges with the paths of 	DP4, DP5 & EP2.2

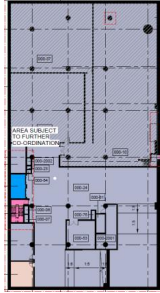
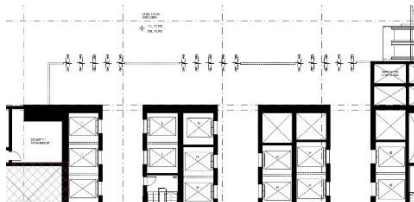
Item	Non-Compliance	DTS Clause	Description	Performance Requirement
			<p>discharge from the rising and descending separating paths associated with both the station and podium buildings. As such the discharge is provided with ultimately 5 paths in → 2 paths out.</p> 	
6.	Fire Control Room	E1.8 & Spec E1.8	<p>The following performance solutions are proposed to be addressed by the projects fire engineer:</p> <ul style="list-style-type: none"> Access to the fire control room requires FRNSW personnel to traverse a level change of greater than 300mm (approx. 600mm); and The path of travel to the OSD undertaken outside the provisions considered in clause 8 of specification E1.8. Access is not provided technically from the front entrance of the OSD entry and is not provided with a consistent access via a fire isolated passageway/stair. 	EP1.6 & DP6

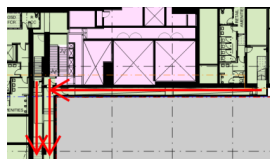
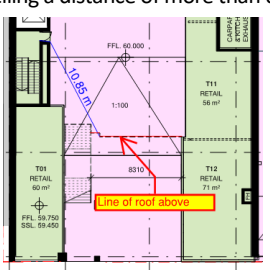
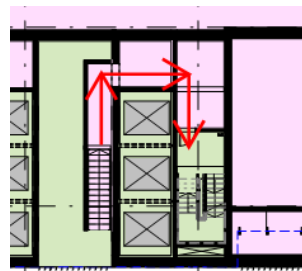
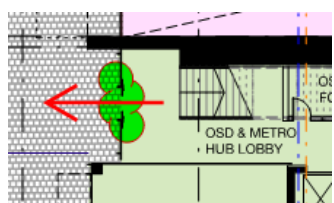
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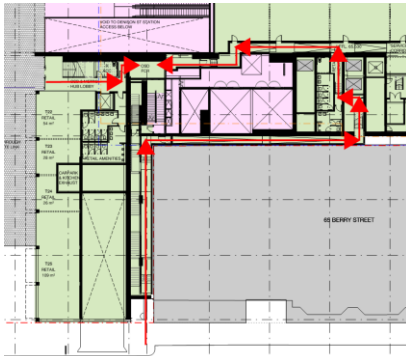
It is proposed to satisfy the following non-compliances via performance solutions:

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
1.	Fire Resisting Construction	C1.1, C2.8, C2.10, C3.12 & Spec C1.1	<p>The following performance solutions are required to be considered through the projects fire engineer-</p> <ul style="list-style-type: none"> A reduction in FRLs are proposed to the separating elements / walls and floors of the class 6 southern laneway building, Miller street retail and Denison Street Concourse of the building from 180/180/180 down to 120/120/120; Basement level 2 is provided with means of bicycle parking facilities. These facilities have a floor area which is greater than 10% of the total floor area and as such is considered to be classified as a class 7b. A reduced FRL is required to be undertaken of 4hrs down to 2hrs 	CP1, CP2 & CP8



Item	Non-Compliance	DTS Clause	Description	Performance Requirement
				
2.	Number of Exits Required	D1.2	<p>The following areas are provided with a single exit in lieu of 2 as required by a building with an effective height of greater than 25m:</p> <ul style="list-style-type: none"> The Podium office building 	DP4 & EP2.2
3.	Exit Travel Distances	D1.4	<p>The following travel distances are applicable to all of the buildings associated within the CSSI metro-box areas forming part of the OSD uses. These distances are required to be implemented within a performance solution addressed by the projects fire engineer:</p> <ul style="list-style-type: none"> 30m to a Point of Choice / Exit in lieu of 20m <p>The following travel distances are applicable to the buildings associated within the CSSI metro-box areas forming part of the OSD uses. These distances are required to be implemented within a performance solution addressed by the projects fire engineer:</p> <ul style="list-style-type: none"> 60m to the nearest available exit through a point of choice in lieu of 40m. <p><i>Please note that these distances occur throughout the development and take into consideration a single tenant per floor.</i></p>	DP4 & EP2.2
4.	Distance Between alternative exits	D1.5	<p>The following travel distances are applicable to the buildings associated within the CSSI metro-box areas forming part of the OSD uses. These distances are required to be implemented within a performance solution addressed by the projects fire engineer:</p> <ul style="list-style-type: none"> 90m between alternative exits in lieu of 60m <p><i>Please note that these distances occur throughout the development and take into consideration a single tenant per floor.</i></p>	DP4 & EP2.2
5.	Dimensions of exits and paths of travel to exits	D1.6	<p>The following levels currently are not provided with an adequate means of egress width and are required to be addressed through the projects fire engineer-</p> <ul style="list-style-type: none"> All required paths of egress are required to achieve a width of no less than 1000mm. The gates currently providing egress into and out of the lift lobby located on level 2 achieve a width of 900mm. 	DP4 & DP6
6.	Travel Via Non-Fire Isolated Exits	D1.7	<p>The following elements of discharge are required to be documented as part of a performance solution through the projects fire engineer:</p> <ul style="list-style-type: none"> The OSD discharge path currently converges with the paths of discharge from the rising and descending separating paths associated with both the station and podium buildings. As such the discharge is provided with ultimately 5 paths in → 2 	DP4, DP5 & EP2.2

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
			<p>paths out.</p>  <ul style="list-style-type: none"> The fire isolated stair serving the basement levels currently discharges within the confines of the building on level 00 Denison Street is not considered more than 1/3 open and requires travelling a distance of more than 6m (11 metres) 	
7.	Travel by non-fire-isolated stairways or ramps	D1.9	<p>The non-fire isolated stair which services the level 3 plant room currently discharges onto the confines of level 4 mezzanine which then requires the occupants to traverse along until they reach the fire isolated exit. This stair therefore presents occupants with a discontinuous means of travel to an exit.</p> 	DP4 & EP2.2
8.	Doorways & Doors	D2.19	<p>The automatic sliding doors extracted below are proposed to be installed at the ground floor main entry to the commercial lobby. These doors are required to be opened manually under a force of not more than 110N and be fitted with a fail-safe device if the door is power operated.</p>  <p>Due to security reasoning the doors are not proposed to fail open upon trip of the relevant active fire systems however the installation of a push to button exit accompanied by a battery backup source is proposed to be installed.</p>	DP2
9.	Fire Hose Reels	E1.4	An omission of fire hose reels to service the smaller retail tenancies is proposed throughout the development	EP1.1
10.	Sprinklers	E1.5	The following performance solutions apply to the proposed design of the sprinkler system and are required to be documented as part of a performance solution:	EP1.4

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
			<ul style="list-style-type: none"> Omission of the 2 hour fire separation between sprinkler & non-sprinkler protected areas (Denison Street Concourse Retail & The Metro Station / Concourse) 	
11.	Fire Control Room	E1.8 & Spec E1.8	<p>The following performance solutions are proposed to be addressed by the projects fire engineer:</p> <ul style="list-style-type: none"> Access to the fire control room requires FRNSW personnel to traverse a level change of greater than 300mm (approx. 600mm); and The path of travel to the OSD undertaken outside the provisions considered in clause 8 of specification E1.8. Access is not provided technically from the front entrance of the OSD entry and is not provided with a consistent access via a fire isolated passageway/stair. 	EP1.6 & DP6
12.	Smoke Hazard Management	E2.2 & Spec E2.2a	<p>It is recommended to liaise with the project's fire engineer to determine any scope in terms of opportunities for performance solutions in relation to smoke hazard management systems. SWP consider that the following performance solutions are to be considered by the projects fire engineer:</p> <ul style="list-style-type: none"> Omission of the zone smoke control to the level 00 (Miller Street & Denison Street) retail precincts; and Omission of zone smoke control to the southern laneway building. 	EP2.2

11. Relevant Authorities

Where an alternative solution is proposed to meet the performance requirements contained in any one or more of the Category 2 fire safety provisions referral to Fire and Rescue NSW under Clause 144 of the EP&A Regulations is required in either of the following types of buildings:

- (a) a class 9a building that is proposed to have a total floor area of 2,000 square metres or more, or
- (b) a building (other than a class 9a building) that is proposed to have:
 - (i) a fire compartment with a total floor area of more than 2,000 square metres, or
 - (ii) a total floor area of more than 6,000 square metres,

12. Statutory Fire Safety Measures

All fire/essential safety measures installed within the building are required required to be certified upon completion of the project and prior to occupation of the building by the owner of the building, by issuing a Final Fire Safety Certificate under the Act.

The owner is also required under the Act to certify each of the Fire Safety Measures annually by issuing a Fire Safety Statement.



With performance solutions, additional or more frequent maintenance may result.

13. Conclusion

The design is capable of complying with the requirements of the relevant sections of the of the Act and EPAR and the BCA 2019 (SSDA OSD AREAS – COMMERCIAL TOWER) & BCA 2016 (Amendment 1) (CSSI 'METRO-BOX AREAS FORMING PART OF THE OSD USES) subject to resolution of the identified areas of non-compliance and compliance with the recommendations provided within the report.

Further detailed regulatory reviews will need to be progressively undertaken as designs advance and become more resolved to ensure compliance is achieved.



14. BCA 2019 – Clause by Clause Assessment

Clause	Description	Comment	Status																		
BCA Version																					
BCA 2019	BCA version The BCA is generally updated every 3 years with amendments influencing health, safety and amenity features required within the building. Legislation typically allows future BCA changes to be ignored provided substantial progress on the design of the development has previously occurred.	This report assumes that the applicable BCA version is BCA 2019. In addition, requirements of the Premises Standards (PS) are covered as relevant.	Noted																		
Section A: General Provisions																					
A5.2	Suitability of materials Every part of a building must be constructed in an appropriate manner to achieve the requirements of the BCA, using materials that are fit for the purpose for which they are intended.	The builder is responsible to adopt and install appropriate proprietary accredited building products and is to ensure that those products/assemblies are fit for the purpose they are intended and are installed in accordance with the manufacturer’s specifications/ requirements for that system.	Compliance readily achievable																		
A6	Classification and usage Usage on each level of the building is as follows: <table><thead><tr><th>LEVEL</th><th>USE</th><th>CLASS</th></tr></thead><tbody><tr><td>Level 00 – Denison Street</td><td>Retail & Metro Station Entrance</td><td>6 & 9b</td></tr><tr><td>Level 00 – Miller Street</td><td>Retail & Metro Station Entrance</td><td>6 & 9b</td></tr><tr><td>Level 1</td><td>Podium Office Space & Retail</td><td>5 & 6</td></tr><tr><td>Level 2</td><td>Podium office Space, Retail & Metro community hub</td><td>5, 6 & 9b</td></tr><tr><td>Level 3 through to level 41</td><td>Podium Office, OSD Commercial office space & Plant</td><td>5</td></tr></tbody></table>	LEVEL	USE	CLASS	Level 00 – Denison Street	Retail & Metro Station Entrance	6 & 9b	Level 00 – Miller Street	Retail & Metro Station Entrance	6 & 9b	Level 1	Podium Office Space & Retail	5 & 6	Level 2	Podium office Space, Retail & Metro community hub	5, 6 & 9b	Level 3 through to level 41	Podium Office, OSD Commercial office space & Plant	5		Noted
LEVEL	USE	CLASS																			
Level 00 – Denison Street	Retail & Metro Station Entrance	6 & 9b																			
Level 00 – Miller Street	Retail & Metro Station Entrance	6 & 9b																			
Level 1	Podium Office Space & Retail	5 & 6																			
Level 2	Podium office Space, Retail & Metro community hub	5, 6 & 9b																			
Level 3 through to level 41	Podium Office, OSD Commercial office space & Plant	5																			
Part A7	Uniting buildings Buildings are deemed united when two or more buildings adjoining each other are connected and used as one building.		Applicable																		
Section B: Structure																					
B1.1	Resistance to actions The resistance of the building must be greater than the most critical action effect resulting from different combinations of actions	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance readily achievable																		
B1.2	Determination of individual actions The magnitude of individual actions must be determined in accordance with Clause B1.2 of the BCA.	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance readily achievable																		



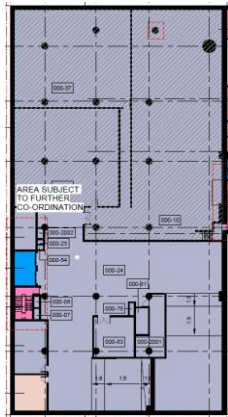
Clause	Description	Comment	Status
B1.3	-	No provisions	-
B1.4	Determination of structural resistance of materials and forms of construction The structural resistance of materials and forms of construction must be determined in accordance with the relevant Australian Standards in accordance with Clause B1.4 of the BCA.	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage.	Additional details required
B1.5	Structural software Structural software used in computer aided design of a building or structure that uses design criteria based on DTS provisions of the BCA must comply with the ABCB Protocol for Structural Software.	-	Noted
B1.6	Construction of buildings in flood hazard areas	-	N/A
Part B	Structure and importance level Assessment of the building structure will be required for dead, live, wind, earthquake, fire and other loads required by current day AS Codes. The design of the structure must be based on the appropriate 'Importance Level' under BCA Table B1.2a.	The building has an importance level 3 in accordance with Table B1.2a.	Compliance readily achievable

Section C: Fire Resistance

Part C1 – Fire Resistance and Stability

C1.1 & Spec C1.1	Type of Construction Required Type A Construction BCA Type A fire resisting construction is required. Refer to Appendix C1.1 and Specification C1.1 below for the relevant fire resisting requirements The below is a summary of the FRL requirements:	Fire resisting requirements to building elements	Additional details required						
	<table><tr><th>Building Element</th><th>Required FRL</th></tr><tr><td>Loadbearing external walls, columns, beams</td><td>Generally a 2 hr FRL throughout subject to reduced FRL for the retail as part of a performance Solution (Excluding the Denison Street concourse retail which is to achieve an FRL of 3 hours)</td></tr><tr><td>Non-loadbearing external walls, etc. less than 3m from a fire source or boundary or less than 6m from another building on the site</td><td>Generally a 2 hr FRL throughout subject to reduced FRL for the retail as part of a performance Solution (Excluding the Denison Street concourse retail which is to achieve an FRL of 3 hours)</td></tr></table>	Building Element		Required FRL	Loadbearing external walls, columns, beams	Generally a 2 hr FRL throughout subject to reduced FRL for the retail as part of a performance Solution (Excluding the Denison Street concourse retail which is to achieve an FRL of 3 hours)	Non-loadbearing external walls, etc. less than 3m from a fire source or boundary or less than 6m from another building on the site	Generally a 2 hr FRL throughout subject to reduced FRL for the retail as part of a performance Solution (Excluding the Denison Street concourse retail which is to achieve an FRL of 3 hours)	<ol style="list-style-type: none">All external walls within 3m from the boundary:<ul style="list-style-type: none">Must be non-combustible;Achieve the following FRLs-<ol style="list-style-type: none">Car parking levels & Commercial office levels – 120/120/120 or -/120/120;Retail premises to Level 00 Miller Street & the Southern laneway building - 120/120/120 or -/120/120 subject to a performance solution for the retail;Retail premises within the Denison Street Concourse – 180/180/180 or -/180/180Any loadbearing internal walls must be of concrete or masonry;Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must have an FRL and be non-combustible as required by Clause 2.2 of the Specification;
	Building Element	Required FRL							
Loadbearing external walls, columns, beams	Generally a 2 hr FRL throughout subject to reduced FRL for the retail as part of a performance Solution (Excluding the Denison Street concourse retail which is to achieve an FRL of 3 hours)								
Non-loadbearing external walls, etc. less than 3m from a fire source or boundary or less than 6m from another building on the site	Generally a 2 hr FRL throughout subject to reduced FRL for the retail as part of a performance Solution (Excluding the Denison Street concourse retail which is to achieve an FRL of 3 hours)								



Clause	Description		Comment	Status
	Non-loadbearing external walls etc. greater than 3m from a fire source or boundary or more than 6m from other buildings on the site.	Nil	4. Any non-loadbearing internal walls required to be fire resistant or shafts must be non-combustible; and 5. Roof is not required to achieve a fire rating provided the covering is non-combustible as sprinklers are being installed throughout the development.	Performance Solution
	Internal load-bearing walls/columns etc	Generally a 2 hr FRL throughout subject to reduced FRL for the retail as part of a performance Solution (The carpark is granted a concession to be 1hr as it is sprinkler protected) (Excluding the Denison Street concourse retail which is to achieve an FRL of 3 hours)	Structural details & specifications of the wall types and relevant FRLs proposed are to be submitted from a suitably qualified Structural Engineer to the Certifying Authority upon application of the relevant Construction Certificate	
	Floors	Generally a 2 hr FRL throughout subject to reduced FRL for the retail as part of a performance Solution (Excluding the Denison Street concourse retail which is to achieve an FRL of 3 hours)	The following performance solutions are required to be considered through the projects fire engineer- <ul style="list-style-type: none"> A reduction in FRLs are proposed to the separating elements / walls and floors of the class 6 southern laneway building, Miller street retail and Denison Street Concourse of the building from 180/180/180 down to 120/120/120; Basement level 2 is provided with means of bicycle parking facilities. These facilities have a floor area which is greater than 10% of the total floor area and as such is considered to be classified as a class 7b. A reduced FRL is required to be undertaken of 4hrs down to 2hrs 	
	Roofs	Nil with sprinkler protection (non-combustible covering)		
C1.1, Spec C1.1	Combustible Materials to External Walls in Fire External walls should be constructed of non-combustible materials and/or otherwise not contribute to the risk of fire spread via the external façade. The following materials may be used where non-combustible materials are required:- <ul style="list-style-type: none"> Plasterboard. Perforated gypsum. Fibrous-plaster sheeting to AS 2185. Fibre-reinforced cement sheeting. 		A detailed review of the external wall system and materials will be undertaken to ensure no combustible materials (including Aluminium Composite Panels ACP's) and non-compliant building products are proposed. All materials proposed within and attached to the external wall are to be detailed and submitted as part of SWP's External & Common wall (Cladding and Wall register) Design Certificate. This also	Additional details required



Clause	Description	Comment	Status
	<ul style="list-style-type: none"> Pre-finished metal sheeting. Bonded laminated materials. As determined by testing to AS 1530.1 An appropriately BCA accredited product or system 	<p>includes relevant test reports, Codemark certification and certificates of conformity demonstrating compliance with relevant Australian Standards.</p> <p><i>Should any deviation occur for the proposed cladding product or sarking material (being a greater thickness than 1mm and a flammability index rating of no greater than 5) either a performance solution will be required or a variation to the selected material will need to be implemented within the design</i></p>	
C1.2	<p>Calculation of rise in storeys</p> <p>Effective Height / Calculation of rise in storeys.</p> <p>Rise in storeys is a defined BCA term addressing the number of main building levels excluding basements.</p> <p>Effective height is defined under the BCA as vertical distance between the floor of the lowest storey included in the calculation of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).</p> <p>These parameters influence the BCA provisions applicable to the building.</p>	<p>The following parameters apply:</p> <p>Rise in storeys: 44 storeys</p> <p>Effective Height: 164.55m (Level 41 RL224.3 - Level 00 Denison Street RL 59.75)</p>	Noted
C1.3	Buildings of multiple classification	The building is required to be constructed of Type A fire resisting construction as the classification of the top storey is a Class 5	Noted
C1.4	Mixed types of construction		N/A
C1.5	Two storey Class 2, 3 or 9c buildings		N/A
C1.6	Class 4 parts of buildings		N/A
C1.7	Open spectator stands and indoor sports stadiums		N/A
C1.8	<p>Lightweight construction</p> <p>Lightweight construction used in a wall system must comply with Specification C1.8.</p> <p>Lightweight construction used as a fire-resisting covering of a steel column or the like, and where the covering is not in continuous contact with the column must have the voids filled to a height of not less than 1.2m above the floor and where the column is liable to be damaged must be protected by steel or other suitable material.</p>	Details of the proposed systems to be installed must be in accordance with a tested prototype.	Compliance readily achievable
C1.9	<p>Non-combustible building elements</p> <p>In a building required to be of Type A construction, the following building elements and their components must be non-combustible:</p> <ol style="list-style-type: none"> External walls and common walls, including all components incorporated within them 	<p>A detailed review of the makeup of the wall systems and materials will be undertaken to ensure no combustible materials (including Aluminium Composite Panels ACP's) and non-compliant building products are proposed.</p> <p>All materials proposed within and attached to the external wall are to be detailed and submitted as part of SWP's</p>	Additional details required



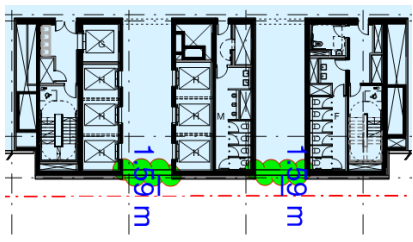
Clause	Description	Comment	Status
	<p>including façade covering, framing and insulation;</p> <p>ii. The flooring and floor framing of lift pits;</p> <p>iii. Non-loadbearing internal walls where they are required to be fire-resisting;</p> <p>iv. Non-loadbearing shaft being a lift, ventilating, garbage or similar shaft.</p> <p>The following materials may be used where non-combustible materials are required:-</p> <ul style="list-style-type: none"> Plasterboard. Perforated gypsum. Fibrous-plaster sheeting to AS 2185. Fibre-reinforced cement sheeting. Pre-finished metal sheeting having a combustible surface finish not exceeding 1mm thickness and where the spread-of-flame index of the product is not greater than 0. Sarking-type materials that do not exceed 1mm thickness and have a flammability index not greater than 5. Bonded laminated materials where each lamina, including any core, is not combustible and each adhesive layer does not exceed 1mm thickness and the total thickness of the adhesive layers does not exceed 2mm and the spread of flame index and smoke development index of the bonded laminated material as a whole do not exceed 0 and 3 respectively. Any product as determined by testing to AS 1530.1 An appropriately BCA accredited product or system 	<p>External & Common wall (Cladding and Wall register) Design Certificate. This also includes relevant test reports, Codemark certification and certificates of conformity demonstrating compliance with relevant Australian Standards (AS1530.1-1994).</p> <p><i>Should any deviation occur for the proposed cladding product or sarking material either a performance solution will be required should acceptance be granted through both the certifier & the projects fire Engineer or a variation to the selected material will need to be implemented within the design</i></p>	
C1.10 & Spec C1.10	<p>Fire Hazard Properties</p> <p>Floor materials, floor coverings and wall and ceiling lining materials need to comply with prescribed fire hazard properties. Refer to Appendix C1.10.</p>	<p>Compliance assumed and will require verification test data for all timber and other combustible linings and materials, including:-</p> <ul style="list-style-type: none"> Carpets Vinyl's (walling and flooring) Timber flooring and wall linings Veneered wall panelling Spray-on insulation material Other combustible finishes Carpark soffit insulation fire test reports, based on 'room fire testing' will be required to meet fire brigade consent conditions if applicable. <p>The fire hazard properties of floor linings and coverings, wall linings and ceiling linings must comply with Specification C1.10 and NSW Specification C1.10. Test reports to be provided certifying that:</p>	Compliance readily achievable



Clause	Description	Comment	Status
		<ul style="list-style-type: none"> the floor linings achieve a critical radiant flux 1.2 The wall and ceiling linings achieve a group 1, 2 or 3 rating <p>Test reports of all the proposed lining materials are required to be provided to the project certifying Authority for review and acceptance prior to the installation</p>	
C1.11	Performance of external walls in fire		N/A
C1.12		This Clause has deliberately been left blank	-
C1.13	Fire-protected timber: Concession		N/A
C1.14	Ancillary elements	An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is non-combustible or as specified under this clause.	Compliance readily achievable
Part C2 – Compartmentation and Separation			
C2.1	Application of Part	Clauses C2.2, C2.3 and C2.4 do not apply to a sprinkler protected carpark, open deck carpark or open spectator stand.	Noted
C2.2	General Floor area and Volume limitations (Type A construction) The floor area and volume limitations are: Class 5 & 9b: 8,000m ² and 48,000m ³ Class 6: 5,000m ² and 30,000m ³	Refer to appendix C2.2 of this report for floor areas and volumes.	Complies
C2.3	Large isolated buildings		N/A
C2.4	Requirements for open space and vehicular access		N/A
C2.5	Class 9a and 9c buildings		N/A
C2.6	Vertical separation of openings in external walls	The building is installed with an automatic fire suppression system	N/A
C2.7	Separation by fire walls A fire wall must extend to the underside of a floor having an FRL required for a fire wall or the roof covering.	Fire Walls are proposed to be provided between the OSD & Station as a request by Metro operations, as such details of any fire walls are required to be documented by the projects Structural Engineer to determine a compliant means of fire rating.	Compliance Readily Achievable
C2.8	Separation of classifications in the same storey	As the building has parts of different classifications located alongside one another in the same storey each building element must have the higher FRL prescribed in Specification C1.1 of the BCA or the parts must be separated by a fire wall.	Compliance readily achievable



Clause	Description	Comment	Status
		<p>The following performance solutions are required to be considered through the projects fire engineer-</p> <ul style="list-style-type: none"> A reduction in FRLs are proposed to the separating elements / walls and floors of the class 6 Denison Street Concourse of the building from 180/180/180 down to 120/120/120 	Performance Solution
C2.9	<p>Separation of classifications in different storeys</p> <p>As different classifications are situated one above the other in adjoining storeys they must be separated in accordance with the DTS provisions of Table 3 of BCA 2019 Specification C1.1.</p>	<p>As different classifications are situated one above the other in adjoining storey's they must be separated in accordance with the DTS provisions of the BCA.</p> <ul style="list-style-type: none"> Class 5 - 120/120/120 Class 6 – 180/180/180 (unless subject to a performance solution to reduce FRLs from 3hrs → 2 hrs) Class 7a - - 120/120/120 Class 9b - 120/120/120 <p>Structural details & specifications are to be submitted to the certifying Authority upon application of the relevant Construction Certificate.</p> <p><i>Note 1 – A reduction of FRLs is proposed for the class 6 portion of the development to achieve an FRL of 120/120/120 in lieu of 180/180/180;</i></p> <p><i>Note 2 – A reduction to the bicycle storage located within the basement carpark is proposed to have an FRL of 120/120/120 and not fire separated in lieu of 240/240/240.</i></p>	Additional Details Required
C2.10	Separation of Lift Shafts	<p>The proposed lift shafts serving the building must be separated as specified in Clause 2.10.</p> <p>Separation of the lift including emergency lift shafts must be achieved from the remainder of the building by complying with elements achieving the following nominated FRLs-</p> <ul style="list-style-type: none"> Class 5 - 120/120/120 Class 6 – 180/180/180 (unless subject to a performance solution to reduce FRLs from 3hrs → 2 hrs) <p>Openings for lift landing doors and services must be protected in accordance with the DTS provisions of Part C3 of the BCA</p> <p>Structural details & specifications of the wall types and relevant FRLs proposed are to be submitted from a suitably qualified Structural Engineer to the Certifying Authority upon application of the Structural Construction Certificate.</p>	Additional details required
C2.11	Stairways and lifts in one shaft	<p>The stairs and lifts are documented to be in separate shafts</p>	Complies
C2.12	<p>Separation of Equipment</p> <p>Two hour fire enclosure is required for:-</p>	<p>Should any of the equipment listed to the left be installed within the confines of the proposed electrical distribution room or</p>	Additional details


Clause	Description	Comment	Status
	<ul style="list-style-type: none"> lift motor rooms emergency generators sustaining emergency equipment operating in emergency mode central mechanical smoke control plant boilers batteries with voltage over 12 volts and a storage capacity exceeding 200kWh. (Batteries within an electricity network substation are exempt.) 	<p>within any proposed plant rooms then these areas are required to be separated from the remainder of the building by construction with an FRL as required under Specification C1.1 but not less than 120/120/120. Any doors to serve these rooms are also required to achieve an FRL of not less than - /120/30 and be self-closing.</p> <p>Structural details & specifications of the wall types and relevant FRLs proposed are to be submitted from a suitably qualified Structural Engineer to the Certifying Authority upon application of the relevant approval</p>	required
C2.13	<p>Electricity Supply System</p> <p>A substation located within a building or main switchboard, which sustains emergency equipment, must be separated from the remainder of the building by 2hr fire rated construction.</p>	<p>Any switch rooms proposed throughout the development that house equipment that sustain emergency equipment are required to be fire separated from the remainder of the building by no less than an FRL of 120/120/120.</p> <p>Structural details & specifications of the wall types and relevant FRLs proposed are to be submitted from a suitably qualified Structural Engineer to the certifying authority upon application of the relevant Construction Certificate.</p> <p><i>It should be noted that the substation which is currently located within level 00 is required to be separated from the remainder of the building by an FRL of not less than 180/180/180 to conform to the energy supplier's specifications.</i></p>	Additional Details Required
C2.14	Public corridors in Class 2 & 3 buildings		N/A
Part C3 – Protection of Openings			
C3.1	Application of Part		Noted
C3.2	<p>Protection of openings in external walls</p> <p>Openings in the external walls of the building are to be protected in accordance with C3.4, being fire rated windows, external sprinklers or the like, if:</p> <ul style="list-style-type: none"> less than 3m to side or rear boundary, less than 6m from the far boundary of a road or lane, Less than 6m from another building on the same allotment. <p>Openings that require protection should not occupy more than $\frac{1}{3}$ of the storey in which they occur.</p>	<p>The following unprotected elements are required to be documented as part of a performance solution through the projects fire engineer or designed out with a DTS method of protection :</p> <ul style="list-style-type: none"> Unprotected glazed elements are proposed to service the eastern façade associated with the lift lobbies on levels 16 – 39 that are located within 3m (1.55m) of a fire source feature (site boundary).  <p><i>Note – All other openings within proximity to fire source features are being protected by a</i></p>	Performance Solution



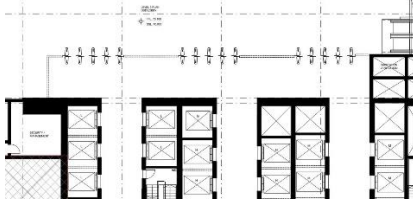
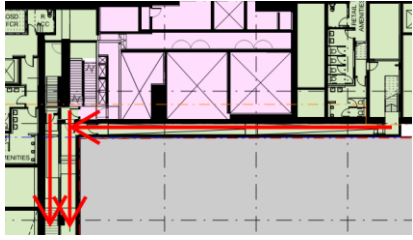
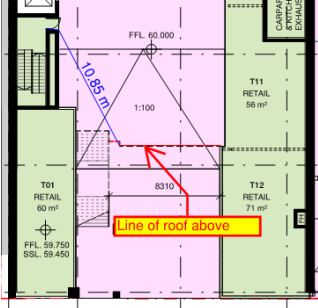
Clause	Description	Comment	Status
		<i>method documented within clause C3.4 and as such will comply</i>	
C3.3	Separation of external walls and associated openings in different fire compartments		N/A
C3.4	Acceptable method of protection	<p>The following methods of protection are permissible within Clause C3.4 of the BCA-</p> <p>Window Protection</p> <ul style="list-style-type: none"> • Wall wetting sprinklers; • -/60/- Fire rated windows that are automatic closing or permanently fixed in the closed position; or • -/60/60 automatic fire shutters. <p>Doorway Protection</p> <ul style="list-style-type: none"> • wall wetting sprinklers used with doors that are self-closing; or • Automatic closing or -/60/30 self-closing or automatic closing fire doors. 	Noted
C3.5	Doorways in fire walls	Doorways in firewalls are to be protected by a fire door or fire shutter that has an FRL of not less than that required for the firewall except that the insulation rating must be at least 30.	Compliance readily achievable
C3.6	Sliding fire doors		N/A
C3.7	Protection of doorways in horizontal exits		N/A
C3.8	Openings in Fire Isolated Exits -/60/30 self-closing fire doors are required to doorways providing access to fire isolated stairways.	A door schedule indicating compliance is required to be provided and will be checked upon an application for the main works Construction Certificate	Additional Details Required
C3.9	Service penetrations in fire isolated exits Service penetrations other than electrical wiring for essential service installations, pressurisation ducts with an FRL of -/120/60, or water pipes for fire services are not permissible.		Noted
C3.10	Openings in fire isolated lift shafts Openings in lift shafts are to be protected by -/60/- fire doors complying with AS1735.11. Lift indicator panels are to be backed by construction having an FRL of not less than -/60/60 if it exceeds 35,000mm ² (175 X 200 mm).	Certification from the lift supplier is required for the installation of the new lifts	Additional Details Required
C3.11	Bounding construction: Class 2, 3, 4 and 9 buildings		N/A
C3.12	Openings in floors and ceilings for services Services passing through floors are to be placed within fire resisting shafts or in accordance with Clause C3.15.	<p><u>Class 5 & 6 (Southern Retail & Miller Street retail portions only)</u></p> <p>Loadbearing shafts are required to have an FRL of not less than 120/90/90, and for non-loadbearing shafts an FRL of not less than -/90/90.</p> <p><u>Class 6 (Denison Street arcade)</u></p> <p>Loadbearing shafts are required to have an FRL of not less than 180/120/120, and for non-loadbearing shafts an FRL of not less than -</p>	Additional details required



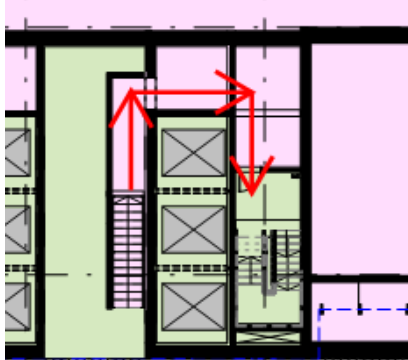
Clause	Description	Comment	Status
		<p>/120/120.</p> <p>Details of the Shaft wall and passive fire systems proposed to be used within the building are to be submitted within a schedule upon application of the relevant Construction Certificate to the Certifying Authority</p> <p><i>Note 1 – A reduction of FRLs is proposed for the class 6 Southern retail building and Miller Street retail tenancies. A reduced FRL is proposed of 120/120/120 in lieu of 180/180/180</i></p>	
C3.13	Openings in shafts	<p>In a building of Type A construction an opening in a wall providing access to a ventilating, pipe, garbage, or other service shaft must be protected by:</p> <ul style="list-style-type: none"> • If it is a sanitary compartment - a door or panel which together with its frame, is non-combustible or has an FRL of not less than -/30/30, or • A self-closing -/60/30 fire door or hopper, or • An access panel with an FRL of not less than -/60/30, or • If the shaft is a garbage shaft - a door or hopper of non-combustible construction. 	Compliance readily achievable
C3.14	-	This clause has deliberately been left blank	-
C3.15	<p>Openings for service installation</p> <p>Services penetrations through a building elements (other than an external wall or roof) that are required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, must comply with a tested system or with Specification C3.15</p> <p>Methods and materials used are to be identical to tested prototypes and in accordance with AS4072.1 and AS1530.4, and having achieved the required FRL or resistance to the incipient spread of fire or other specified method, or differ from a prototype assembly of the service, building element and protection method in accordance with Section 4 of AS 4072.1</p>	Any system used must be a certified system and installed in accordance with the tested method. Specifications of the methods of fire sealing need to be provided	Compliance readily achievable
C3.16	<p>Construction Joints</p> <p>Construction joints in elements required to have a fire resistance with respect to integrity and insulation must be protected.</p>	Construction joints are to be installed in accordance with a tested prototype in accordance with AS1530.4.	Compliance readily achievable
C3.17	Columns protected with lightweight construction	Columns must be protected in accordance with the identical tested prototype.	Compliance readily achievable

Clause	Description	Comment	Status
Section D: Access and Egress			
Part D1 - Provision for Escape			
D1.1	Application of Part		Noted
D1.2	Number of exits required At least two exits need to serve all areas of every storey as follows: <ul style="list-style-type: none"> • High rise buildings over 25m in effective height; • Each basement level 	The following areas are provided with a single exit in lieu of 2 as required by a building with an effective height of greater than 25m: <ul style="list-style-type: none"> • The podium office building 	Performance Solution
D1.3	When fire-isolated stairways and ramps are required		Complies
D1.4	Exit travel distances No point on the floor must be more than 20m to an exit or a point in which travel in different directions to 2 exits is available, in which case, the maximum distance to 1 exit cannot exceed 40m.	The following travel distances are applicable to all of the buildings associated within the OSD & The Carpark. These distances are required to be implemented within a performance solution addressed by the projects fire engineer: <ul style="list-style-type: none"> • 30m to a Point of Choice / Exit in lieu of 20m The following travel distances are applicable to the main office building. These distances are required to be implemented within a performance solution addressed by the projects fire engineer: <ul style="list-style-type: none"> • 60m to the nearest available exit through a point of choice in lieu of 40m. <i>Please note that these distances occur throughout the development and take into consideration a single tenant per floor.</i>	Performance Solution
D1.5	Distance between alternative exits The following travel distance limits apply: <ul style="list-style-type: none"> • ≤ 60m travel distance between alternative exits and not less than 9m between alternative exits; • Exit paths to alternative exits should not converge at any point to be less than 6m apart. 	The following travel distances are applicable to the main office building & Within the Carpark. These distances are required to be implemented within a performance solution addressed by the projects fire engineer: <ul style="list-style-type: none"> • 90m between alternative exits in lieu of 60m <i>Please note that these distances occur throughout the development and take into consideration a single tenant per floor.</i>	Performance Solution
D1.4 & D1.5	Extended travel distance – Consideration and limitations associated with future fitouts & tenancy splits	Due to the large travel distances proposed within levels 4 – 29 consideration needs to be made when taking into account proposed fit-out options as tenancy split may not be an option or limited in locations 	Noted
D1.6	Dimensions of exits and paths of travel to exits	The following levels currently are not provided with an adequate means of egress width and are required to be addressed	Performance Solution



Clause	Description	Comment	Status
		<p>through the projects fire engineer-</p> <ul style="list-style-type: none">• Mid Rise – Levels 16 to 28 (0.5m short in width); and• All required paths of egress are required to achieve a width of no less than 1000mm. The gates currently providing egress into and out of the lift lobby located on level 2 achieve a width of 900mm. 	
D1.7	Travel via fire-isolated exits	<p>The following elements of discharge are required to be documented as part of a performance solution through the projects fire engineer:</p> <ul style="list-style-type: none">• The OSD discharge path currently converges with the paths of discharge from the rising and descending separating paths associated with both the station and co-working buildings. As such the discharge is provided with ultimately 5 paths in → 2 paths out.  <ul style="list-style-type: none">• The fire isolated stair serving the basement levels currently discharges within the confines of the building on level 00 Denison Street is not considered more than 1/3 open and requires travelling a distance of more than 6m (11 metres) 	Performance Solution
D1.8	External stairways or ramps in lieu of fire-isolated exits		N/A
D1.9	Travel by non-fire-isolated stairways or ramps	<p>The non-fire isolated stair which services the level 3 plant room currently discharges onto the confines of level 4 mezzanine which</p>	Performance Solution


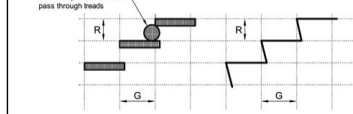


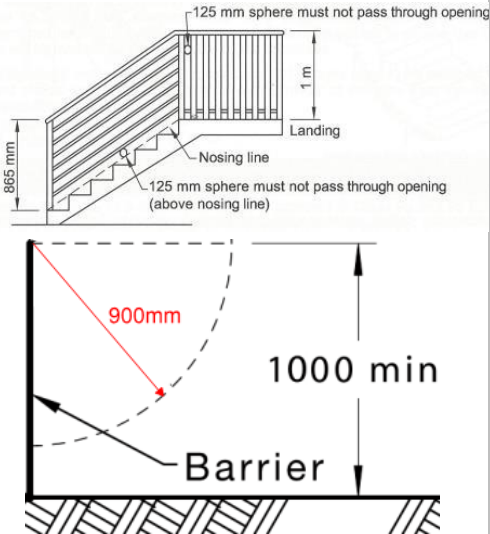
Clause	Description	Comment	Status
		<p>then requires the occupants to traverse along until they reach the fire isolated exit. This stair therefore presents occupants with a discontinuous means of travel to an exit.</p>  <p>Details of this non-compliance are required to be documented by the projects fire engineer as part of a performance solution</p>	
D1.10	Discharge from exits	<p>An exit must not be blocked nor be capable of being blocked at its point of discharge. The path of discharge from the fire isolated exit must achieve a width of not less than 1m.</p>	Compliance readily achievable
		<p>Details of the methods of protection of the doors are required to be provided on the plans to demonstrate compliance against the requirements of BCA Clause D1.10</p>	Additional Details Required
D1.11	Horizontal exits		N/A
D1.12	Non-required stairways, ramps or escalators		N/A
D1.13	Number of persons accommodated	Refer to Appendix D1.13	Noted
D1.14	Measurement of distance		Noted
D1.15	Method of measurement		Noted
D1.16	Plant rooms and lift machine rooms: Concession		Noted
D1.17	Access to lift pits		Noted
Part D2 – Construction of Exits			
D2.1	Application of Part		Noted
D2.2	Fire Isolated Stairs or Ramps	<p>A stairway or ramp that is required to be within a fire-resisting shaft must be constructed-</p> <ul style="list-style-type: none"> a) Of non-combustible materials; and b) So that if local failure occurs it will not cause structural damage to, or impair the fire resistance of the shaft 	Compliance Readily Achievable
D2.3	Non Fire Isolated Stairways and Ramps	<p>The proposed non-fire isolated stairs serving the southern retail precinct and the stairs serving the OSD lobby are required to be constructed in accordance with the provisions of D2.3, or only of-</p> <ul style="list-style-type: none"> a) Reinforced or pre-stressed concrete; or 	Additional Details Required

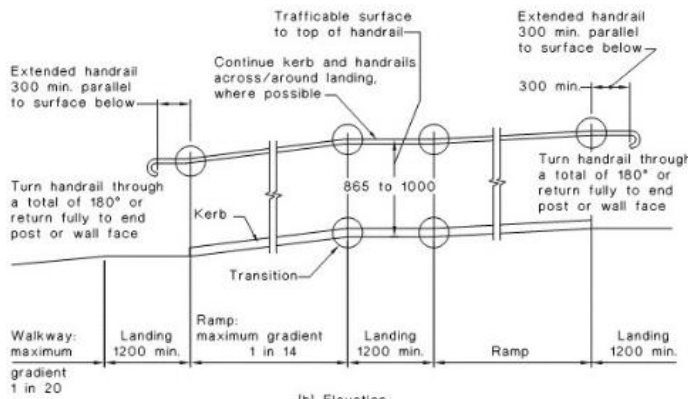
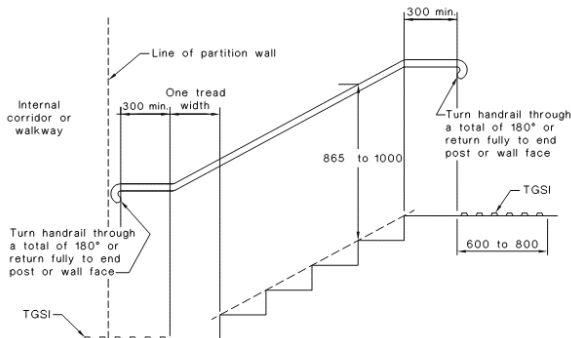


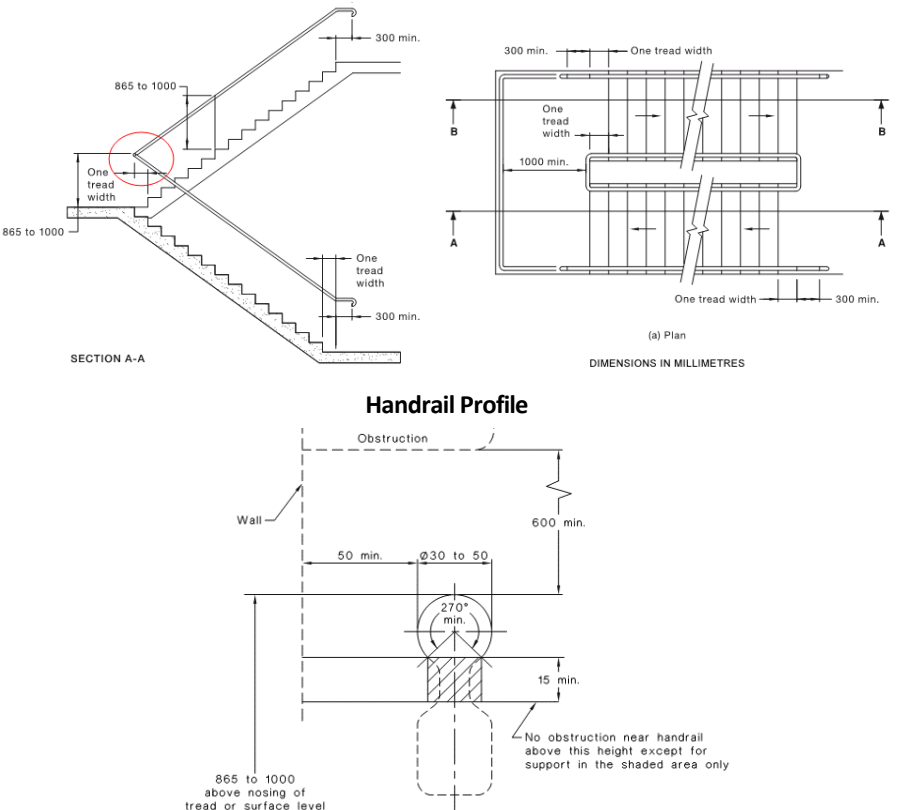
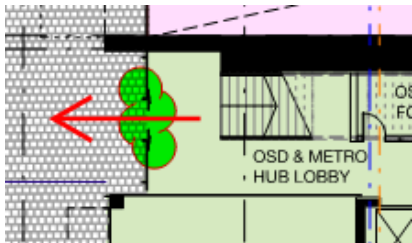
Clause	Description	Comment	Status
		<p>b) Steel in no part less than 6mm thick; or</p> <p>c) Timber that-</p> <p>I. Has a finished thickness of not less than 44mm; and</p> <p>II. Has an average density of not less than 800kg/m³ at a moisture content of 12%; and</p> <p>III. Has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue</p> <p>Details of the proposed methods of construction and materials used for this staircase are required to be submitted to the Certifying Authority upon application for the Construction Certificate for review</p>	
D2.4	Separation of rising and descending stair flights		Complies
D2.5	Open access ramps and balconies		N/A
D2.6	Smoke lobbies		N/A
D2.7	Installations in Exits and Paths of Travel	<p>Electrical boards and the like are to be located within and enclosed by non-combustible construction or have a fire-protective covering with the doorway suitably sealed against smoke spreading from the enclosure.</p> <p>Generally the services or equipment may be enclosed in non-combustible construction such as MDF with a solid core</p> <p>Details of the proposed doors including notation of smoke seals and / or metal backed solid core doors are to be incorporated within a door schedule to be submitted for the issue of the relevant Construction Certificate for review</p>	Additional details required
D2.8	Enclosure of space beneath stairs and ramps	<p>If enclosures are proposed beneath stairs the following are to be considered:</p> <p><u>Fire Isolated Stairways:</u></p> <p>Must not be enclosed to form a cupboard or similar enclosed space.</p> <p><u>Non-Fire Isolated Stairways:</u></p> <p>Must not be enclosed to form a cupboard or similar enclosed space unless the enclosing walls have an FRL of not less than 60/60/60 and any doorway to the enclosed space is fitted with a self-closing -/60/30 fire door.</p>	Compliance readily achievable
D2.9	Width of required stairways and ramps		N/A
D2.10	Pedestrian ramps		N/A
D2.11	<p>Fire-isolated passageways</p> <p>Fire isolated passageways are to have an FRL equivalent to the fire resisting stair shaft as</p>	<p>A Structural Engineer is to determine adequate FRLs and nominate these on structural plans associated with the application with the relevant</p>	Additional Details Required



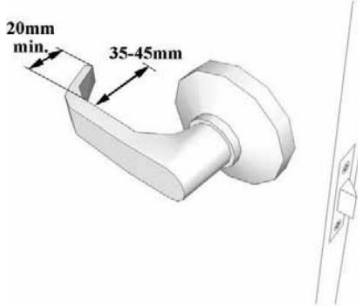
Clause	Description	Comment	Status																												
	specified in Table 4 of Specification C1.1.	Construction Certificate																													
D2.12	Roof as open space The roof is required to have an FRL of not less than 120/120/120 and not incorporate any roof lights or other openings within 3m of the path of travel.	<p>Non-fire isolated stairs serving the Southern precinct retail building discharge onto the through site link associated with level 00 Miller Street. This level is technically the roof of the level 00 Denison Street.</p>  <p>A Structural Engineer is to determine adequate FRLs and nominate these on structural plans associated with the application of the relevant Construction Certificate</p>	Applicable																												
D2.13	Going and Risers Stairways within this development are to be constructed and comply with the following-	<table><tr><th></th><th colspan="2">Riser (R)</th><th colspan="2">Going (G) ⁽²⁾</th><th colspan="2">Quantity (2R+G)</th></tr><tr><th></th><th>Max</th><th>Min</th><th>Max</th><th>Min</th><th>Max</th><th>Min</th></tr><tr><td>Public stairways</td><td>190</td><td>115</td><td>355</td><td>250</td><td>700</td><td>550</td></tr><tr><td>Private stairways⁽¹⁾</td><td>190</td><td>115</td><td>355</td><td>240</td><td>700</td><td>550</td></tr></table>  <p>Details and specifications of all stairways are to be submitted to the Certifying Authority for review prior to the issue of the relevant Construction Certificate</p>		Riser (R)		Going (G) ⁽²⁾		Quantity (2R+G)			Max	Min	Max	Min	Max	Min	Public stairways	190	115	355	250	700	550	Private stairways ⁽¹⁾	190	115	355	240	700	550	Additional Details Required
	Riser (R)		Going (G) ⁽²⁾		Quantity (2R+G)																										
	Max	Min	Max	Min	Max	Min																									
Public stairways	190	115	355	250	700	550																									
Private stairways ⁽¹⁾	190	115	355	240	700	550																									
	<ul style="list-style-type: none">Stairs are to have risers measuring between 115-190mm and goings between 250-355mm.Goings and Risers are to satisfy the equation of 2R+G=700(max) and 550(min).Adjacent risers, or between adjacent goings a variation no greater than 5mm is permitted and the largest and smallest riser within the flight or the largest and smallest going within a flight is not to exceed a variation of 10mm.Under the requirements of AS1428.1-2009 open riser are not permitted.All treads to be fitted with non-slip finish or non-skid strips.Treads are required to have a surface or nosing strip with a slip-resistance classification not less than listed in Table D2.14 when tested in accordance with AS 4586																														

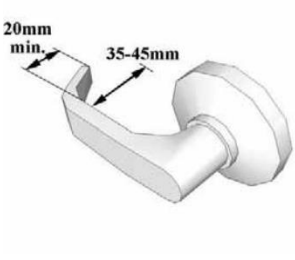

Clause	Description	Comment	Status															
D2.14	<p>Landings</p> <p>Ramps Surfaces, stair tread surfaces or nosing strips, and stair landing surfaces, or landing nosing strips to a flight below, must achieve slip-resistance classifications to AS4586-2013 as follows: -</p> <table><thead><tr><th>Application</th><th>Dry Surface Conditions</th><th>Wet Surface Condition</th></tr></thead><tbody><tr><td>1:14 or steeper ramps</td><td>P4 or R11</td><td>P5 or R12</td></tr><tr><td>Ramps of 1:14 to 1:20</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Tread or Landing Surface</td><td>P3 or R10</td><td>P4 or R10</td></tr><tr><td>Nosing Strip or Landing Strip</td><td>P3</td><td>P4</td></tr></tbody></table>	Application	Dry Surface Conditions	Wet Surface Condition	1:14 or steeper ramps	P4 or R11	P5 or R12	Ramps of 1:14 to 1:20	P3 or R10	P4 or R11	Tread or Landing Surface	P3 or R10	P4 or R10	Nosing Strip or Landing Strip	P3	P4	<p>Certification / test reports on the slip resistance of the surfaces will need to be provided on constructed elements.</p> <p>All stairways and ramps located throughout the ground floor are considered to adopt slip ratings associated with wet surface conditions within the table to the left.</p>	Compliance readily achievable
Application	Dry Surface Conditions	Wet Surface Condition																
1:14 or steeper ramps	P4 or R11	P5 or R12																
Ramps of 1:14 to 1:20	P3 or R10	P4 or R11																
Tread or Landing Surface	P3 or R10	P4 or R10																
Nosing Strip or Landing Strip	P3	P4																
D2.15	<p>Thresholds</p> <p>Steps should not occur at doorways without a threshold landing except as follows:</p> <ul style="list-style-type: none">A single 190mm step is permitted (other than in health or aged care buildings) at doors leading to the exterior.	<p>Note that where access for people with disabilities is required it is not permitted to have a step at the threshold of a doorway</p>	Compliance readily achievable															
D2.16	<p>Barriers to Prevent Falls</p> 	<ul style="list-style-type: none">Balustrades complying with Deemed-to-Satisfy provisions of the BCA are to be provided to where the level of the surface below is 1m or more;Where the level of the surface below is 4m or more, a balustrade or other barrier must not facilitate climbing of horizontal elements between 150mm and 760mm above the floor;Any opening in the balustrade must not permit a 125mm sphere to pass through the balusters; andClimbable elements cannot be located within 900mm of the top rail of each balustrade where the fall is greater than 4m. This measurement is taken in an arc as seen in the extract to the left. <p>Detailed designs, drawings and specifications of the balustrade design are to be submitted to the certifying Authority for a further detailed review upon application of the relevant Construction Certificate.</p>	Additional Details Required															
D2.17	<p>Handrails</p> <p>Handrails to exits including parts of fire isolated exits serving an area required to be accessible to people with disabilities must comply with Clause 12 of AS1428.1: -</p> <ul style="list-style-type: none">Handrails not to obstruct circulation space	<p>Handrails are to be provided in compliance with Clause D3.3 and include the following-</p> <ul style="list-style-type: none">Non-Fire Isolated Stairways and Ramps <p>All stairs and ramps not used as an emergency exit are to have handrails installed on both sides that comply with</p>	Additional Details Required															

Clause	Description	Comment	Status
	<ul style="list-style-type: none"> 30-50mm diameter 865-1000mm above nosing line of stairs 865-1000mm above ramps and landings Consistent height throughout 50mm grip clearance and no obstructions to handhold Continuous at internal (return) landings <p>Provided with handrail extensions and 180 degree curled ends</p>	<p>Clause 10 & 11 of AS1428.1-2009</p> <ul style="list-style-type: none"> Fire Isolated Stairways and Ramps <p>In Fire Isolated Stairways & Ramps a handrail is required to be installed to at least one side of stair flights and located not less than 865mm above the nosing's of stair treads and the floor surfaces of landings</p> <ul style="list-style-type: none"> Consistent Handrail Heights for all stairways <p>The height of the top of the handrail, measured at a height of between 865mm – 1000mm vertically from the stair nosing shall be consistent throughout the ramp (or stairs) and any landings.</p> <p>All stairs including fire stairs are required to be designed to comply with Clause 12 of AS1428.1 – 2009</p> <p>Detailed designs, drawings and specifications of the handrail design are to be submitted to the certifying Authority for a further detailed review upon application of the relevant Construction Certificate.</p>	
<p style="text-align: center;">Ramps</p>  <p style="text-align: center;">(b) Elevation</p> <p style="text-align: center;">DIMENSIONS IN MILLIMETRES</p> <p style="text-align: center;">FIGURE 14 RAMP HANDRAILS</p> <p style="text-align: center;">Stairways</p>  <p style="text-align: center;">SECTIONAL VIEW</p> <p style="text-align: center;">DIMENSIONS IN MILLIMETRES</p> <p style="text-align: center;">FIGURE 26(B) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT END OF STAIRWAY OTHER THAN AT LINE OF BOUNDARY</p>			

Clause	Description	Comment	Status
			
D2.18	Fixed Platforms, Walkways, Stairways and Ladders Platforms, walkways, stairs, ladders and the like that give access to and around plant and equipment, machine rooms, attic spaces and other low use areas of the building are permitted provided that construction details are to AS1657.		Noted
D2.19	Doorways and doors Must not be revolving door, roller shutter or tilt door. Can be fitted with a sliding door if it leads directly to open space and can be opened manually under a force of not more than 110N and be fitted with a fail-safe device if the door is power operated.	<p>The automatic sliding doors extracted below are proposed to be installed at the ground floor main entry to the commercial lobby. These doors are required to be opened manually under a force of not more than 110N and be fitted with a fail-safe device if the door is power operated.</p>  <p>Due to security reasoning the doors are not proposed to fail open upon trip of the relevant active fire systems however the installation of a push to button exit accompanied by a battery backup source is proposed to be installed.</p> <p>Details of the non-compliance is to be submitted to an accredited fire engineer to determine the feasibility of justifying this</p>	Performance Solution

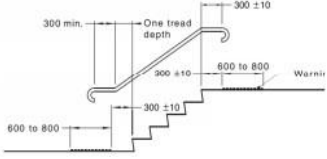
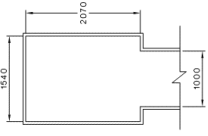
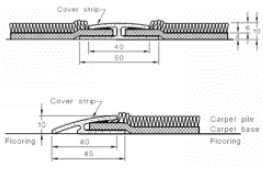


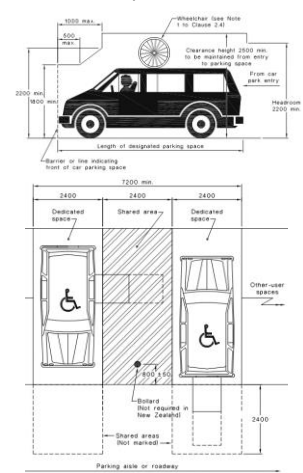


Clause	Description	Comment	Status
		non-compliance as part of a Performance Solution.	
D2.20	Swinging doors Defined exit doors that serve a part of a building with a floor area over 200m ² must swing outward in the direction of exit travel. Must not encroach more than 500mm into the required width of the stair or 100mm when fully open and swing in the direction of travel.	Door which service a room that contains a floor area greater than 200sqm and located within the required path of travel are required to swing in a direction that does not impede on occupants evacuating. Currently not all doors are documented within the design and as such a full assessment could not be undertaken to determine compliance. Areas include but not limited to the retail precincts associated to the Denison Street concourse Updated drawings which demonstrate compliance are required to be provided to SWP for review and acceptance upon application for the relevant approval.	Additional Details Required
D2.21	Operation of latch	Common OSD Areas All exit doors and doors in the path of travel must comply with provisions documented below in the extract from AS1428.1-2009 (A) Example of Lever Handle Design  Doors within the path of travel are required to achieve compliance with this clause. Door hardware and associated specifications are required to be submitted to the Certifying Authority upon application for the relevant Construction Certificate Metro Station Areas Doors in a Class 9b building that is a door to a required exit or forming part of a required exit or in the path of travel to a required exit are required to achieve compliance with the following: <ul style="list-style-type: none">A room accommodating less than 100 occupants requires a single hand downward action on a single device to conform with the requirements as extracted below from AS1428.1-2009	Additional Details Required



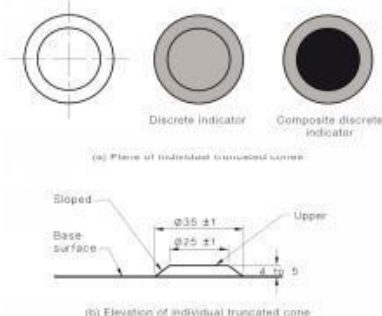
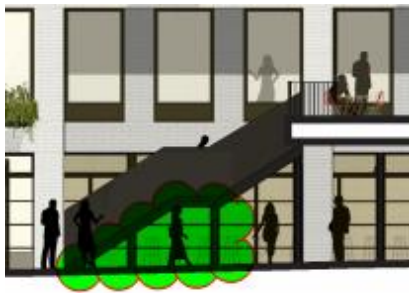
Clause	Description	Comment	Status
		 <ul style="list-style-type: none"> A room accommodating more than 100 occupants require a device such as a panic bar to allow a single hand pushing action.  <p>Door hardware and associated specifications are required to be submitted to the Certifying Authority upon application for the relevant Construction Certificate for review</p>	
D2.22	<p>Re-Entry from Fire-Isolated Exits</p> <p>Doors of fire-isolated exits must not be locked from the inside of a fire-isolated exit, unless:</p> <p><u>Option 1</u></p> <p>All doors are fitted with a fail-safe device that automatically unlocks the door upon activation of a fire alarm; AND</p> <ul style="list-style-type: none"> On at least every fourth storey, the doors are not able to be locked at all and are sign posted stating re-entry is available at that level. <p><u>Option 2</u></p> <ul style="list-style-type: none"> All doors are fitted with a fail-safe device that automatically unlocks the door upon activation of a fire alarm; AND An intercommunication or audible/visual alarm system is provided within the stair to assist persons who may accidentally be locked within the stair. 	<p>Levels which service a building over an effective height of 25m are required to facilitate re-entry provisions throughout the flights.</p> <p>Doors of fire-isolated exits must not be locked from the inside of a fire-isolated exit, unless all doors are automatically unlocked by a failsafe device by activation of a fire alarm.</p> <p>Additionally, on at least every fourth storey, the doors should not be locked at all and should be sign posted that re-entry is available at that level. Alternatively, an intercommunication or audible/visual alarm system is required within the stair to assist persons who may accidentally be locked within the stair.</p> <p>Details of the proposed method of re-entry is required to be submitted to the Certifying Authority upon application for the relevant Construction Certificate.</p> <p><i>Note: Should a deviation be proposed to this DTS method a performance based solution should be sought by the projects accredited fire engineer</i></p>	Additional Details Required
D2.23	<p>Signage to Fire Safety Doors</p> <p>An <u>automatic</u> door held open by an <u>automatic</u> hold-open device:</p> <p style="text-align: center;">FIRE SAFETY DOOR DO NOT OBSTRUCT</p> <p>Or for a <u>self-closing</u> door</p>	<p>Under Clause 183 of the Environmental Planning and Assessment Regulation 2000 a notice is to be displayed in a conspicuous location adjacent to a doorway providing access to but not within a fire isolated stairway, passageway or ramp. The words</p>	Additional Details Required



Clause	Description	Comment	Status
	FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN or for a door discharging from a fire-isolated <u>exit</u> FIRE SAFETY DOOR DO NOT OBSTRUCT	<p>"OFFENCES RELATING TO FIRE EXITS" are to be provided in letters at least 8mm high and the remaining words are to be at least 2.5mm high.</p> <p>The notice is to state the following:</p> <p>OFFENCES RELATING TO FIRE EXITS</p> <p>It is an offence under the Environmental Planning and Assessment Act 1979</p> <ul style="list-style-type: none"> (a) to place anything in or near this fire exit that may obstruct persons moving to or from this exit, or (b) to interfere with or obstruct the operation of any fire doors, or (c) to remove, damage or otherwise interfere with this notice. <p>A signage schedule is required to be provided to the Certifying Authority upon application of the relevant Construction Certificate</p>	
D2.24	Protection of openable windows Where the fall distance from the floor to the surface below is 4m or more or where a release device occurs to a required screen, an additional barrier at 865mm above floor level is required and must be non-climbable with gaps no greater than 125mm between elements.		Compliance readily achievable
D2.24	Timber stairways: Concession		N/A
NSW D2.101	Doors in the path of travel in an Entertainment Venue		N/A
Part D3 – Access for People with Disabilities An Access Report prepared by projects accredited access consultant is to be provided to accompany the main works Construction Certificate. Any deviation from the DTS Provisions an alternative solution is to be developed and endorsed under a Construction Certificate			
D3.1	General building access requirements Access is generally required for persons with a disability throughout all areas unless specifically exempted.	<p>Access is required throughout complying with AS1428.1 – 2009 as follows:</p> <ul style="list-style-type: none"> • From the pedestrian entrance on Ground floor to <u>and</u> within all areas normally used by the occupants. <p>A full review is to be undertaken by the access consultant with the provisions of a report to be submitted to the Certifying Authority upon application of the relevant Construction Certificate</p>	Additional Details Required
D3.2	Access to buildings External access to the building for people with a disability must be provided: - <ul style="list-style-type: none"> • From main pedestrian entry points at the allotment boundary • Through the principle pedestrian entrance • Through at least 50% of all pedestrian entries 	<p>Access must be provided in accordance with AS1428.1 – 2009</p> <p>A detailed report from an access consultant is required to be provided to the certifying Authority upon application of the relevant Construction Certificate</p>	Compliance Readily Achievable
D3.3	Parts of the Building to be Accessible	All common areas throughout the proposed building are to be readily	Additional

Clause	Description	Comment	Status
	All parts of the building must be accessible to people with a disability except for areas where access would be inappropriate due to the particular use or areas that would pose a health or safety risk to people with a disability.	<p>accessible and comply with the requirements of Part D3 of the BCA, AS142.8.1 – 2009 & the Disability (Access to premises – buildings) standard 2010</p> <p>Areas to be aware of include the following-</p> <ul style="list-style-type: none"> • Every ramp, except a fire isolated ramp, must comply with Clause 10 if AS 1428.1. • Every stairway, except a fire isolated stairway, must comply with Clause 11 of AS 1428.1.  <p>A fire isolated stairway must comply with Clause 11(f) and (g) of AS 1428.1.</p> <ul style="list-style-type: none"> • Every passenger lift must comply with Clause E3.6. • Access ways must have passing spaces and turning spaces complying with AS 1428.1.  <ul style="list-style-type: none"> • Pile height or pile thickness of carpets shall comply with the requirements of this Clause and AS 1428.1.  <p>Design Documentation including a full review is to be undertaken upon receipt of the construction issued set of drawings which are to include a full detailed set of specifications, drawings of stairways, ramps showing compliance against AS1428.1 – 2009.</p>	Details Required
D3.4	<p>Exemptions</p> <p>Certain areas may not need to be accessible if the area is deemed inappropriate because of the particular use or the area would pose a health or safety risk for people with disabilities.</p>		Noted

Clause	Description	Comment	Status
D3.5	<p>Accessible Car Parking</p> <p>The accessible parking spaces must comply with AS/NZS 2890.6 – 2009.</p> <p>General requirements are: -</p> <ul style="list-style-type: none"> • 2.4m x 5.4m. • 2.2m head clearance for access and egress routes to and from accessible car spaces. • 2.5m head clearances over accessible car spaces. • Flat even surfaces. • Designated and sign posted for disabled users. <p>Note – The carpark has the provision of 161 Car spaces. This therefore requires the precinct to be provided with the following number of accessible parking facilities:</p> <p>Class 5 – 2x Accessible Spaces</p> <p>Class 6 – 4 x Accessible Spaces</p>	<p>Accessible car parking spaces for people with disabilities are to be provided in compliance with AS/NZS 2890.6.</p>  <p>Details of height clearances including service drawings and Architectural sections & elevations of the accessible car spaces are to be submitted upon application of the Construction Certificate for review.</p> <p>Class 5 The class 5 portion of the development requires for every 100 car spaces, 1 space is required to accessible.</p> <p>Class 6 The class 6 portion of the development requires for every 50 car spaces, 1 space is required to accessible.</p>	Additional Details Required
D3.6	<p>Signage</p> <p>Braille and tactile signage complying with Specification D3.6 and incorporating the international symbol of access or deafness in accordance with AS1428.1 must identify every accessible sanitary facility and space with a hearing augmentation system.</p>  <p>Every doorway required to be provided with an exit sign under Clause E4.5 is to be provided with braille and tactile signage that states “EXIT” and identify the floor level “LEVEL #”.</p> 	<p>Signage details for the proposed works must be in accordance with AS1428.1 - 2009 and Specification D3.6 of the BCA.</p> <p>Details and a signage schedule are required to be submitted upon application of the relevant Construction Certificate</p>	Additional details required

Clause	Description	Comment	Status
	<p>Signage identifying ambulant accessible sanitary facilities in accordance with AS 1428.1 must be located on the door of the facility.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage 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.</p>		
D3.7	Hearing augmentation	This report considers base building provisions only. Should the fit out proceed to incorporate meeting rooms or the like then provisions of hearing augmentation to cater for the population will need to be considered to ensure compliance is met with this clause.	N/A
D3.8	<p>Tactile Indicators (TGSIs)</p> <p>Tactile indicators are to be provided to all stairways, ramps and escalators must be provided to warn people who are blind or have a vision impairment that they are approaching:</p> <ul style="list-style-type: none"> • a stairway, other than a fire-isolated stairway, • a ramp other than a fire-isolated ramp, step ramp, kerb ramp, or • in the absence of a suitable barrier an overhead: ○ Where head heights below non fire isolated stairways are proposed to be less than 2000mm a suitable barrier (rail or tactile indicators) is required to be documented on the drawings; and ○ an access way meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D3.4, if there is no kerb or kerb ramp at that point <ul style="list-style-type: none"> • Tactile ground surface indicators must comply with sections 1 and 2 of AS/NZS 1428.4.1 	<div style="text-align: center;">  <p>(a) Plan of individual truncated cone</p> <p>(b) Elevation of individual truncated cone</p> </div> <p>Tactile indicators are to be provided and shown on all stairs within the required Architectural drawings on submission for the Construction Certificate for review</p> <p><i>Note - All tactile indicators are required to achieve a 30% luminance contrast to achieve compliance</i></p> <p>Where head heights below non fire isolated stairways are proposed to be less than 2000mm a suitable barrier (rail or tactile indicators) is required to be documented on the drawings.</p> 	Additional details required



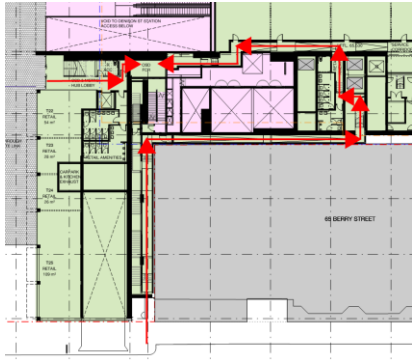
Clause	Description	Comment	Status
		Drawings demonstrating the implementation of a suitable barrier where required is to be documented within drawings issued for construction and review by the certifying authority	
D3.9	Wheelchair seating spaces in Class 9b assembly buildings		N/A
D3.10	Swimming pools		N/A
D3.11	Ramps		N/A
D3.12	Glazing on an access way 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 AS 1428.1.	Glazed shopfronts will need to have solid and non-transparent decals installed in accordance with AS 1428.1	Compliance readily achievable
Section E: Services and Equipment			
Part E1 – Fire Fighting Equipment			
E1.1	-	This Clause has deliberately been left blank	
E1.2	-	This Clause has deliberately been left blank	
E1.3	Fire hydrants The building requires a fire hydrant system in accordance with AS 2419.1 – 2005. Where a sprinkler system is installed in the building in accordance with AS 2118.1, AS 2118.4, AS 2118.6, FPAA101H or FPAA101D the fire hydrant booster protection requirements of clauses 7.3(c)(ii) and 7.3(d)(iii) of AS 2419.1 do not apply The fire brigade booster assembly is required to be installed in accordance with AS2419.1 – 2005 except that it may be located between 3.5m and 10m of the building where the assembly is protected by an adjacent fire-rated freestanding wall that— <ul style="list-style-type: none"> • achieves an FRL of not less than 90/90/90; and • extends not less than 1 m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3 m wide; and • extends to a height of not less than 2 m above finished ground level. 	Fire hydrants must conform to the pressure and flow requirements and distance limitations specified in AS 2419.1 – 2017 and AS2118.6-2012.	Compliance Readily Achievable
		Detailed hydraulic drawings & Specifications identifying the locations of all fire hydrants, the booster assembly and other associated system infrastructure are to be provided to the certifying Authority for review. The hydraulic engineer must ensure that compliant coverage is provided to all areas of the building from the internal hydrants and must provide design certification to accompany the drawings certifying the design complies with Clause E1.3 of the BCA and AS2419.1 – 2005 (noting any non-compliances, which are to be addressed as a performance solution). <i>Note 1: Hydrant hose must extend at least 1m into rooms to be counted for coverage</i> <i>Note 2: If full coverage is not provided from hydrants located within the stairs alone. Intermittent hydrant outlets can be installed to achieve a compliant coverage.</i> <i>Note 3: As the building has an effective height of greater than 25m the system is required to be installed in the configuration of a ring main</i>	Additional Details Required
E1.4	Fire Hose Reels <ul style="list-style-type: none"> • Fire hose reels are not required to be provided to the Class 5 elements of the 	Fire Hose Reels are applicable to the Class 6, 7a & 9b portions of the development Fire Hose reels and the associated	Compliance readily achievable



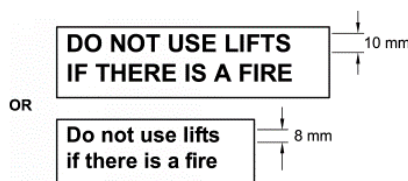
Clause	Description	Comment	Status
	building. <ul style="list-style-type: none"> Fire hose reels are to be installed internally within 4m of an exit or internally adjacent to a fire hydrant. Additional hose reels are permitted to be installed further then 4m from exit to achieve coverage. Fire hose reels are to be installed accordance with AS2441. Hoses are not permitted to pass through fire or smoke doors to achieve hose reel cover where coverage is not achieved due to the installation of such door an additional intermediate hose reel is required the be installed. 	requirements of clause E1.4 are not applicable to the class 5 portion of the development. Details hydraulic plans identifying the locations of all fire hose reels are to be provided to the certifying Authority for review. The hydraulic engineer must ensure that compliant coverage is provided to all areas of the building and must provide design certification to accompany the drawings certifying the design complies with Clause E1.4 of the BCA and AS2441 – 2005. Hydraulic plans showing details of the fire hose reels for the building will be required to be submitted to the Certifying Authority for review upon application of the relevant Construction Certificate	 Additional Details Required
		An omission of fire hose reels to service the smaller retail tenancies is proposed throughout the development	Performance Solution
E1.5	Sprinklers (It is understood a combined Fire Hydrant & Sprinkler System are proposed to be installed against AS2118.6)	The building is to be provided with a sprinkler system throughout in accordance with Specification E1.5, AS2118.1-2017 and AS2118.6-2012 due to the development having an effective height of greater than 25m in effective height.	Applicable
		Provisions of a sprinkler system and associated infrastructure are required to be demonstrated within the services drawings in accordance with clauses 1 – 11 & 13 of Specification E1.5 of the BCA	Compliance readily achievable
		The designing services engineer is to prepare the sprinkler system design incorporating but not limited to the following items and submit it to the certifying Authority for review: <ul style="list-style-type: none"> Sprinkler booster locations, schematics and specifications; Layout Schematics, Specifications and design documentation of the pump and valve sets and water tanks; Layout Schematics, Specifications and design documentation of the sprinkler system layout throughout the building The Hydraulic Engineer is to advise compliance of the system against the requirements of BCA Clause E1.5, BCA Specification E1.5 and AS2118.1-2017.	Additional Details Required
		The following performance solutions apply to the proposed design of the sprinkler system and are required to be documented as part of a performance solution:	Performance Solution



Clause	Description	Comment	Status
		<ul style="list-style-type: none">○ Omission of the 2 hour fire separation between sprinkler & non-sprinkler protected areas (Denison Street Concourse Retail & The Metro Station / Concourse)	
E1.6	Portable Fire Extinguishers	<p>Portable fire extinguishers are required to be provided in accordance with Table E1.6 of the BCA and Sections 1, 2, 3 and 4 of AS 2444.</p> <p>Portable fire extinguishers are also required to be installed in consideration of the following:</p> <ul style="list-style-type: none">• Be installed adjacent to internal Fire Hydrants; and• To cover Class AE or E fire risk associated with emergency services switchboards;• To cover Class F fire risks involving cooking oils and fats in kitchens; and• To cover Class A fire risks associated with a Class 5 building	Compliance readily achievable
E1.7	-	This Clause has deliberately been left blank	

Clause	Description	Comment	Status
E1.8 & Spec E1.8	<p>Fire Control Room</p> <p>Buildings over 50m in effective height require a fire rated fire control room with prescribed requirements for layout, access, location and equipment with the following features: -</p> <ul style="list-style-type: none"> • 2 hr FRL concrete/masonry construction. • Low hazard linings (per fire stairs) • No extraneous services passing through • 2 hr fire FRL doors • No penetrations through floor over • 2 hour fire dampers, etc • Doors must open into room • Two access points are needed - one from front entry foyer of building and one from a fire isolated exit / passageway • Contents required:- <ul style="list-style-type: none"> - FIP - Controls for pumps, fans and other emergency gear - Phone - Whiteboard and pinup board - Plan layout table - Tactical fire plans • May also contain <ul style="list-style-type: none"> - MECP - Lift annunciation panels - Gas/electric controls - Emergency generator backup • Dedicated fire isolated pressurisation system to ventilate with 30 air changes required. 	<p>The following performance solutions are proposed to be addressed by the projects fire engineer:</p> <ul style="list-style-type: none"> • Access to the fire control room requires FRNSW personnel to traverse a level change of greater than 300mm (approx. 600mm); and • The path of travel to the OSD undertaken outside the provisions considered in clause 8 of specification E1.8. <p>Access is not provided technically from the front entrance of the OSD entry and is not provided with a consistent access via a fire isolated passageway/stair.</p> 	Performance Solution
E1.9	<p>Fire Services During Construction</p> <p>Fire services are required during construction, including fire hydrants and hose reels which must be active and operational after the building reaches a construction stage effective height of 12m.</p> <p>When the building reaches 12m effective height:-</p> <ul style="list-style-type: none"> • All required hydrants and hose reels must be operational on every storey covered by a roof or floor slab over, except for the two uppermost storeys. • Any required booster connections must be installed. 	<p>BCA compliance with respect to fire services during construction can be problematic as hydrants with required pressures and flows and booster connections often cannot be achieved at the required time. A temporary fire protection system, possibly with temporary boosters and no fire pumps, may need to be agreed with the fire brigade. This needs to be put in place early in the construction programme and may require liaison with the builder and his fire services contractor.</p>	Compliance Readily achievable
E1.10	Provisions for special hazards		N/A
Part E2 – Smoke Hazard Management			
E2.1	Applicable of Part	<p>Part is not applicable to</p> <ul style="list-style-type: none"> • open deck car parks • open spectator stands • a Class 8 electricity network substation with a floor area not more than 200m² • storerooms, etc. less than 30m² 	Noted



Clause	Description	Comment	Status
		<ul style="list-style-type: none"> sanitary compartments plant rooms or the like 	
E2.2 & Spec E2.2a	Smoke Hazard Management Commercial & Retail Buildings The following smoke hazard management systems are required for the building: <ul style="list-style-type: none"> <u>Stair pressurisation</u> throughout all the fire isolated stairs in accordance with AS 1668.1 – 2015 for the fire stairs; <u>Zone smoke control system</u> in accordance with AS 1668.1 – 2015 to all storeys containing Class 5 commercial and Class 6 retail portions; <u>Smoke detection system</u> in accordance with Clause 6 of Specification E2.2a of the BCA to activate:- <ul style="list-style-type: none"> Stair pressurisation system to fire-isolated exits; and Zone smoke control system; A Building occupant warning system is required to be installed throughout the building in accordance with Clause 7 of Specification E2.2a. The proposed BOWS system is to be adaptive for provisions associated with EWIS which is required to be adopted in accordance with Clause E4.9 of the BCA and AS1670.4-2018 The basement carpark provided with a mechanical ventilation system in accordance with AS 1668.2 must also comply with clause 5.5 of AS/NZS 1668.1 except that- <ul style="list-style-type: none"> Fans with metal blades suitable for operation at normal temperature may be used; and The electrical power and control cabling need not be fire rated. 	Details demonstrating compliance with the relevant standards such as however not limited to drawings, specifications and design certification are required to be submitted to the Certifying Authority from the relevant services Engineer for approval upon application of the relevant Construction Certificate It is recommended that the project's fire services and mechanical engineers review the smoke hazard managements requirements and provide comment (where applicable) on any co-ordination issues.	Additional Details Required
		It is recommended to liaise with the project's fire engineer to determine any scope in terms of opportunities for performance solutions in relation to smoke hazard management systems. SWP consider that the following performance solutions are to be considered by the projects fire engineer: <ul style="list-style-type: none"> Omission of the zone smoke control to the level 00 (Miller Street & Denison Street) retail precincts; and Omission of zone smoke control to the southern retail building. 	Performance Solution
E2.3	Provisions of special hazards		N/A
Part E3 – Lift Installations			
E3.1	Lift Installations Electric and electrohydraulic lifts must comply with the design requirements of BCA Specification E3.1.	Certification of lift design to be provided	Compliance readily achievable
E3.2	Stretcher Capacity Lifts Buildings greater than 12m in effective height require a lift sized to accommodate a stretcher of 2m x 0.6m x 1.4m high. Where emergency lifts are proposed the lift must serve every level to which stretcher lift access is provided.	Ensure a suitably sized lift serves each level.	Compliance readily achievable
E3.3	Warning Against Use of Lift in Fire Warning signage is required at lift doors advising that lifts should not be used in the event of a fire.	The warning sign is to comply with the details and dimensions set out in Figure E3.3 of the BCA. 	Compliance readily achievable



Clause	Description	Comment	Status
E3.4	Emergency Lifts All of the lifts provided throughout this development are to have emergency Lift requirements prescribed size, operation and fire isolation are required in buildings where: - <ul style="list-style-type: none"> the building has an effective height over 25m; Where more than two passenger lifts serve a storey, two emergency lifts must be provided, and these must be in separate shafts if multiple lift shafts occur; and As the building has an effective height that exceeds 75m, the lift must have a 600kg rating if not provided with a stretcher facility or a 900kg rating if stretcher facility is provided. 	The following requirements apply to an emergency lift: - <ul style="list-style-type: none"> Must serve all storeys served by a passenger lift; and An emergency lift is required to be contained within a fire isolated shaft constructed in accordance with the requirements of clause C2.10 of the BCA (Shaft having an FRL of not less than 120/120/120) 	Compliance Readily Achievable
E3.5	Landings		Complies
E3.6	Passenger lifts	Every passenger lift must be one of the types identified in Table E3.6a, have accessible features in accordance with Table E3.6b and not rely on a constant pressure device for its operation if the lift car is fully enclosed.	Compliance readily achievable
E3.7	Fire Service Control	Where lifts serve a storey above 12m in effective height: - <ul style="list-style-type: none"> A fire service control switch is required for each lift or lift group; and A lift car fire service drive control is required for each lift. 	Compliance readily achievable
E3.8	Aged care buildings		N/A
E3.9	Fire service recall control switch	The fire service control switch must be located at the landing nominated by the appropriate authority and, when activated, must return all lifts to the nominated floor. If a lift car drive control has been activated, it shall override the landing fire service control switch	Compliance readily achievable
E3.10	Lift car fire service drive control switch	The lift car service drive control must be activated from within the lift car. The switch is to be located between 600mm and 1500mm above the lift car floor and be labelled 'FIRE SERVICE' in indelible white lettering on red background. The "OFF" and "ON" positions are to be identified.	Compliance readily achievable
Part E4 – Emergency Lighting, Exit and Warning Systems			
E4.1	-	This clause has been intentional left blank	-
E4.2	Emergency lighting requirements Emergency lighting is to be provided throughout the building.	Emergency lighting is to be provided in: <ul style="list-style-type: none"> Every fire-isolated stairway, fire-isolated ramp or fire-isolated passageway. Every passageway, hallway, corridor or the like, that is part of the path of travel to an exit. In every room having a floor area more than 100m² that does not open to a 	Compliance readily achievable



Clause	Description	Comment	Status
		<p>corridor or space that has emergency lighting or to a road or open space.</p> <ul style="list-style-type: none"> • In any room having a floor area more than 300m². • In every required non-fire isolated stairway • To every room or space that has public access in a Class 6 building if: <ul style="list-style-type: none"> • the floor area is more than 300m²; • or if any point on the floor is more than 20m from the nearest doorway opening directly to the road or open space; or • if the egress involves a vertical rise within the building of more than 1.5m. <p>Design Documentation including electrical specifications, plans and a design certificate are to be provided to the Certifying Authority amongst the documentation submitted for the relevant Construction Certificate application for further review</p>	
E4.3	Measurement of distances		Noted
E4.4	Design and operation of emergency lighting	Emergency lighting must comply with to AS2293.1	Compliance readily achievable
E4.5	<p>Exit signs</p> <p>Exit signs are to be provided in accordance with Clause E4.5 of the BCA.</p>	<p>Exit signs must be clearly visible to a person approaching the exit and must be installed on, above or adjacent to;</p> <ol style="list-style-type: none"> 1. A door providing direct egress from a storey to a stairway, passageway or ramp serving as a required exit; 2. A door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space; and 3. A door serving as or forming part of a required exit in a storey required to be provided with emergency lighting. <p>Design Documentation including electrical plans, specifications and a design certificate are to be provided to the certifying Authority upon application of the relevant Construction Certificate</p>	Additional details required
E4.6	Direction signs	<p>Where an exit is not readily apparent then exit signs with directional arrows must be installed in appropriate positions in corridors, hallways, lobbies and the like indicating the direction to a required exit in accordance with Clause E4.6 of the BCA.</p> <p>Design Documentation including electrical plans, specifications and a design certificate are to be provided to the certifying Authority upon application of the relevant Construction Certificate</p>	Additional details required



Clause	Description	Comment	Status
E4.7	Class 2 and 3 buildings and Class 4 parts: Exemptions		N/A
E4.8	Design and operation of exit signs Exit signs are to operate in accordance with AS 2293.1. Photo luminescent exit sign are to comply with Specification E4.8		Compliance readily achievable
E4.9	Emergency warning and intercom system As the building has an effective height of greater than 25m a Emergency Warning Intercom System (EWIS) complying with AS 1670.4 must be installed throughout.	Details demonstrating compliance and design certification will be required from services consultants at Construction Certificate stage.	Additional details required
Section F: Health and Amenity			
Part F1 – Damp and Weatherproofing			
F1.0	Water Proofing of External Walls Weatherproofing of external wall systems must be in accordance with BCA Verification Method FV1.	A test report on the proposed wall system is to be provided to the certifying Authority for review. The test report must conform that the external wall complies with the provisions of the performance requirement FP1.4.	Additional details required
F1.1	Stormwater Drainage Stormwater drainage must comply with AS/NZS 3500.3.	Hydraulic drawings and design certification to be provided at Construction Certificate stage.	Compliance readily achievable
F1.2	-	This clause has deliberately been left blank	-
F1.3	-	This clause has deliberately been left blank	-
F1.4	External above ground membranes External waterproofing membrane systems for roofs, decks, balconies and the like must comply with AS4654 Parts 1 and 2.	The standard membrane detailing for waterproofing including minimum upturn termination lengths, requirements for stepped balcony details at doorways and windows and provision of continuous grates where stepping does not occur.	Compliance readily achievable
F1.5	Roof coverings		N/A
F1.6	Sarking	Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.	Compliance readily achievable
F1.7	Water Proofing of Wet Areas in Buildings	Water proofing of wet areas within a building to comply with AS 3740.	Compliance readily achievable
F1.8	-	This clause has deliberately been left blank	-
F1.9	Damp-proofing Moisture from the ground must be prevented from reaching the lowest timber element of the building should there be any and the walls above the lowest floor joists, the walls above the dam proof course and the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. Damp proof course must consist of a material that complies with AS/NZS 2904 or an impervious termite shield in accordance with AS 3660.1.	Details of the method of protection against moisture and other associated termite attack should be documented within the specifications and on the drawings proposed for construction (Termite protection is only applicable to and confirmation should be given for the use of timber products)	Additional details required



Clause	Description	Comment	Status
F1.10	Damp-proofing of floors on the ground A vapour barrier in accordance with AS2870 is to be provided beneath the basement floor slab.		Compliance Readily Achievable
F1.11	Provision of floor wastes		N/A
F1.12	Subfloor ventilation		N/A
F1.13	Glazed assemblies Windows, sliding doors with a frame, adjustable louvres, shopfronts and window walls with one piece framing in an external wall must comply with AS 2047 requirements for resistance to water penetration.		Compliance readily achievable
Part F2 – Sanitary and Other Facilities			
F2.1	Facilities in residential buildings		N/A
F2.2	Calculation of number of occupants and fixtures		Noted
F2.3	Facilities in Class 3 to 9 buildings Toilet facilities are required in appropriate numbers based on the number of persons accommodated.	Amenities documented within the OSD and the podium office levels comply with the proposed population numbers (based off a floor area calculation)	Complies
		A shortfall of amenities have been documented specifically considering the retail tenancies. The shortfall is due to Tenancy 27 which will be provided with amenities once fit out occurs. This fit out will incorporate the additional amenities required to cater for the overall population based around guidance provided by Lendlease. <i>Please refer to appendix F2.3 of this report to determine the levels which have a current shortfall.</i>	Additional Details Required
F2.4	Facilities for Persons with Disabilities	Accessible unisex toilets for people with a disability are required on each storey and at 50% of toilet banks on any storey and accessible facilities are to be constructed to AS1428.1 – 2009. Each bank of toilets where there is more toilets in addition to an accessible unisex facility at the bank of toilets , a sanitary compartment suitable for use for a person with an ambulant disability in accordance with clause 16 of AS1428.1-2009	Compliance readily achievable
		Floor plans, internal elevations and relevant specifications of the proposed toilet blocks including accessible and ambulant facilities compliant against clauses 15 – 17 of AS1428.1-2009 are to be provided to the certifying Authority for review	Additional details required
F2.5	Construction of sanitary compartments Where clear space between closet pan and doorway is less than 1.2m, doors must open outwards, slide or be readily removable from outside.	All hinged doors that swing inward to sanitary facilities and do not comply with achieving a 1200mm clearance to pan are required to be installed with lift-off hinges	Compliance readily achievable



Clause	Description	Comment	Status
F2.6	Interpretation: Urinals and washbasins	Each 600mm length of a continuous urinal trough is counted as 1 urinal.	Noted
F2.7	<i>(NSW variation – Deleted)</i>	-	-
F2.8	Waste management		N/A
F2.9	Accessible adult change facilities Note: applies to- <ul style="list-style-type: none"> • Shopping centre >3,500 people • Sports venue >35,000 people • Swimming pool >70m perimeter • Museum, art gallery, theatre >1,500 patrons • Airport terminal 		N/A
Part F3 – Room Heights			
F3.1	Height of rooms and other spaces The following ceiling heights apply- <u>Class 5 & 6 portion:</u> <ul style="list-style-type: none"> • Corridor, passageway or the like – 2.1m; • General habitable areas – 2.4m; • Above a stairway, landing or the like – 2m measured vertically above nosing of stairway treads or floor surface of landing; • A commercial kitchen – 2.4m; and • Bathroom, sanitary compartment, car parking area store room or the like – 2.1m <u>Class 7a portions:</u> <ul style="list-style-type: none"> • General floor areas – 2.4m; • Basement carpark – 2.1m (Note requirements under AS/NZS2890.6 – 2006 requires 2.2m leading to accessible car spaces and 2.5m above the actual accessible car spaces; • Corridor, passageways or the like – 2.1m; • Bathroom, sanitary compartment, car parking area store room or the like – 2.1m; and • Above a stairway, landing or the like – 2m measured vertically above nosing of stairway treads or floor surface of landing. 	The project Architect is to provide detailed sections to the Certifying Authority for an assessment at Construction Certificate stage to verify compliance of the relevant ceiling heights.	Additional Details Required
Part F4 – Light and Ventilation			
F4.1	Provisions of natural light		N/A
F4.2	Methods and extent of natural lighting		N/A
F4.3	Natural Light borrowed from adjoining room		N/A



Clause	Description	Comment	Status
F4.4	Artificial lighting The artificial lighting system must comply with AS/NZS 1680.0.	Design details and certification from an electrical engineer is required	Compliance readily achievable
F4.5	Ventilation of rooms Ventilation shall be provided throughout the building in by means of natural ventilation complying with Clause F4.6 or mechanical ventilation complying with the requirements of AS1668.2 as required by Clause F4.5 of the BCA.	Mechanical details including drawings, specification and a design certificate are required to be provided to the Certifying Authority from the projects Mechanical Engineer	Additional Details Required
F4.6	Natural ventilation	Natural ventilation must be provided via permanent openings, windows, doors or other devices which can be opened and achieve an aggregate size not less than 5% of the floor area of the room required to be ventilated.	Compliance readily achievable
F4.7	Ventilation borrowed from adjoining room		N/A
F4.8	Restriction on the location of sanitary compartments		Complies
F4.9	Airlocks	If a sanitary compartment opens directly into a space, which is occupied by more than one person one of the following is required to be installed / implemented: 1. Implementation of an airlock, hallway or other room with a floor area of not less than 1.1m ² and fitted with self closing doors; or 2. The sanitary compartment must be provided with mechanical exhaust ventilation and the doorway serving the room adequately screened from view	Noted
F4.10	-	This clause has intentionally been left blank	-
F4.11	Carparks	Basement carparks must be provided with a system of mechanical ventilation complying with AS 1668.2. Design certification and other associated documentation such as drawings and system specifications from mechanical engineer are to be provided to demonstrate compliance <i>Note – Should the use of Jet fans be proposed the Fire Safety Engineer is to assess the non-compliance and address via means of a performance Solution</i>	Additional Details Required
F4.12	Kitchen Local Exhaust Ventilation A commercial kitchen must be provided with a kitchen exhaust hood complying with AS/NZS 1668.1 and AS 1668.2, where: <ul style="list-style-type: none"> any cooking apparatus has a total maximum electrical power input exceeding 8kW, or a total gas power input exceeding 29 MJ/h, or the total maximum power input to more than one apparatus exceeds 0.5kW electrical power or 1.8 MJ gas per metre square of the room or enclosure. 	Mechanical drawings and specifications are to be submitted to the Certifying Authority from a Mechanical Engineer if exhaust provisions are to be installed. Adequate provisions need to be made for the future use of these tenancies and a system adopted to cater for the largest capacity of output for the use.	Additional Details Required



Clause	Description	Comment	Status
Part F5 – Sound Transmission and Insulation			N/A
Part F6 – Condensation management			N/A
Section G: Ancillary Provisions			
Part G1- Minor Structures and components			
G1.1	Swimming pools		N/A
G1.2	Refrigerated chambers, strong rooms and vaults		N/A
G1.3	Outdoor play spaces		N/A
G1.101	Provision for cleaning windows A safe manner of cleaning windows is to be provided as windows are located 3 or more storeys above ground level.	The windows must either be able to be cleaned wholly from within the building, or a method complying with the Construction Safety Act 1912 and Regulations is required.	Compliance readily achievable
Part G2 - Boilers, pressure vessels, heating appliances, fire places, chimneys and flues			N/A
Part G3 - Atrium Construction			N/A
Part G4 - Construction in Alpine Areas			N/A
Part G5 - Construction in Bushfire Prone Areas			N/A
Part G6 – Occupiable outdoor areas			N/A
Section H: Special Use Buildings – Auditoriums, Public Halls, Public Transport Buildings			N/A
Part H1 - Class 9b Buildings			N/A
Part H2 - Public Transport Buildings			N/A for the OSD portion of the development
Part H3 - Farm Building and Farm Sheds			N/A
NSW Section J: Energy Efficiency			
Energy Efficiency for buildings requires buildings to reduce greenhouse gas emissions by efficiently using energy. A building's services must have features that facilitate the efficient use of energy. The discipline of Energy Efficiency with the BCA has become a specialised field where compliance with BCA Section J is to be certified with the issue of a Certificate of Compliance – Design from the relevant Services Engineer/Consultant. The purpose of this section is to provide a brief explanation of which areas are to achieve compliance with BCA Section J – Energy Efficiency during design and construction. The BCA should be referenced for exact requirements, clarification and further explanation.			
Section J	Energy efficiency measures Energy efficiency measures are prescribed for the following building elements to limit energy consumption:- <ul style="list-style-type: none"> • Building fabric • External glazing • Building sealing • Air movement. • Air-conditioning and ventilation systems. • Artificial lighting and power • Hot water supply 	Compliance assumed, although further information is required to confirm compliance. A performance based BCA JV3 assessment may be adopted for the project if compliance with BCA deemed to satisfy provisions are problematic.	Compliance readily achievable



Clause	Description	Comment	Status
	<ul style="list-style-type: none">Access for maintenance		
NSW Subsection J(A) & NSW J(B) Energy Efficiency - Class 2 - 9 Buildings			
<p>Note: An assessment is to be carried out by an energy efficiency consultant on the proposed design and a report provided with the documentation for Construction Certificate.</p> <p>An inspection and completion report will also be required upon completion from the suitably qualified consultant demonstrating compliance with their construction issued report.</p> <p><u>Due to the transitional period applicable for section J it has been assumed that a substantial construction certificate will be applied for and as such will lock in the BCA 2016 (amendment 1) version of section J for the project.</u></p>			



15. Appendix A – Referenced Documentation

The following documentation issued by Batesmart was used in the preparation of this report:

Drawing title	Drawing Number	Date	Drawn
Denison Street Plan	SMCSWSVI-LLC-SVC-AT-DWG-521000	24/06/19	Bates Smart
Miller Street Plan	SMCSWSVI-LLC-SVC-AT-DWG-521001	24/06/19	Bates Smart
Level 01 Plan (Podium Office)	SMCSWSVI-LLC-SVC-AT-DWG-521010	24/06/19	Bates Smart
Level 02 Plan (OSD Lobby)	SMCSWSVI-LLC-SVC-AT-DWG-521020	24/06/19	Bates Smart
Level 03 Plan (Podium Office + Plant)	SMCSWSVI-LLC-SVC-AT-DWG-521030	24/06/19	Bates Smart
Level 03 Mezzanine Plan (Podium Office L04)	SMCSWSVI-LLC-SVC-AT-DWG-521035	24/06/19	Bates Smart
Level 04 Plan (Podium Office)	SMCSWSVI-LLC-SVC-AT-DWG-521040	24/06/19	Bates Smart
Level 05 Podium Office and Tower	SMCSWSVO-LLC-SVC-AT-DWG-420050	24/06/19	Bates Smart
Level 06-14 Low Rise Typical	SMCSWSVO-LLC-SVC-AT-DWG-420060	24/06/19	Bates Smart
Level 15 Mid Level Plant	SMCSWSVO-LLC-SVC-AT-DWG-420150	24/06/19	Bates Smart
Level 16-27 Mid Rise Typical	SMCSWSVO-LLC-SVC-AT-DWG-420160	24/06/19	Bates Smart
Level 28 Mid Rise Lift Overhead	SMCSWSVO-LLC-SVC-AT-DWG-420280	24/06/19	Bates Smart
Level 29 Mid Rise Terrace	SMCSWSVO-LLC-SVC-AT-DWG-420290	24/06/19	Bates Smart
Level 30-39 High Rise Typical	SMCSWSVO-LLC-SVC-AT-DWG-420300	24/06/19	Bates Smart
Level 40 Roof Plant	SMCSWSVO-LLC-SVC-AT-DWG-420400	24/06/19	Bates Smart
Level 43 Roof	SMCSWSVO-LLC-SVC-AT-DWG-420430	24/06/19	Bates Smart
North Elevation	SMCSWSVO-LLC-SVC-AT-DWG-430001	24/06/19	Bates Smart
West Elevation	SMCSWSVO-LLC-SVC-AT-DWG-430002	24/06/19	Bates Smart
South Elevation	SMCSWSVO-LLC-SVC-AT-DWG-430003	24/06/19	Bates Smart
East Elevation	SMCSWSVO-LLC-SVC-AT-DWG-430004	24/06/19	Bates Smart
North/South Section	SMCSWSVI-LLC-SVC-AT-DWG-540001	24/06/19	Bates Smart
East/West Section	SMCSWSVI-LLC-SVC-AT-DWG-540002	24/06/19	Bates Smart
Laneway Section	SMCSWSVI-LLC-SVC-AT-DWG-540003	24/06/19	Bates Smart
North/South Section	SMCSWSVI-LLC-SVC-AT-DWG-540005	24/06/19	Bates Smart



16. Appendix B – Statutory Fire Safety Measures

Schedule of Statutory Fire Safety Measures

SSDA OSD Areas

Measure	Standard of Performance
Access panels, doors and hoppers to fire resisting shafts	BCA2019 Clause C3.13 and tested prototypes (AS 1530.4 – 2014 and AS 4072.1-2005)
Automatic fail safe devices	Scheduled devices release upon trip of smoke detection and/or sprinkler activation in accordance with BCA2019 Clauses D2.19 and D2.21.
Automatic fire detection and alarm system (smoke detection system)	BCA2019 Clause 4 of Specification E2.2a, AS 1670.1 – 2018
Automatic fire detection and alarm system (smoke detection system to operate zone smoke control or stair pressurisation system)	BCA2019 Clause 7 of Specification E2.2a and AS/NZS 1668.1 – 2015 and AS 1670.1 - 2015
Automatic fire detection and alarm system (smoke detection system to automatically shut down air-handling system)	BCA2019 Clause 6 and 8 of Specification E2.2a and AS/NZS 1668.1 – 2015 (System monitoring in accordance with AS1670.3-2018)
Automatic fire suppression systems (<i>Combined sprinkler and hydrant system</i>)	BCA2019 Specification E1.5, AS2118.1-2017, AS2419.1-2005 and AS 2118.6-2012 (combined sprinkler and hydrant systems in multistorey buildings)
Emergency lifts	BCA2019 Clause E3.4
Emergency lighting	BCA2019 Clause E4.2, E4.4 and AS 2293.1 – 2005
Emergency Warning Intercommunication System	BCA2019 Clause E4.9 and AS 1670.4 – 2018
Exit signs	BCA2019 Clause E4.5, NSW E4.6, E4.8 and AS 2293.1 – 2005
Fire control room	BCA2019 Specification E1.8
Fire dampers	BCA2019 Clause C3.15 and AS/NZS 1668.1 – 2015 (AS 1682.1-1990 and AS 1682.2-1990)
Fire doors	BCA2019 Specification C3.4 and AS 1905.1 – 2015
Fire hydrants systems	BCA2019 Clause E1.3, AS 2419.1 – 2005 and AS2118.6-2012
Fire seals protecting opening in fire resisting components of the building	BCA2019 Clause C3.15, Specification C3.15 and AS 1530.4 –2014 and AS 4072.1 – 2005 and installed in accordance with the tested prototype. [Note: Systems tested to AS 1530.4 prior to 1 January 1995 need not be retested to comply with the provisions in AS 4072.1]
Hose reel system	BCA2019 Clause E1.4 and AS 2441 – 2005
Mechanical air handling system (<i>automatic shutdown of air-handling system</i>)	BCA2019 Clause E2.2 and AS/NZ 1668.1-2015
Mechanical air handling system (<i>automatic air pressurisation system</i>)	BCA2019 Table E2.2a and AS/NZ 1668.1-2015
Mechanical air handling system (<i>zone smoke control system</i>)	BCA2019 Table E2.2a and AS/NZ 1668.1-2015
Mechanical air handling system (<i>carpark mechanical ventilation system</i>)	BCA2019 Table E2.2a and Clause 5.5 of AS/NZ 1668.1-2015 and fans with metal blades suitable for operation at normal temperature may be used and the electrical power and control cabling need not be fire rated
Portable fire extinguishers	BCA2019 Clause E1.6 and AS 2444 – 2001
Wall wetting sprinkler and drencher systems	BCA2019 Clause C3.4 and AS 2118.2 – 1995
Warning and operational signs	BCA2019 Clauses D2.23, D3.6, E3.3, E3.9, E3.10 and E1.8

Note the fire safety schedule will need to be amended subject to the inclusion of a fire engineered performance solution.



CSSI 'metro-box' areas forming part of the OSD uses

Measure	Standard of Performance
Access panels, doors and hoppers to fire resisting shafts	BCA2016 (AMENDMENT 1) Clause C3.13 and tested prototypes (AS 1530.4 – 2014 and AS 4072.1-2005)
Automatic fail safe devices	Scheduled devices release upon trip of smoke detection and/or sprinkler activation in accordance with BCA2016 (AMENDMENT 1) Clauses D2.19 and D2.21.
Automatic fire detection and alarm system (within atriums)	BCA2016 (AMENDMENT 1) Specification G3.8 and AS 1670.1 – 2015
Automatic fire detection and alarm system (smoke detection system to operate a stair pressurisation system)	BCA2016 (AMENDMENT 1) Clause 5 of Specification E2.2a and AS/NZS 1668.1 – 2015 and AS 1670.1 - 2015
Automatic fire detection and alarm system (smoke detection system to automatically shut down air-handling system)	BCA2016 (AMENDMENT 1) Clause 5 of Specification E2.2a and AS/NZS 1668.1 – 2015
Automatic fire suppression systems (<i>Combined sprinkler and hydrant system</i>)	BCA2016 (AMENDMENT 1) Specification E1.5, AS2118.1-2017, AS2419.1-2005 and AS 2118.6-2012 (combined sprinkler and hydrant systems in multistorey buildings)
Emergency lifts	BCA2016 (AMENDMENT 1) Clause E3.4
Emergency lighting	BCA2016 (AMENDMENT 1) Clause E4.2, E4.4 and AS 2293.1 – 2005
Sound System and Intercommunication System for Emergency Purposes (aka EWIS)	BCA2016 (AMENDMENT 1) Clause E4.9, Specification G3.8 and AS 1670.4 – 2015
Exit signs	BCA2016 (AMENDMENT 1) Clause E4.5, NSW E4.6, E4.8 and AS 2293.1 – 2005
Fire control room	BCA2016 (AMENDMENT 1) Specification E1.8
Fire dampers	BCA2016 (AMENDMENT 1) Clause C3.15 and AS/NZS 1668.1 – 2015 (AS 1682.1-1990 and AS 1682.2-1990)
Fire doors	BCA2016 (AMENDMENT 1) Specification C3.4 and AS 1905.1 – 2015
Fire hydrants systems	BCA2016 (AMENDMENT 1) Clause E1.3 and AS 2419.1 – 2005
Fire seals protecting opening in fire resisting components of the building	BCA2016 (AMENDMENT 1) Clause C3.15, Specification C3.15 and AS 1530.4 –2014 and AS 4072.1 – 2005 and installed in accordance with the tested prototype.
Hose reel system	BCA2016 (AMENDMENT 1) Clause E1.4 and AS 2441 – 2005
Mechanical air handling system (<i>automatic shutdown of air-handling system</i>)	BCA2016 (AMENDMENT 1) Clause E2.2 and AS/NZ 1668.1-2015
Mechanical air handling system (<i>automatic air pressurisation system</i>)	BCA2016 (AMENDMENT 1) Table E2.2a and Specification G3.8 and AS/NZ 1668.1-2015
Mechanical air handling system (<i>automatic smoke exhaust system</i>)	BCA2016 (AMENDMENT 1) Table E2.2b, Specification E2.2b and G3.8, and AS/NZ 1668.1-2015
Mechanical air handling system (<i>carpark mechanical ventilation system</i>)	BCA2016 (AMENDMENT 1) Table E2.2a and Clause 5.5 of AS/NZ 1668.1-2015 and fans with metal blades suitable for operation at normal temperature may be used and the electrical power and control cabling need not be fire rated
Portable fire extinguishers	BCA2016 (AMENDMENT 1) Clause E1.6 and AS 2444 – 2001
Smoke detectors and heat detectors (<i>detectors for the automatic closing operation of fire shutters</i>)	BCA2016 (AMENDMENT 1) Clause C3.5 and AS 1670.1 – 2015
System Monitoring	BCA2016 (AMENDMENT 1) Clause 7 of Specification E2.2a and AS1670.1-2004
Warning and operational signs	BCA2016 (AMENDMENT 1) Clauses D2.23, D3.6, E3.3, E3.9, E3.10 and E1.8

Note the fire safety schedule will need to be amended subject to the inclusion of a fire engineered performance solution.



17. Appendix C1.1 – Fire Rating Requirements

Type A Construction: FRL of Building Elements				
Building element	Class of building - FRL: (in minutes)			
	Structural adequacy/Integrity/Insulation			
	2, 3 or 4 part	5, 9 or 7a	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is-				
For loadbearing parts-				
less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/60	120/ 90/ 90	180/180/120	240/240/180
3 or more	90/60/30	120/ 60/ 30	180/120/90	240/180/ 90
For non-loadbearing parts-				
less than 1.5 m	-/90/90	- /120/120	- /180/180	- /240/240
1.5 to less than 3 m	-/60/60	- / 90/ 90	- /180/120	- /240/180
3 m or more	- / - / -	- / - / -	- / - / -	- / - / -
EXTERNAL COLUMN not incorporated in an external wall-				
For loadbearing columns	90/ - / -	120/ - / -	180/ - / -	240/ - / -
For non-loadbearing columns	- / - / -	- / - / -	- / - / -	- / - / -
COMMON WALLS				
and FIRE WALLS	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS-				
Fire-resisting lift and stair shafts-				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-loadbearing	- /90/90	- /120/120	- /120/120	- /120/120
Bounding public corridors, public lobbies and the like-				
Loadbearing	90/90/90	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- /60/60	- / - / -	- / - / -	- / - / -
Between or bounding sole-occupancy units-				
Loadbearing	90/90/90	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- /60/60	- / - / -	- / - / -	- / - / -
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of Combustion-				
Loadbearing	90/90/90	120/ 90/ 90	180/120/120	240/120/120
Non-loadbearing	- /90/90	- / 90/ 90	- /120/120	- /120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES				
and COLUMNS	90/ - / -	120/ - / -	180/ - / -	240/ - / -
FLOORS	90/90/90	120/120/120	180/180/180	240/240/240
ROOFS	90/60/30	120/ 60/ 30	180/60/30	240/ 90/ 60



18. Appendix C1.10 – Early Fire Hazard Properties for Materials

Floor materials, floor coverings and wall and ceiling lining materials are required to comply with BCA prescribed fire hazard properties.

Floor Linings and Floor Coverings	
General Non Sprinklered Areas	Minimum 2.2 (or 4.5 for Class 3 areas and 9a patient care areas) kw/m ² critical radiant heat flux and, a maximum smoke development rate of 750 percent minutes.
General Sprinklered Areas	Minimum 1.2(or 2.2 for Class 3, 9a patient care, and 9c residential use areas) kw/m ² critical radiant heat flux
Fire Isolated Exits and Fire Control Rooms	Minimum 2.2/(or 4.5 for Class 3, 9a and 9c areas) kw/m ² critical radiant heat flux
Lift Cars	Minimum 2.2 kw/m ² critical radiant heat flux

Wall Linings and Ceiling Linings	
Generally	Variously Group 1,2, or 3 materials (more restrictive Group number for non-sprinklered areas, public corridors, health care corridors and other prescribed locations) when tested to AS/ISO 9705 or clause 3 of BCA Spec A2.4 and AS/NZ 3837
Fire Isolated Exits	Group 1 material when tested as above
Lift Cars	Group 1 or 2 materials when tested as above

In addition, in non-sprinklered areas, wall and ceiling linings must have a smoke growth rate index not more than 100 or an average specific extinction area less than 250m²/g.

Other than above, construction materials generally need to achieve as1530.3 early fire hazard indices requirements as follows:	
Generally	Spread of flame Index not > 9 Smoke developed index not > 8
Sarking	Flammability Index not > 5
Fire Isolated Exits and Fire Control Rooms	Spread of Flame Index 0 Smoke Developed Index not > 2 Sarking Flammability 0
Non Fire Isolated Stairs & Escalators and Auditorium Fixed Seating	Spread of Flame Index 0 Smoke Developed Index not > 5
Lifts	To AS 1735.2
Air Ducts	To AS4254



19. Appendix C2.2 – Floor Areas and Volumes

Floor areas have been based NLAs provided by Batesmart DWG A02.01 & DWG A22.004

20. Appendix D1.13 – Populations/Exit Width Assessment (Density of 1:8)

Location	Use	Population	Required aggregate egress width (m) or maximum permissible population*	Proposed aggregate egress width (m)	Status
Level 1	Co-Working Office	57	1m	2m	Complies
Level 2 - 4	Co-Working Office	61	1m	2m	Complies
Level 4 - 5	Low Rise Office	192	2m	2m	Complies
Levels 6 - 13	Low Rise Office	192	2m	2m	Complies
Level 14	Low Rise Transfer Office	192	2m	2m	Complies
Levels 16 - 27	Mid Rise Typical Office	220	2.5m	2m	Does Not Comply
Level 28	Mid Rise Transfer Office	220	2.5m	2m	Does Not Comply
Level 29	High Rise Terrace & Office	128	2m	2m	Complies
Levels 30 - 38	High Rise Typical Office	187	2m	2m	Complies
Level 39	High Rise Office	187	2m	2m	Complies

21. Appendix D2.24 – Protection of Openable Windows

Building Use	Openable Windows		
	<2m above surface beneath	>2m above surface beneath	>4m above surface beneath
All other buildings	No restrictions	No restrictions	Barrier required <ul style="list-style-type: none"> Min. 865mm above floor No openings exceeding 125mm No climbable elements between 150-760mm above floor



22. Appendix D3 – Significant Accessibility Requirements

Access for wheelchair users and people with disabilities generally must be to AS1428.1-2009.

Principle requirements are:

- Continuous accessible paths of travel throughout
- Minimum 1m wide travel paths with maximum 3-5mm joints, lips, level changes etc.
- No deep pile carpets or grates with large slots.
- Walls or 75-150mm kerbs at travel path sides or if level change occurs to cause a wheelchair hazard.
- 1.8m wide x 2m long wheelchair passing spaces at 20m intervals in passageways where a direct line of sight is not available.
- Turning spaces at 20m intervals and within 2m of dead end access ways. 1.5m x 1.5m 90 deg turning spaces (with splayed internal corner) and 1.54m x 2.07m long 180 deg turning spaces are required including at dead ends in passageways.
- Step ramps, kerb ramps and threshold ramps as prescribed.
- 1:14 maximum ramps with 9m between landings.
- 1.9m x 1 in 10 (maximum 190mm rise) step ramps
- 1.52m x 1 in 8 (maximum 190mm rise) kerb ramps.
- 30-50mm handrails with 300mm extensions and curls and 50mm clearances on both sides of steps, ramps, etc.
- 850mm clear width doors with 340 - 900mm latch side clearances and 1220-1670mm approach clearances depending on arrangements.
- Stairs and ramps set back from building lines and corridors to allow space for handrail extensions and TGSIs.
- Decals to glazing.
- 900-1100mm door hardware height.
- Lever handle hardware with low opening forces.
- Landings at doorways, direction changes and at intervals on ramps and inclined walkways.
- Walkways with colour contrast borders.
- Flat even surfaces.
- Colour contrasted hand rails and door frames.
- "D" pull handles to doors.
- Continuous protected paths from disabled persons' car spaces to lifts, access points, etc.
- Ambulant disabled persons' toilets with grab rails and outward swinging doors or longer cubicles.
- Prescribed types of water entry arrangements for swimming pools depending on pool size.
- Non fire enclosed stairs with opaque risers.
- Fire stairs and non-fire enclosed stairs with colour contrasting nosing strips.
- All switches and controls 900-1100mm above floor level.

The following general requirements apply to accessible toilets:

- Unisex facility.
- ~1.9 x 2.7m or 2.3 x 2.4m minimum room dimensions depending on arrangements. (~2.2m x 1.6m if AS1428.1-2001 concession applies).
- 30-40mm grab rails with 50-60mm clearances.
- Doors with appropriate clearances and circulation spaces and able to be operated externally in emergencies
- Washbasins with clearances as required.
- Shielded hot water pipes.
- Mirror, shelf, dispensers and coat hooks.
- Mirrored layout for alternative facilities



23. Appendix F2.3 – Requirements for Sanitary Facilities

The status of sanitary facilities required by Part F2 of the BCA are set out below:

Commercial Office

Class	Use	Occupant Numbers			WC Required / Provided		Urinal Required / Provided		Basin Required / Provided	
		Total								
5	Level 1 – Podium Office	57	Male	29	2	2*	2	2	1	2*
			Female	29	2	2*	N/A		1	2*
			Unisex Disabled		1*		N/A		1*	
5	Levels 2 – 4 Podium Office	61	Male	31	2	2*	2	2	2	2*
			Female	31	3	3*	N/A		2	2*
			Unisex Disabled		1*		N/A		1*	
5	Levels 4 – 14 Office	192	Male	96	5	5*	3	3	4	4*
			Female	96	7	7*	N/A		4	4*
			Unisex Disabled		1*		N/A		1*	
5	Levels 16 – 27 Office	220	Male	110	6	6*	4	4	4	4*
			Female	110	8	8*	N/A		4	4*
			Unisex Disabled		1*		N/A		1*	
5	Level 28 Office	220	Male	110	6	6*	4	4	4	4*
			Female	110	8	8*	N/A		4	4*
			Unisex Disabled		1*		N/A		1*	
5	Level 29 Office	128	Male	64	4	4*	3	3	3	3*
			Female	64	5	5*	N/A		3	3*
			Unisex Disabled		1*		N/A		1*	
5	Levels 30 – 39 Office	187	Male	94	5	5*	3	3	4	4*
			Female	94	7	7*	N/A		4	4*
			Unisex Disabled		1*		N/A		1*	

Retail Buildings (South Laneway Building, Denison Street Concourse & Miller Street)

Class	Use	Occupant Numbers			WC Required / Provided		Urinal Required / Provided		Basin Required / Provided	
		Total								
6	Food & Beverage Patrons	1193	Male	597	4		9		4	
			Female	597	9		N/A		5	
			Unisex Disabled				N/A			
6	Food & Beverage Staff	111	Male	56	3		3		2	
			Female	56	4		N/A		2	
			Unisex Disabled				N/A			
6	Non-Food Patrons	345	Male	173	1		1		1	
			Female	173	1		N/A		1	
			Unisex Disabled				N/A			
6	Non-Food Staff	15	Male	8	1		1		1	
			Female	8	1		N/A		1	
			Unisex Disabled				N/A			



6	Total – Patrons & Staff	Refer to note 7 below	Male		9	9*	14	6	8	6
			Female		15	11*	N/A		9	7
			Unisex Disabled		1*		N/A		1*	

Notes:

1. A common unisex accessible facility may be counted once for both male and female facilities in accordance with Clause F2.2(c) of the BCA;
2. Staff and patrons are permitted to share the same facilities in accordance with Clause F2.3(d) of the BCA;
3. At least one ambulant sanitary compartment must be provided within each the male and female facilities complying with Section 16 of AS1428.1 – 2009.
4. A WC is able to be used in place of a urinal.
5. * Denotes the inclusion of the accessible facility in the calculation
6. Populations and restrictions for retail premises have been provided by correspondence issued by Lendlease on the 29th May 2019
7. The shortfall associated with the patron and staff numbers is proposed to be absorbed by amenities provided within retail tenancy 27 per the retail amenity strategy prepared by Lendlease dated May 2019. The following additional amenities will need to be implemented as a base case:
 - 4 x Female Pans;
 - 2 x Female Washbasins;
 - 8 x Urinals; and
 - 2 x Male Washbasins



24. Appendix J1 – Energy Efficiency R-Values

Roofs and Ceilings - Minimum Total R-Value (Table J1.3a)

Climate zone	1, 2, 3, 4 & 5	6	7	8
Direction of heat flow	Downwards		Upwards	
Minimum <u>Total R-Value</u> for a roof or ceiling with a roof upper surface solar absorptance value of not more than 0.4	3.2	3.2	3.7	4.8
Minimum <u>Total R-Value</u> for a roof or ceiling with a roof upper surface solar absorptance value of more than 0.4 but not more than 0.6	3.7	3.2	3.7	4.8
Minimum <u>Total R-Value</u> for a roof or ceiling with a roof upper surface solar absorptance value of more than 0.6	4.2	3.2	3.7	4.8

Adjustment of Minimum Total R-Value for Loss of Ceiling Insulation (Table j1.3b)

Percentage of ceiling area uninsulated	Minimum R-Value of ceiling insulation required to satisfy J1.3(a)										
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
	Adjusted minimum R-Value of ceiling insulation required to compensate for loss of ceiling insulation area										
0.5% to less than 1.0%	1.0	1.6	2.2	2.8	3.4	4.0	4.7	5.4	6.2	6.9	
1.0% to less than 1.5%	1.1	1.7	2.3	2.9	3.6	4.4	5.2	6.1	7.0		
1.5% to less than 2.0%	1.1	1.7	2.4	3.1	3.9	4.8	5.8	6.8			
2.0% to less than 2.5%	1.1	1.8	2.5	3.3	4.2	5.3	6.5				
2.5% to less than 3.0%	1.2	1.9	2.6	3.6	4.6	5.9	Not Permitted				
3.0% to less than 4.0%	1.2	2.0	3.0	4.2	5.7						
4.0% to less than 5.0%	1.3	2.2	3.4	5.0							
5.0% or more											

Note: Where the minimum R-Value of ceiling insulation required to satisfy J1.3(a) is between the values stated, interpolation may be used to determine the adjusted minimum R-Value.



Roof Lights - Thermal Performance of Transparent and Translucent Elements (Table j1.4)

Roof light shaft index (see Note 1)	Constant	Total area of roof lights serving the room or space as a percentage of the floor area of the room or space			
		Up to 2%	More than 2% to and up to 3%	More than 3% and up to 4%	More than 4% and up to 5%
Less than 0.5	<i>Total System SHGC</i>	Not more than 0.83	Not more than 0.57	Not more than 0.43	Not more than 0.34
	<i>Total System U-Value</i>	Not more than 8.5	Not more than 5.7	Not more than 4.3	Not more than 3.4
0.5 to less than 1.0	<i>Total System SHGC</i>	Not more than 0.83	Not more than 0.72	Not more than 0.54	Not more than 0.43
	<i>Total System U-Value</i>	Not more than 8.5	Not more than 5.7	Not more than 4.3	Not more than 3.4
1.0 to less than 2.5	<i>Total System SHGC</i>	Not more than 0.83	Not more than 0.83	Not more than 0.69	Not more than 0.55
	<i>Total System U-Value</i>	Not more than 8.5	Not more than 5.7	Not more than 4.3	Not more than 3.4
2.5 and more	<i>Total System SHGC</i>	Not more than 0.83	Not more than 0.83	Not more than 0.83	Not more than 0.83
	<i>Total System U-Value</i>	Not more than 8.5	Not more than 5.7	Not more than 4.3	Not more than 3.4

Notes:

- The roof light shaft index is determined by measuring the distance from the centre of the shaft at the roof to the centre of the shaft at the ceiling level and dividing it by the average internal dimension of the shaft opening at the ceiling level (or the diameter for a circular shaft) in the same units of measurement.
- The total area of roof lights is the combined area for all roof lights serving the room or space.
- The area of a roof light is the area of the roof opening that allows light to enter the building.
- The thermal performance of an imperforate ceiling diffuser may be included in the Total System U-Value and Total System SHGC of the roof light.
- The total area of roof lights serving the room or space as a percentage of the floor area of the room or space must not exceed 5% unless allowed by J1.4(b).



Options for Each Part of an External Wall that is Part of an Envelope (Table J1.5a)

Climate zone	Options
1, 2 and 3	<p>(a) (i) Achieve a minimum <i>Total R-Value</i> of 3.3. (ii) The minimum <i>Total R-Value</i> in (i) is reduced (A) for a wall with a surface density of not less than 220 kg/m², by 0.5; and (B) for a wall that is (aa) facing the south orientation as described in Figure J2.3, by 0.5; or (bb) shaded with a projection shade angle in accordance with Figure J1.5 of (AA) 15 degrees to not more than 45 degrees, by 0.5; or (BB) more than 45 degrees, by 1.0; and (C) if the outer surface solar absorptance value is not more than 0.6, by 0.5.</p> <p>(b) Where the only space for insulation is provided by a furring channel, top hat section, batten or the like (i) achieve a minimum <i>Total R-Value</i> of 1.4; and (ii) satisfy <i>glazing</i> energy index Option B of Table J2.4a.</p>
4, 5 and 6	<p>(a) (i) Achieve a minimum <i>Total R-Value</i> of 2.8. (ii) The minimum <i>Total R-Value</i> in (i) is reduced - (A) for a wall with a surface density of not less than 220 kg/m², by 0.5; and (B) for a wall that is - (aa) facing the south orientation as described in Figure J2.3, by 0.5; or (bb) shaded with a projection shade angle in accordance with Figure J1.5 of (AA) 30 degrees to not more than 60 degrees, by 0.5; or (BB) more than 60 degrees, by 1.0.</p> <p>(b) Where the only space for insulation is provided by a furring channel, top hat section, batten or the like (i) achieve a minimum <i>Total R-Value</i> of 1.4; and (ii) satisfy <i>glazing</i> energy index Option B of Table J2.4a.</p>
7	<p>(a) Achieve a minimum <i>Total R-Value</i> of 2.8.</p> <p>(b) Where the only space for insulation is provided by a furring channel, top hat section, batten or the like (i) achieve a minimum <i>Total R-Value</i> of 1.4; and (ii) satisfy <i>glazing</i> energy index Option B of Table J2.4a.</p>
8	<p>(a) Achieve a minimum <i>Total R-Value</i> of 3.8.</p> <p>(b) Where the wall is an earth retaining wall or earth-berm, achieve a minimum <i>Total R-Value</i> of 2.0.</p>



An Envelope Wall Other than an External Wall Minimum Total R-Value (Table J1.5b)

Location		Climate zone							
		1	2	3	4	5	6	7	8
(a)	Where the adjacent enclosed non- <i>conditioned space</i> has	1.0	1.0	Nil	Nil	1.0	1.0	1.5	2.5
	(i) ventilation of not more than 1.5 air changes per hour of outside air during occupied hours; and								
	(ii) glazing in the external fabric as required by Part J2; and								
	(iii) <i>roof lights</i> in the external fabric as required by J1.4.								
(b)	For other than (a)	2.3	2.3	2.3	1.8	1.8	1.8	2.8	3.8

Note:

When assessing the glazing and roof lights as required by Part J2 and J1.4, assess the glazing and roof lights as if the non- conditioned space is the same separate conditioned space.

Floors - Minimum Total R-Value (Table J1.6)

Location		Climate zone							
		1	2	3	4	5	6	7	8
Direction of heat flow		Upwards	Downwards and upwards	Downwards					
(a)	A slab on ground:								
	(i) Without an in-slab heating or cooling system	Nil	Nil	Nil	Nil	Nil	Nil	1.0	2.0
	(ii) With an in-slab heating or cooling system	1.25	1.25	1.25	1.25	1.25	1.2 5	1.2 5	2.25
(b)	A suspended floor without an in-slab heating or cooling system where the non- <i>conditioned space</i> is	1.0	1.0	Nil	Nil	1.0	1.0	1.5	2.5
	(i) enclosed; and								
	(ii) where mechanically ventilated by not more than 1.5 air changes per hour.								
(c)	A suspended floor with an in-slab heating or cooling system where the non- <i>conditioned space</i> is	1.25	1.25	1.25	1.25	1.25	1.2 5	1.7 5	2.75
	(i) enclosed; and								
	(ii) where mechanically ventilated by not more than 1.5 air changes per hour								
(d)	For other than (a), (b) or (c)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.5

Note:

A sub-floor space with not more than 150% of the required sub-floor ventilation is considered enclosed.



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