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Macarthur Gardens North R3,
Goldsmith Ave. Campbelltown

BCA Assessment Report Report 2024/3089 R1.1

Prepared for Landcom
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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 BCA Report been prepared by Steve Watson & Partners to accompany a State Significant Development Application (SSDA) for an affordable housing development within the Macarthur Gardens North precinct (MGN) in the Campbelltown Local Government Area (LGA). The MGN precinct is identified as Lot 1097 in DP1182558.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the project (SSD-80482713) on 16 July 2025. A preliminary assessment of the design of the proposed design of the project at Macarthur Gardens North R3, Goldsmith Ave. Campbelltown 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 concludes that the proposed development is suitable and warrants approval subject to the implementation of the following mitigation measures identified in section 10. This report details the non-compliances identified that require either amendments to plans or a Performance Solution to satisfy the Performance Requirements of the BCA.

Summary of BCA Parameters:

Building Use:	Residential and basement car park and ancillary
Class of Occupancy	Class 2 & 7a
Type of Construction Required	Type A
Rise Storeys:	10
Number of Storeys:	10
Effective Height:	Approx 31.60 m (L 8 RL 104.75. – Basement RL.73.15)> < 25 m



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

1. Public corridors / bounding construction
2. Protection of openings
3. Travel distance
4. Travel via fire isolated exits and discharge
5. Rising and descending stairs
6. Roof as open space
7. Fire hydrants
8. Fire hose reels
9. Sprinklers
10. Provisions for special hazards

The following are the main issues proposed to be addressed by a non-fire engineered Performance Solution:

1. Access to and throughout premises
2. Façade / Weatherproofing

These proposed Performance Solutions should be referred to the relevant consultant to investigate viability.

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 2021 and the Building Code of Australia 2022 Amendment 1. 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.

Key issues which require additional details have been listed under Section 10 of this report and need to be clarified with SWP or the building certifier for the project prior to the issue of a construction certificate.



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GLOSSARY

Building Code of Australia - BCA, National Construction Code - NCC

Deemed-to-Satisfy - DTS

Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 - EPAR (DCFS)

Environmental Planning and Assessment Act 1979 No 203 - EPAA

Environmental Planning and Assessment Regulation 2021 - EPAR



1. Introduction

The SSDA seeks development consent for a 100% affordable housing development on site R3 of the MGN Precinct.

Specifically, the SSDA seeks development consent for:

- Construction of two 3 to 9 storey residential flat buildings
- 130 dwellings, all of which are affordable housing
- One basement level of car parking
- Landscaping
- Communal open space area

The purpose of the project is to facilitate the delivery of high-quality affordable housing, on a strategically located site consistent with the vision for MGN.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 16 July 2025 and issued for the SSDA (SSD-80482713). Specifically, this report has been prepared to respond to the SEARs requirement issued below.

2. Purpose

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

The assessment is undertaken for the purpose of, and to the extent necessary for, construction certification to be issued under Part 6 of the NSW Environmental Planning and Assessment Act 1979 No 203, Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 and Environmental Planning and Assessment Regulation 2021.

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.



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- 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
 - The BCA report and associated compliance advice is not intended or permitted to be relied on by any other party with respect to their obligations to ensure compliance including but not limited to the making of a compliance declaration under the NSW Design and Building Professionals Act.



3.3. Certification Works

This report is provided as part of SWP's contracted scope for this project, which is "Certification Work", as defined in the Building and Development Certifiers Regulation 2020. Due to the strict requirements and limits in terms of conflicts of interest imposed under that regulation, SWP cannot undertake any services other than Certification Work services on this project. Hence, the contents of this report, and any associated correspondence, are provided in the context of a preliminary certification assessment of plans, and may not be construed to constitute involvement in building design, the preparation of plans and specifications, the provision of advice on how to amend a plan or specification to ensure that the aspect will comply with legislative or code requirements, or to breach any other restriction or limitation imposed under the conflict of interest provisions of that or any other legislation.

4. National Construction Code BCA 2022 Amendment 2- 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 somewhat safer building, however performance 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 (DCFS) S19	All new works must comply
Access to premises	Disability (Access to Premises — Buildings) Standards 2010	Upgrade of the “Affected Part” to provide access for people with disabilities
Residential Flat Development	EPAR (DCFS) S15 & S43	Statement from a qualified designer verifying compliance with SEPP65 for residential developments
BASIX	EPAR (DCFS) S10	BASIX certificate required for residential projects

6.1. New Work

Section 19 of the EPAR (DCFS) 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.

6.2. Access to premises

The Disability (Access to Premises - Buildings) Standards came into force via BCA2011 throughout Australia on 01 May 2011, and with it introduced a higher standard of access to that required by previous versions of the BCA. In prescribed circumstances, the legislation requires upgrade of access and facilities for persons with disabilities when building work is proposed. In particular, unless works are undertaken by a lessee who does not lease the entire building, proposed building work anywhere in the building could trigger a need for enhanced access at the main building pedestrian entry and from that entry to all areas of the building that are subject to the building work.

6.3. Residential flat development

Section 15 of the EPAR (DCFS) requires a qualified designer to provide a statement that verifies that the plans and specifications achieve or improve the design quality of the development having regard to the design quality principles set out in Part 2 of the *State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Development* (SEPP 65) prior to the issue of a Construction Certificate. Section 43 of the EPAR (DCFS) requires a qualified designer to provide a statement that verifies that the residential flat development achieves the design quality of the development as shown in the plans and specifications having regard to the design quality principles set out in Part 2 of SEPP 65 prior to issuing an Occupation Certificate.

6.4. Fulfilment of BASIX Commitments

Section 10 of the EPAR (DCFS) requires the certifying authority to monitor fulfilment of any commitments listed on the BASIX certificate, where the BASIX certificate requires the certifying authority to monitor those commitments. A final occupation certificate must not be issued until the certifying authority is satisfied that each of the commitments has been fulfilled.



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 performance solution has been proposed to address the issue;
 7. Proposed work is to be addressed on a performance basis via a Performance 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 proposed development involves the construction of a multi-unit residential complex with two towers over a common three level car park and ancillary services.

MGN is located on Lot R3 – Goldsmith Avenue, Campbelltown

9. Assessment Data Summary

The following basic assessment data has been drawn from the provisions of the BCA 2022 Amendment 2.

9.1. Assumptions

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

1. That the relevant accredited consultants have been consulted regarding possible Performance Solutions for the premises including;
 - a. An accredited Fire Safety Engineer
 - b. An Access consultant
 - c. A weatherproofing / façade consultant
2. The roof area is not accessible / occupiable
3. The fire isolated exits discharge outside the footprint of the building.

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:

1. The whole of the premises are defined as a single building in accordance with the BCA;
2. Areas marked ST on SOUs are storage areas thus not habitable;
3. The basement carpark is not required to be provided with dedicated sanitary facilities to comply with Part F4 of the BCA as it is ancillary to the residential, commercial and retail uses of the building.

10. Issues Requiring Resolution

10.1. Performance solutions required.

It is proposed to investigate satisfying the following non-compliances via performance solutions. The issues should be referred to the relevant consultant:

Item	Non-Compliance	DTS Clause	Description
1.	Public corridors in Class 2 & 3 buildings	C3D15	Public corridors on Ground Level and Levels 1 – 2 exceed 40 m permitted by this clause
2.	Bounding construction common room ground floor	C4D12	Any room off the public corridor must be separated from the public corridor by construction having a FRL of at least 60/60/60
3.	Opening within 3 m of the boundary	C4D3	The opening from the car park entry is exposed to the side boundary
4.	Travel distance	D2D5, D2D6, G6D4	The following issues are identified On Residential level <ul style="list-style-type: none"> ▪ Travel to a point of choice is over 6 m being on ground level to level 8 up to 11.3 m ▪ Common areas up to 23 m to a point of choice The following issues are identified Basement level : - <ul style="list-style-type: none"> ▪ Distance to a point of choice from south-east area ▪ Distance between exits exceeds 60m (worst point 85.10m)
5.	Travel via fire isolated exits	D2D12	The path of travel from the fire stair discharge to a roadway requires persons egressing the premises to pass with 6 m of openings in external walls of the building contrary to the requirements of this clause
6.	Discharge from exits	D2D15	The various exits do not discharge as far apart as practical
7.	Rising and descending stairs	D3D5	Consult with fire Engineer
8.	Roof as open space	D3D13	Investigate reducing the FRL of the ground level communal open space slab.
9.	Fire hydrants	E1D2	Full compliance with AS2419.1 will be required unless varied via fire brigade approval. Including booster location. The hydraulic engineer must ensure that compliant coverage is provided to all areas of the building from the internal hydrants



Item	Non-Compliance	DTS Clause	Description
			and must provide design certification to accompany the drawings certifying the design complies with Clause E1D2 of the BCA and AS2419.1-2021 (noting any non-compliances, which are to be addressed as a Performance Solution).
10.	Fire hose reels	E1D3	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 E1D3 of the BCA and AS2441 - 2005.
11.	Sprinklers	E1D4	The provision of sprinkler infrastructure does not meet the requirements of the Australian Standard
12.	Provisions of special hazards	E2D21 E1D17	The following matters are a special hazard and requires a separate assessment from a fire engineer:- <ul style="list-style-type: none"> ▪ EV charging within the car park ▪ Solar panels and batteries
13.	Access to and throughout premises	Part D4	Access is required throughout. Consultation with the access consultant is required.
14.	Deemed-to-Satisfy Provisions	F1D1	A test report on the proposed wall system is to be provided. The test report must include the following information: <ul style="list-style-type: none"> (i) Name and address of the person supervising the test. (ii) Test report number. (iii) Date of the test. (iv) Cladding manufacturer's name and address. (v) Construction details of the test specimen, including a description, and drawings and details of the components, showing modifications, if any. (vi) Test sequence with the pressures used in all tests. (vii) For each of the static and cyclic pressure tests, full details of all leakages, including position, extent and timing.

11. Relevant Authorities

Consultation with the Fire Commissioner is required under Section 26 and 27 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 for performance-based design briefs and performance solutions prepared for a fire safety requirement if:

- (a) the building is a class 2, 3, 4, 5, 6, 7, 8 or 9 building, and
- (b) a construction certificate is required for the building work comprising the performance solution.

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 (DCFS) 2021, EPAR 2021 and the BCA 2022 Amendment 2 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 2022 Amendment 2 - Clause by Clause Assessment

Clause	Description	Comment	Status									
BCA Version												
BCA 2022 Amendment 2	<p>BCA version</p> <p>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.</p>	<p>This report assumes that the applicable BCA version is BCA 2022 Amendment 2. In addition.</p> <p>NCC 2022 uses a new structure and clause referencing system. This system is called Section-Part-Type-Clause (SPTC).</p> <p>BCA 2022 amend. 2 references AS 1428.1 - 2021</p>	Noted									
Section A: General Provisions												
A5G3	<p>Suitability of materials</p> <p>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.</p>	<p>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.</p>	Noted									
Part A6	<p>Classification and usage</p> <p>Usage on each level of the building is as follows:</p> <table border="1"> <thead> <tr> <th>LEVEL</th> <th>USE</th> <th>CLASS</th> </tr> </thead> <tbody> <tr> <td>Basement 1</td> <td>Carparking</td> <td>7a</td> </tr> <tr> <td>Ground – Level 8</td> <td>Residential</td> <td>2</td> </tr> </tbody> </table>	LEVEL	USE	CLASS	Basement 1	Carparking	7a	Ground – Level 8	Residential	2	<p>Basement 1 consists of Class 7a carparking and associated facilities.</p> <p>Ground Level to Level 8 consists of Class 2 residential premises.</p> <p>Note: If proposed storage/garbage areas are greater than 10% of the total floor of the storey then prior to the issue of a Construction Certificate they will be required to be considered as Class 7b.</p>	Noted
LEVEL	USE	CLASS										
Basement 1	Carparking	7a										
Ground – Level 8	Residential	2										
Part A7	<p>United buildings</p> <p>Buildings are deemed united when two or more buildings adjoining each other are connected and used as one building.</p>	<p>The building is not a united building. However, the whole of the premises is defined as a single building under the BCA.</p>	N/A									
Section B: Structure												
B1D2	<p>Resistance to actions</p> <p>The resistance of the building must be greater than the most critical action effect resulting from different combinations of actions</p>	<p>Certification from a qualified structural engineer will need to be provided at Construction Certificate stage.</p>	Compliance Readily Achievable									
B1D3	<p>Determination of individual actions</p> <p>The magnitude of individual actions must be determined in accordance with Clause B1D3 of the BCA.</p> <p>The building has an importance level 3 in accordance with Table B1D3a.</p>	<p>Certification from a qualified structural engineer will need to be provided at Construction Certificate stage.</p>	Compliance Readily Achievable									
B1D4	<p>Determination of structural resistance of materials and forms of construction</p> <p>The structural resistance of materials and forms of</p>	<p>Certification from a qualified structural engineer will need to be provided at Construction Certificate stage.</p>	Compliance Readily Achievable									



Clause	Description	Comment	Status
	construction must be determined in accordance with the relevant Australian Standards in accordance with Clause B1D4 of the BCA.		
B1D5	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.	-	Compliance Readily Achievable
B1D6	Construction of buildings in flood hazard areas A Class 2, 3, 4, 9a or 9c building located in a flood hazard area must comply with the ABCB Standard for Construction of Buildings in Flood Hazard Areas.	Civil engineer to confirm whether the building is located within a flood hazard area and compliance with this clause.	Compliance Readily Achievable
Section C: Fire Resistance			
Part C2 - Fire Resistance and Stability			
C2D2	Type of construction required Type A Construction BCA Type A fire resisting construction is required. Refer to Appendix Specification 5 for the required FRLs for each building element.	Details of the proposed construction and how it will achieve the required FRL is to be provided. Certification from a structural engineer will be required for FRL's of all structural elements.	Compliance Readily Achievable
C2D3	Calculation of rise in storeys Effective Height / Calculation of rise in storeys. Rise in storeys is a defined BCA term addressing the number of main building levels excluding basements. 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). These parameters influence the BCA provisions applicable to the building.	The following parameters apply: Rise in storeys: 10 storeys	Noted
C2D4	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 2	Noted
C2D5	Mixed types of construction	If a fire wall divides the building in accordance with Clause C3D8, the building portions are able to be constructed in differing levels of fire-resistance determined in accordance with Clause C2D2 or C2D4.	N/A
C2D6	Two storey Class 2, 3 or 9c buildings	The building has more than rise in storeys of 2.	N/A
C2D7	Class 4 parts of buildings	The building does not include Class 4 premises.	N/A
C2D8	Open spectator stands and indoor sports stadiums	The building does not include an open spectator stand	N/A



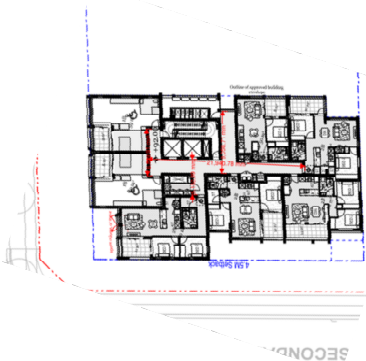
Clause	Description	Comment	Status
C2D9	<p>Lightweight construction</p> <p>Lightweight construction used in a wall system must comply with Specification 6 - Structural tests for lightweight construction.</p> <p>Lightweight construction used as a fire-resisting covering of a steel column or the like, and 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>	<p>Fire rated wall types must match a tested prototype. Product codes should be noted on the wall type schedule and corresponding test reports provided for review.</p> <p>Lightweight construction must comply with Specification 6 if it is used in a wall system listed in C2D9(1).</p> <p>C2D9(2) sets out the circumstances under which lightweight construction is permitted to be used as a fire resisting covering for steel columns and the like.</p>	Compliance Readily Achievable
C2D10	<p>▪ Non-combustible building elements</p> <p>▪ In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible:</p> <p>▪ External walls and common walls, including all components incorporated within them including façade covering, framing and insulation;</p> <p>▪ The flooring and floor framing of lift pits;</p> <p>▪ Non-loadbearing internal walls where they are required to be fire-resisting;</p> <p>▪ 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> <p>▪ Plasterboard.</p> <p>▪ Perforated gypsum.</p> <p>▪ Fibrous-plaster sheeting to AS 2185.</p> <p>▪ Fibre-reinforced cement sheeting.</p> <p>▪ 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.</p> <p>▪ Sarking-type materials that do not exceed 1mm thickness and have a flammability index not greater than 5.</p> <p>▪ 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 and when located externally, are fixed in accordance with C2D15.</p> <p>▪ Any product as determined by testing to AS 1530.1</p> <p>▪ An appropriately BCA accredited product or system</p>	<p>The Architect and Structural Engineer are to make provisions for this requirement in the design.</p> <p>A detailed review of the external cladding must be undertaken to ensure that there are no combustible materials and non-complaint claddings have not been nominated that could increase the risk of fire spread via the external façade. An architectural specification detailing the components of the external walls and their fire properties are needed for review including corresponding test reports verifying compliance with this clause.</p> <p>Ensure all façade materials have a current Certificate of Conformity or a current Certificate of Accreditation, or the like to determine their acceptance by the Fire Safety Engineer and Fire Brigade</p>	Compliance Readily Achievable



Clause	Description	Comment	Status
C2D11	Fire hazard properties Floor materials, floor coverings and wall and ceiling lining materials need to comply with prescribed fire hazard properties. Refer to Appendix C2D11 & compliance with AS5637.1-2015.	Compliance assumed and will require verification test data for all timber and other combustible linings and materials, including: <ul style="list-style-type: none">▪ Carpets▪ Vinyls (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. A schedule of internal finishes and corresponding fire hazard test data for all combustible internal linings are needed for review.	Compliance Readily Achievable
C2D12	Performance of external walls in fire Concrete external walls that could collapse as complete panels are to be designed in accordance with Specification 8 to minimise the likelihood of external walls collapsing outwards in the event of a fire and separating from supporting members.	The building has a rise in storeys of more than 2.	N/A
C2D13	Fire-protected timber: Concession <i>Fire-protected timber</i> may be permitted under this clause wherever an element is <i>required</i> to be <i>non-combustible</i> .		N/A
C2D14	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 is otherwise permitted under this clause.	C2D14 prescribes certain allowable ancillary elements that may form part of or be attached to an external wall required to be non-combustible, subject to certain limitations or conditions such as meeting certain fire properties, and limitations on its potential extent of coverage of the wall.	Compliance Readily Achievable
C2D15	Fixing of bonded laminated cladding panels In a building required to be of Type A or B construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame.	C2D15 stipulates fixing requirements for external bonded laminated cladding panels, specifically, all panel layers are to be mechanically restrained with concessions to certain elements.	Compliance Readily Achievable



Part C3 - Compartmentation and Separation			
C3D2	Application of Part	Clauses C3D3, C3D4 and C3D5 do not apply to a sprinkler protected carpark, an open deck carpark or an open spectator stand.	Noted
C3D3	General floor area and volume limitations	The BCA does not require Class 2 and sprinkler protected car park parts of the building to be considered.	N/A
C3D4	Large isolated buildings Where the building exceeds the limitations under Clause C3D3 additional fire safety measures are required.	The BCA does not require Class 2 and sprinkler protected car park parts of the building to be considered.	N/A
C3D5	Requirements for open space and vehicular access	Vehicular access / open space is required for large isolated buildings.	N/A
C3D6	Class 9 buildings	The subject development is not a Class 9 building.	N/A
C3D7	Vertical separation of openings in external walls Spandrel separation is required in a building of Type A construction that is not sprinkler protected, which must be not less than 900mm in height, extend not less than 600mm above the upper surface of the intervening floor and be of non-combustible material having an FRL of not less than 60/60/60.	The building is required to be sprinkler protected, hence the requirements of C3D7 do not apply.	N/A
C3D8	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.	Structural engineer is to design the construction of fire walls and/or separations to achieve the required FRL's specified in Specification 5.	Compliance Readily Achievable
C3D9	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 5 of the BCA or the parts must be separated by a fire wall.	Separation of fire wall between the Class 2 and Class 7a part of Lower Ground Level is to meet the requirements of S5C19 Structural engineer specification of the FRL of the lift shaft and its opening are to be provided.	Compliance Readily Achievable
C3D10	Separation of classifications in different storeys As different classifications are situated one above the other in adjoining storeys they must be separated in accordance with the DTS provisions of the BCA.	The floor between the adjoining parts of different classifications are to have a minimum FRL specified in Specification 5 for the classification of the lower storey. Structural engineer specification of the FRL of the lift shaft and its opening are to be provided.	Compliance Readily Achievable
C3D11	Separation of lift shafts Openings for lift landing doors and services must be protected in accordance with the DTS provisions of Part C4 of the BCA. *Note glazed atrium lift shafts require a performance solution if they serve any area outside the atrium, including the basement.	Structural engineer specification of the FRL of the lift shaft and its opening are to be provided.	Compliance Readily Achievable
C3D12	Stairways and lifts in one shaft	The lift is within its own shaft.	N/A

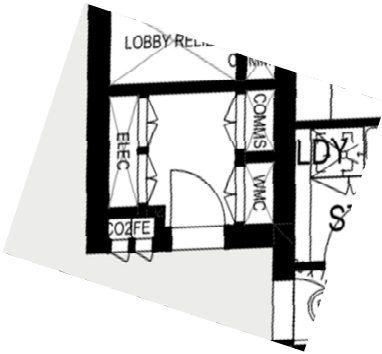
C3D13	<p>Separation of equipment</p> <p>2hr fire separation is required for:</p> <ul style="list-style-type: none"> ▪ Lift motor rooms. ▪ Emergency generators sustaining emergency equipment operating in emergency mode. ▪ Central mechanical smoke control plant. ▪ Boilers. ▪ A battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more. 	Structural engineer specification of the FRL of the lift shaft and its opening are to be provided.	Compliance Readily Achievable
C3D14	<p>Electricity supply system</p> <p>A substation located within a building or main switchboard that sustains emergency equipment must be separated from the remainder of the building by 2hr fire rated construction.</p> <p>Switchboards sustaining emergency equipment must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of faults.</p>	Structural engineer specification of the FRL of the lift shaft and its opening are to be provided.	Compliance Readily Achievable
C3D15	<p>Public corridors in Class 2 & 3 buildings</p> <p>Public corridors must be divided at intervals of not more than 40m by smoke-proof walls complying with S11C2.</p>	<p>Public corridors to Ground Level and Levels 1 – 2 exceed 40m intervals. Either smoke separate or investigate a Performance Solution</p> 	Performance Solution

Part C4 - Protection of Openings

C4D2	<p>Application of Part</p>		Noted
C4D3	<p>Protection of openings in external walls</p> <p>Openings in the external walls of the building are to be protected in accordance with C4D5, being fire rated windows, external sprinklers or the like, if they are:</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. ▪ Openings that require protection should not occupy more than $\frac{1}{3}$ of the external wall of the storey in which it is located. 	The car park entry is exposed to a fire source feature (side boundary).	Performance Solution
C4D4	<p>Separation of external walls and associated openings in different fire compartments</p>		Compliance Readily



	<p>External walls within the distances specified in Table C4D4 of the BCA are to be protected by construction with an FRL not less than 60/60/60 and the associated openings protected in accordance with Clause C4D5 of the BCA.</p> <table border="1"> <thead> <tr> <th>Angle between walls</th> <th>Min. Distance</th> </tr> </thead> <tbody> <tr> <td>0° (walls opposite)</td> <td>6 m</td> </tr> <tr> <td>more than 0° to 45°</td> <td>5 m</td> </tr> <tr> <td>more than 45° to 90°</td> <td>4 m</td> </tr> <tr> <td>more than 90° to 135°</td> <td>3 m</td> </tr> <tr> <td>more than 135° to less than 180°</td> <td>2 m</td> </tr> <tr> <td>180° or more</td> <td>Nil</td> </tr> </tbody> </table>	Angle between walls	Min. Distance	0° (walls opposite)	6 m	more than 0° to 45°	5 m	more than 45° to 90°	4 m	more than 90° to 135°	3 m	more than 135° to less than 180°	2 m	180° or more	Nil		Achievable
Angle between walls	Min. Distance																
0° (walls opposite)	6 m																
more than 0° to 45°	5 m																
more than 45° to 90°	4 m																
more than 90° to 135°	3 m																
more than 135° to less than 180°	2 m																
180° or more	Nil																
C4D5	<p>Acceptable method of protection</p> <p>Window openings are to be protected by internal or external wall wetting sprinklers and must automatically close or be permanently fixed in the closed position, -/60/- fire windows that are automatic closing or permanently fixed closed or -/60/60 automatic closing fire shutters.</p> <p>Doorways are to be protected by internal or external wall wetting sprinklers used with doors that are self-closing or automatic closing, or -/60/30 self-closing or automatic closing fire doors.</p> <p>Other openings, excluding voids, are to be protected with internal or external wall wetting sprinklers or construction having an FRL not less than -/60/-.</p>		Compliance Readily Achievable														
C4D6	<p>Doorways in fire walls</p> <p>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.</p>	<p>The specification of the FRL of fire doors are to be provided</p> <p>Fire doors must be self-closing.</p>	Compliance Readily Achievable														
C4D7	<p>Sliding fire doors</p> <p>Sliding fire doors are to be held open with an electromagnetic device, which when deactivated allows the door to be fully closed in not less than 20 seconds and not more than 30 seconds.</p> <p>An audible warning device and red flashing warning light must be provided.</p> <p>A sign stating “WARNING - SLIDING FIRE DOOR” in capital letters not less than 50 mm high is to be provided on each side of the doorway directly above the opening.</p>	<p>Confirmation if there are any fire sliding doors proposed.</p>	Compliance Readily Achievable														
C4D8	<p>Protection of doorways in horizontal exits</p> <p>Doorways in horizontal exits are to be protected by a fire door, which has an FRL of not less than that required for the firewall except that the insulation rating must be at least 30.</p>	<p>The specification of the FRL of fire doors are to be provided</p> <p>Fire doors must be self-closing.</p>	Compliance Readily Achievable														
C4D9	<p>Openings in fire-isolated exits</p> <p>-/60/30 self-closing fire doors are required to doorways providing access to fire isolated stairways.</p> <p>A window or other opening in the external wall of the fire isolated exit is to be protected in accordance with Clause C4D5 if it is within 6m of, and exposed to, a window or other opening in the wall of the same building.</p>	<p>The specification of the FRL of fire doors are to be provided</p> <p>Fire doors must be self-closing.</p>	Compliance Readily Achievable														

<p>C4D10</p>	<p>Service penetrations in fire-isolated exits</p> <p>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.</p>	<p>Noted.</p>	<p>Compliance Readily Achievable</p>
<p>C4D11</p>	<p>Openings in fire-isolated lift shafts</p> <p>Openings in lift shafts are to be protected by -/60/- fire doors complying with AS1735.11.</p> <p>Lift indicator panels are to be backed by construction having an FRL of not less than -/60/60 if they exceed 35,000mm² (175 X 200 mm).</p>	<p>Certification from the lift supplier or a lift specification noting compliance is needed for review.</p>	<p>Compliance Readily Achievable</p>
<p>C4D12</p>	<p>Bounding construction: Class 2 and 3 buildings and Class 4 parts</p> <p>Doorways opening to public corridors are to be protected with self-closing -/60/30 fire doors.</p>	<p>The specification of the FRL of fire doors are to be provided.</p> <p>Doorways to rooms off public corridors must be fire doors. Example shown also common rooms. <i>(service cupboards with services fire sealed are excluded)</i></p>  <p>Fire doors must be self-closing.</p>	<p>Compliance Readily Achievable</p>
<p>C4D13</p>	<p>Openings in floors and ceilings for services</p> <p>Services passing through floors are to be placed within fire resisting shafts or in accordance with Clause C4D15.</p>	<p>Services penetrations of fire rated structure generally need to be fire-stopped and/or located in fire rated riser shafts. Openings in fire rated elements need to be fire resisting to maintain the function of the elements.</p>	<p>Compliance Readily Achievable</p>
<p>C4D14</p>	<p>Openings in shafts</p> <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. 	<p>Specification of the FRL of fire doors are to be provided</p> <p>Fire doors must be self-closing.</p>	<p>Compliance Readily Achievable</p>
<p>C4D15</p>	<p>Openings for service installations</p> <p>Services penetrations through a building element (other than an external wall or roof) that is 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</p>	<p>A schedule of penetrations prepared by a suitably qualified consultant nominating the types of openings requiring protection and the method of protection including test reports for each fire-stopping product is needed</p>	<p>Compliance Readily Achievable</p>

	<p>Specification 13.</p> <p>Methods and materials used are to be identical to tested prototypes and in accordance with AS4072.1 and AS1530.4, and must achieve the required FRL or resistance to the incipient spread of fire or other specified method.</p> <p>Ventilation and air-conditioning systems are to be installed in accordance with AS/NZS 1668.1.</p>	for review.	
C4D16	<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 fire protected in a manner identical to a prototype tested in accordance with AS4072.1 and AS1530.4 to achieve the required FRL or must otherwise comply with the requirements of this clause.	Compliance Readily Achievable
C4D17	<p>Columns protected with lightweight construction to achieve an FRL</p>	Columns must be protected in accordance with the identical tested prototype. Product codes should be noted on architectural plans and corresponding test reports provided for review.	Compliance Readily Achievable

Specification 5 - Fire-resisting construction

S5C1	Scope	-	Noted
S5C2	<p>Exposure to fire-source features</p> <p>Shielding elements must have an FRL of not less than 30/-/-.</p> <p>Concessions apply for parts of external walls of another building 15m above the building concerned or if the exposed part is below the finished ground level at the property boundary.</p>	The proposed building is at least 3m away from adjoining boundaries (properties) and 6 m away from the boundary across any roads.	Complies
S5C3	<p>Fire protection for a support of another part</p> <p>Supporting elements must generally maintain required FRLs unless a concession is available under this clause.</p>		Compliance Readily Achievable
S5C4	Lintels	Structural engineer specification of the	Compliance



	A lintel must generally maintain the FRL required for the part of the building in which it is situated unless it can otherwise comply with this clause.	FRL of proposed lintels are to be provided.	Readily Achievable
S5C5	Method of attachment not to reduce the fire-resistance of building elements The method of attaching or installing a finish, lining, ancillary element or service installation to a building element must not reduce the fire-resistance of that element to below that required.		Compliance Readily Achievable
S5C6	General concessions (see clause) <ul style="list-style-type: none"> ▪ (1) & (2) Concessions are applicable for some steel and timber columns in predominantly single storey buildings. ▪ (3) Concessions are available for non-combustible rooftop plant enclosures. ▪ (4) Curtain walls fully protected with external sprinklers do not require an FRL. ▪ (5) Concessions are applicable for balconies not more than 2 storeys above ground that are not the only path of travel toward an exit. 		N/A
S5C7	Mezzanine floors: Concession Concessions are available for mezzanines (other than Class 9b with occupancy greater than 100) not exceeding 200m ² or 1/3 the room area, however increased FRLs are required for the surrounding elements per Table S5C7.	This building does not contain a mezzanine.	N/A
S5C8	Enclosure of shafts Shafts required to have an FRL must be enclosed at the top and bottom by construction have an FRL not less than that required for the walls of the shaft. Shafts, other than one enclosing a fire isolated stairway or ramp, do not require an FRL at the top if the shaft extends beyond the roof covering.	Large-scale sections illustrating how lightweight fire rated construction encloses the top of shafts or how the shafts extend beyond the roof covering per this clause are needed for review.	Compliance Readily Achievable
S5C9	Carparks in Class 2 and 3 buildings A single carpark storey in a Class 2 building containing not more than 4 storeys is treated as Class 2 for the purposes of determining the required FRLs. A single carpark storey in a Class 3 (or Class 2 and 3) building containing not more than 3 storeys is treated as Class 2 or 3 for the purposes of determining the required FRLs.	The building contains more than 4 storeys, hence the concession for carpark FRLs does not apply.	N/A
S5C10	Residential care building: Concession Concessions apply enabling reduced FRLs for building elements for a Class 3 residential care buildings protected with a sprinkler system excluding fire-protected timber construction.	This building is not a Class 3 building.	N/A
S5C11	Type A fire-resisting construction – fire-resistance of building elements <ol style="list-style-type: none"> a) All elements must achieve the FRL specified in Table 3. b) Internal walls requiring an FRL must extend to the underside of the floor above, to the roof, or to the underside of a ceiling with resistance to the incipient spread of fire of not less than 60 minutes. 	Details of the proposed method of fire separation at the junction of floors and the external wall and the junction of fire rated internal walls and the external wall are needed for review.	Compliance Readily Achievable



	<p>c) Loadbearing internal walls (including shafts) and fire walls must be constructed from masonry, concrete or fire-protected timber that complies with this clause.</p> <p>d) The FRLs for external columns also apply to internal columns facing and within 1.5 of a window that is exposed to a fire source feature.</p>		
S5C12	<p>Type A fire-resisting construction –concession for floors</p> <p>Floors do not require an FRL if they are:</p> <p>a) Laid on the ground.</p> <p>b) In Class 2, 3, 5 or 9 buildings and the space below is not a storey nor used for ancillary purposes.</p> <p>c) Timber stage floors over a floor with the required FRL, where the space below is not used (e.g. store room).</p> <p>d) Within Class 2, 3 and 4 sole-occupancy units.</p> <p>e) Open-access and above a floor with the required FRL.</p>	This concession has been applied to the following floors in this building:	Noted
S5C13	<p>Type A fire-resisting construction – floor loading of Class 5 and 9b buildings: Concession</p> <p>Concessions apply for FRLs to floors and roofs above a floor in a class 5 or 9b building designed for live load up to 3kPa.</p>	This building is not Class 5 or 9b.	N/A
S5C14	<p>Type A fire-resisting construction – roof superimposed on concrete slab: Concession</p> <p>Roofs do not require an FRL if they are non-combustible and installed above a concrete slab roof with the required FRL.</p>		Noted
S5C15	<p>Type A fire-resisting construction – roof: Concession</p> <p>Roofs do not require an FRL if they are non-combustible and:</p> <p>a) The building is sprinkler protected;</p> <p>b) The building has a rise in storeys of 3 or less;</p> <p>c) Is a Class 2 or 3 building; or</p> <p>d) The building is less than 25m in effective height and a ceiling with a RISF60 is installed below the roof.</p>	This concession is applicable on the basis that the building is of Class 2 and fully sprinklered.	Noted
S5C16	<p>Type A fire-resisting construction – roof lights</p> <p>Roof lights must:</p> <p>(a) Not occupy more than 20% of the roof area;</p> <p>(b) Be not less than 3m from a fire source feature, non-fire separated external walls projecting above, any roof light in an adjoining SOU or fire separated part of the building.</p>	Rooflights are not proposed	N/A
S5C17	<p>Type A fire-resisting construction – internal columns and walls: Concession</p> <p>Class 2 and 3 - In a building not more than 25m effective height and with a non-combustible roof complying with Clause 3.5, internal columns and walls (other than fire walls and shaft walls) may have an FRL of 60/60/60.</p>	This concession does not apply as the building has an effective height of more than 25m.	N/A
S5C18	<p>Type A fire-resisting construction – open spectator stands and indoor sports stadiums: Concession</p> <p>FRL concessions are applicable for roofs, columns,</p>	The building does not contain an open spectator stand and/or indoor sports stadium.	N/A



	loadbearing walls and non-loadbearing external walls in open spectator stands and indoor sports stadiums.		
S5C19	Type A fire-resisting construction – carparks FRL concessions apply to sprinkler protected and open deck carparks that are separate buildings or otherwise fire separated per this clause.	Structural engineer specifications of the FRLs of building elements in the proposed carpark are to be provided.	Compliance Readily Achievable
S5C20	Type A fire-resisting construction – Class 2 and 3 buildings: Concession Timber framed construction and FRL concessions per this clause are permitted for Class 2 and 3 buildings that are limited in their rise in storeys. Further concessions are available if they are sprinkler protected.	The concession is applicable subject to a sprinkler system fitted complying with Specification 17. The following reduced FRLs prescribed in Tables S5C11a, S5C11d, S5C11e, S5C11f and S5C11g may apply: <ul style="list-style-type: none"> ▪ For any floor and loadbearing wall, may be reduced to 60, except any FRL criterion of 90 for an external wall must be maintained when tested from the outside; and ▪ For any non-loadbearing internal wall, need not apply if – <ul style="list-style-type: none"> ○ It is lined on each side with 13mm standard grade plasterboard or similar non-combustible material; and ○ It extends – <ul style="list-style-type: none"> ▪ To the underside of the floor next above; or ▪ To the underside of a ceiling with a resistance to the incipient spread of fire of 60 minutes; or ▪ To the underside of a non-combustible roof covering; and <ul style="list-style-type: none"> ○ Any insulation installed in the cavity of the wall is non-combustible; and ○ Any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material; and ○ Any doorway in the wall is protected by a self-closing, tight fitting, solid core door not less than 35mm thick. 	Noted
S5C21	Type B fire-resisting construction – fire- resistance of building elements	The proposed type of construction is Type A.	N/A
S5C22	Type B fire-resisting construction – carparks	The proposed type of construction is Type A.	N/A
S5C23	Type B fire-resisting construction – Class 2 and 3 buildings: Concession	The proposed type of construction is Type A.	N/A
S5C24	Type C fire-resisting construction – fire- resistance of building elements	The proposed type of construction is Type A.	N/A
S5C25	Type C fire-resisting construction – carparks	The proposed type of construction is Type A.	N/A



Section D: Access and Egress

Part D2 - Provision for Escape

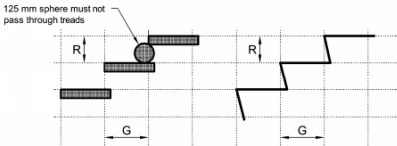
D2D2	Application of Part This part does not apply to the internal parts of a sole-occupancy in a Class 2 or 3 building or Class 4 part of a building.		Noted
D2D3	Number of exits required At least two exits need to serve each storey of: <ul style="list-style-type: none"> ▪ Buildings over 25m in effective height. ▪ Class 2 or 3 buildings subject to C2D6. ▪ Each basement level. ▪ Class 9 buildings: <ul style="list-style-type: none"> ○ More than 6 storeys or over 25m in effective height. ○ Storeys including Class 9a patient care areas. ○ Storeys containing Class 9c sleeping areas. ○ Early childhood centres. ○ Primary or secondary schools exceeding 2 storeys. ○ Storeys or mezzanines accommodating more than 50 persons. ○ Auditoriums in an entertainment venue. Access to an exit must be provided without passing through another SOU.		Compliance Readily Achievable
D2D4	When fire-isolated stairways and ramps are required Every stair in a Class 5 to 9 building must be fire isolated unless it does not connect or pass through more than 3 consecutive floors in a sprinkler protected building, or 2 storeys in a non-sprinkler protected building.	The required exits must be fire-isolated complying with C3D8.	Compliance Readily Achievable
D2D5	Travel distance See Appendix D	The following issues are identified On Residential level <ul style="list-style-type: none"> ▪ Travel to a point of choice is over 6 m being on ground level to level 8 up to 11.3 m ▪ Common areas up to 23 m to a point of choice On basement level <ul style="list-style-type: none"> ▪ Over 20 m from south-east area 	Performance Solution
D2D6	Distance between exits See appendix D	The following issues are identified Basement level : - Distance between exits exceeds 60m (worst point 85.10m)	Performance Solution
D2D7	Height of exits, paths of travel to exits and doorways Except for doorways, paths of travel must have a clear height of at least 2m.		Compliance Readily Achievable



D2D8	Width of exits and paths of travel to exits <i>(NSW variation for Access and egress)</i>		Compliance Readily Achievable
D2D9	Width of doorways in exits or paths of travel to exits <i>(NSW variation for Access and egress)</i>		Compliance Readily Achievable
D2D10	Exit width not to diminish in direction of travel		Compliance Readily Achievable
D2D11	Determination and measurement of exits and paths of travel to exits		Compliance Readily Achievable
D2D12	Travel via fire-isolated exits	The following issues must be addressed: <ul style="list-style-type: none">Require persons egressing the premises pass with 6 m of openings in external walls of the building at the point of discharge and the path to the roadway Contrary to the requirements of this clause	Performance Solution
D2D13	External stairways or ramps in lieu of fire-isolated exits External stairs or ramps may be used instead of fire-isolated stairs to a building under 25m in effective height.	The building is more than 25m in effective height.	N/A
D2D14	Travel by non-fire-isolated stairways or ramps	There is no proposed non-fire-isolated stairway or ramp.	N/A
D2D15	Discharge from exits An exit must not be blocked nor be capable of being blocked at its point of discharge.	The various exits do not discharge as far apart as practical.	Performance Solution
D2D16	Horizontal exits Horizontal exits must have a clear area on the side of the fire wall, to which the occupants are evacuating, to accommodate the total number of persons serviced by the horizontal exit of not less than 0.5m ² per person in any other case.		N/A
D2D17	Non-required stairways, ramps or escalators Non-required stairs are permitted to connect up to 3 consecutive levels in a sprinklered building if one of the levels has direct access to open space		Compliance Readily Achievable
D2D18	Number of persons accommodated		N/A
D2D19	Measurement of distances		Noted
D2D20	Method of measurement		Noted
D2D21	Plant rooms, lift machine rooms and electricity network substations: Concession A ladder may be used in lieu of a stairway as an exit from: <ul style="list-style-type: none">a) a plant room with a floor area not more than 100m², orb) all but one point of egress from a plant room with a floor area not more than 200m².		Noted



D2D22	Access to lift pits Access requirements apply to lift pits over 3m in depth.	Lift consultant to confirm.	Compliance Readily Achievable
D2D23	Egress from primary schools Every part of a class 9b primary school must be wholly within a storey that provides direct egress to a road or open space.		N/A
Part D3 - Construction of Exits			
D3D2	Application of Part		Applicable
D3D3	Fire-isolated stairways and ramps Fire resisting shafts must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage or impair the fire resistance of the shaft.		Compliance Readily Achievable
D3D4	Non-fire-isolated stairways and ramps Required stairs in a building having a rise in storeys of more than 2 must be constructed only of reinforced or prestressed concrete, or steel not less than 6mm thick, or timber that has a finished thickness of not less than 44mm and an average density of not less than 800 kg/m ³ at a moisture content of 12%.		Compliance Readily Achievable
D3D5	Separation of rising and descending stair flights		Complies
D3D6	Open access ramps and balconies		N/A
D3D7	Smoke lobbies		N/A
D3D8	Installations in exits and paths of travel Electrical meters and motors, distribution boards and telecommunication boards must not be accessed from fire isolated exits and, if located in corridors leading to exits, should occur in non-combustible or fire protective smoke sealed enclosures. No openings to ducts conveying hot products of combustion permitted in required exits. Gas or fuel services not permitted in required exits. Electric or services equipment in paths of travel to exits must be within a non-combustible and smoke sealed enclosure.	Distribution board enclosures must either be non-combustible or a fire protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure. Compliance should be illustrated on the drawings.	Compliance Readily Achievable
D3D9	Enclosure of space beneath stairs and ramps If the space below a fire-isolated stairway is within the fire isolated shaft it must not be enclosed to form a cupboard or similar enclosed space. The space below non fire-isolated stairs 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.	The storage cupboard below the required egress stair must be fire separated with 60min construction and a -/60/30 self-closing fire door. Compliance should be illustrated on the architectural drawings.	Compliance Readily Achievable
D3D10	Width of required stairways and ramps A stairway or ramp more than 2m in width is only counted as having a width of 2m unless it is divided by a continuous handrail or balustrade between landings and each division is less than 2m wide.		Compliance Readily Achievable

D3D11	Pedestrian ramps Ramps serving as required exit must have a gradient not less steep than 1:8. If the ramp is required for disabled access under Part D4 it must comply with AS1428.1. The surface of the ramp must have a non-slip finish.		Compliance Readily Achievable																											
D3D12	Fire-isolated passageways Fire isolated passageways are to have an FRL equivalent to the fire resisting stair shaft as specified in Specification 5 when tested from the outside		Compliance Readily Achievable																											
D3D13	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.	The FRL is proposed to be reduced as part of a Performance Solution	Performance Solution																											
D3D14	Going and risers To provide safe passage, stairways must comply with the following: <ul style="list-style-type: none"> ▪ minimum 2 risers / maximum 18 in each flight ▪ risers 115mm min 190 mm max - going 250mm min 355mm max - 2R+G 550mm min 700mm max. ▪ 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 D3D15 when tested in accordance with AS 4586 <table border="1" data-bbox="316 1429 815 1512"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Riser (R)</th> <th colspan="2">Going (G) ⁽²⁾</th> <th colspan="2">Quantity (2R+G)</th> </tr> <tr> <th>Max</th> <th>Min</th> <th>Max</th> <th>Min</th> <th>Max</th> <th>Min</th> </tr> </thead> <tbody> <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> </tbody> </table> 		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	Large scale stair details are needed for review and should demonstrate compliance with the requirements of this clause.	Compliance Readily Achievable
	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																								
D3D15	Landings 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: <table border="1" data-bbox="331 1883 791 2018"> <thead> <tr> <th><u>Application</u></th> <th><u>Dry Surface Conditions</u></th> <th><u>Wet Surface Condition</u></th> </tr> </thead> <tbody> <tr> <td>1:14 or steeper</td> <td>P4 or R11</td> <td>P5 or R12</td> </tr> </tbody> </table>	<u>Application</u>	<u>Dry Surface Conditions</u>	<u>Wet Surface Condition</u>	1:14 or steeper	P4 or R11	P5 or R12	A finishes schedule specifying ramp and stairway finishes and corresponding slip resistance certification/test reports are needed for review.	Compliance Readily Achievable																					
<u>Application</u>	<u>Dry Surface Conditions</u>	<u>Wet Surface Condition</u>																												
1:14 or steeper	P4 or R11	P5 or R12																												



	<p>ramps</p> <p>Ramps of 1:14 to 1:20 P3 or R10 P4 or R11</p> <p>Tread or Landing Surface P3 or R10 P4 or R10</p> <p>Nosing Strip or Landing Strip P3 P4</p>		
D3D16	<p>Thresholds</p> <p>Steps should not occur at doorways without a threshold landing except as follows:</p> <ul style="list-style-type: none"> In a building required to be accessible and the doorway opens to a road or open space and is provided with a threshold ramp or step ramp in accordance with AS1428.1, Or in any other case a single 190mm step is permitted at doors leading to the exterior. 	Note that where access for people with disabilities is required it is not permitted to have a step at the threshold of a doorway.	Compliance Readily Achievable
D3D17	Barriers to prevent falls		Compliance Readily Achievable
D3D18	<p>Height of barriers</p> <p>Barriers must generally not be less than 865mm for stairways and ramps and 1m in all other cases. A 700mm balustrade is permitted in front of fixed seating in an auditorium.</p>		Compliance Readily Achievable
D3D19	<p>Openings in barriers</p> <p>Openings in a required barrier must not allow a 125mm sphere to pass through, except for concessions applying to fire-isolated stairs or other emergency use areas excluding Class 9b early childhood centres.</p> <p>Where a barrier is fixed to the face of a landing, balcony or the like, the opening between the barrier and the face must not permit a 40mm sphere to pass through.</p>		Compliance Readily Achievable
D3D20	<p>Barrier climbability</p> <p>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.</p>		Compliance Readily Achievable
D3D21	Wire barriers		Compliance Readily Achievable
D3D22	<p>Handrails</p> <p>Handrails to exits including parts of fire isolated exit serving an area required to be accessible to people with disabilities must comply with Clause 12 of AS1428.1, viz:</p> <ul style="list-style-type: none"> Handrails not to obstruct circulation space 30-50mm diameter 865-1000mm above nosing line of stairs 865-1000mm above ramps and landings Consistent height throughout 	<p>Handrail compliance should be confirmed by the access consultant..</p> <p>Handrails are to be provided in compliance with Clause D4D4, which includes the following-</p> <p>Non-Fire Isolated Stairways and Ramps</p> <p>All stairs and ramps not used as an emergency exit are to have handrails installed on both sides that comply with Clause 10 & 11 of AS1428.1-2009</p> <p>Fire Isolated Stairways and Ramps</p>	Compliance Readily Achievable

- 50mm grip clearance and no obstructions to handhold
- Continuous at internal (return) landings
- Provided with handrail extensions and 180 degree curled ends

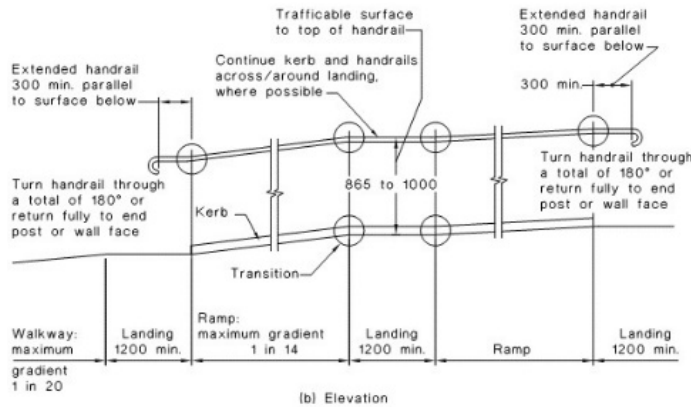
In Fire Isolated Stairways & Ramps a handrail is required to be installed to at least one side of stair flights and located not less than 865mm above the nosing's of stair treads and the floor surfaces of landings

Consistent Handrail Heights for all stairways

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.

All stairs including fire stairs are required to be designed to comply with Clause 12 of AS1428.1 - 2009

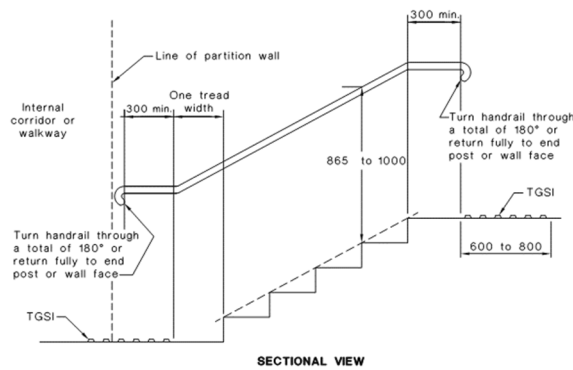
Ramps



DIMENSIONS IN MILLIMETRES

FIGURE 14 RAMP HANDRAILS

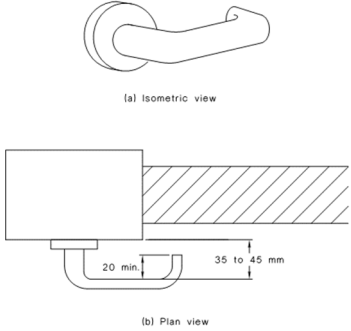
Stairways



DIMENSIONS IN MILLIMETRES

FIGURE 26(B) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT END OF STAIRWAY OTHER THAN AT LINE OF BOUNDARY

	<p>SECTION A-A</p> <p>Handrail Profile</p>	<p>(a) Plan</p> <p>DIMENSIONS IN MILLIMETRES</p>	
<p>D3D23</p>	<p>Fixed platforms, walkways, stairways and ladders</p> <p>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.</p>	<p>Certification to AS1657 is to be provided.</p>	<p>Compliance Readily Achievable</p>
<p>D3D24</p>	<p>Doorways and doors</p> <p>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>	<p>Auto sliding doors at the entries into the building must comply with these requirements.</p>	<p>Compliance Readily Achievable</p>
<p>D3D25</p>	<p>Swinging doors</p> <p>Defined exit doors that serve a part of a building with a floor area over 200m² must swing outward in the direction of exit travel.</p> <p>Exit doors must not encroach more than 500mm into the required width of the stair or 100mm when fully open and must swing in the direction of travel.</p>	<p>Exit doors must swing outward and not encroach to the width of the path of travel of the stair.</p>	<p>Compliance Readily Achievable</p>
<p>D3D26</p>	<p>Operation of latch</p> <p>Exit doors should be provided with “free handle” egress via a downward or pushing action and, if serving an area accessible to people with disabilities, must have non-slip “D” pull handles with 35-45mm hand clearances.</p>	<p>All exit doors and doors in the path of travel must comply.</p>	<p>Compliance Readily Achievable</p>

	 <ul style="list-style-type: none"> ▪ Where the latch operation device is not located on the door leaf itself- ▪ manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located not less than 500 mm from an internal corner; and ▪ for a hinged door, between 1 m and 2 m from the door leaf in any position; ▪ and for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position. ▪ braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. 		
<p>D3D27</p>	<p>Re-Entry from Fire-Isolated Exits</p> <p>Fire isolated stair doors must facilitate re-entry from within the stair back onto the floor on every 4th level at all times and on all levels in the event of a fire alarm, where the exit stair serves a storey above 25m in effective height, a Class 9a building, a Class 9b early childhood centre or a Class 9c building</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> <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 ▪ 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>Compliance Readily Achievable</p>
<p>D3D28</p>	<p>Signs on doors</p> <p>Signage in capital letters not less than 20mm high to be provided on doors as follows</p> <ol style="list-style-type: none"> i. An automatic door held open by an automatic hold-open device: 	<p>Under Section 108 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 a notice is to be displayed in a conspicuous location adjacent to a</p>	<p>Compliance Readily Achievable</p>



	<p>FIRE SAFETY DOOR - DO NOT OBSTRUCT</p> <p>i. for a self-closing door</p> <p>FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN</p> <p>i. for a door discharging from a fire-isolated exit</p> <p>FIRE SAFETY DOOR - DO NOT OBSTRUCT</p>	<p>doorway providing access to but not within a fire isolated stairway, passageway or ramp. The words "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> <p>(a) to place anything in or near this fire exit that may obstruct persons moving to or from this exit, or</p> <p>(b) to interfere with or obstruct the operation of any fire doors, or</p> <p>(c) to remove, damage or otherwise interfere with this notice.</p>	
D3D29	<p>Protection of openable windows</p> <p>Windows serving a residential bedroom or serving an early childhood centre must be protected where the floor is 2m or more above the external surface below.</p> <p>Window openings must be provided with protection if the floor below the window is 2m or more above the surface beneath in the bedrooms of Class 2 or 3 buildings or Class 9b early childhood centre.</p> <p>Where the window sill is below 1.7m above the floor level, the openable portion of the window must be protected with</p> <ul style="list-style-type: none"> ▪ a device to restrict the window opening or ▪ a screen with secure fittings <p>A device or screen required must:</p> <ul style="list-style-type: none"> ▪ not permit a 125mm sphere to pass through the window opening or screen; and ▪ resist an outward horizontal action of 250N against the window restrained by a device or screen protecting the opening and have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden. <p>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.</p>	<p>Should "Juliet" type balconies be provided to bedroom windows then protection must be as required by this clause up to a high of 1.7 m.</p>	<p>Compliance Readily Achievable</p>
D3D30	Timber stairways: Concession		N/A
NSW D3D31	Doors in the path of travel in an Entertainment Venue		N/A



Part D4 - Access for People with Disabilities			
D4D2	<p>General building access requirements</p> <p>Access is generally required for persons with a disability throughout all areas unless specifically exempted.</p>	Access is required throughout. Consultation with the access consultant is required.	Compliance Readily Achievable
Section E: Services and Equipment			
Part E1 - Fire Fighting Equipment			
E1D2	<p>Fire hydrants</p> <p>The building requires a fire hydrant system in accordance with AS2419.1-2021.</p> <p>Where a sprinkler system is installed in the building in accordance with AS 2118.1, AS 2118.4 or AS 2118.6, the fire hydrant booster protection requirements of clauses 7.6.2 and 7.6.3 of AS2419.1 do not apply.</p> <p>The location of the booster is not within site of main entrance.</p> <p><i>Note: Varied booster protection requirements for sprinklered and non-sprinklered buildings.</i></p> <p><i>Note: Ring main requirements for large-isolated buildings and buildings exceeding 25m in effective height.</i></p>	<p>Full compliance with AS2419.1 will be required unless varied via fire brigade approval.</p> <p>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 E1D2 of the BCA and AS2419.1-2021 (noting any non-compliances, which are to be addressed as a Performance Solution).</p>	Performance Solution
E1D3	<p>Fire hose reels</p> <p>Fire hose reel coverage to AS2441-2005 is required throughout with hose reels located adjacent to stairs and exits. Where coverage is not achieved with hose reels located Additional hose reels are permitted to be located along the paths of travel to achieve coverage where</p> <p><i>Hoses are not permitted to pass through fire or smoke doors to achieve hose reel cover. Coverage to waste rooms may need to be considered.</i></p> <p>Note: Fire hose reels not required to: -</p> <ul style="list-style-type: none"> ▪ Class 2, 3, 4, 5 and 9c buildings; ▪ Class 8 electricity network substations; ▪ Classrooms and associated corridors in primary and secondary schools 	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 E1D3 of the BCA and AS2441 - 2005.	Performance Solution
E1D4	<p>Sprinklers</p> <p>Fire sprinkler protection to AS2118.1-2017, AS2118.4- 2012 and AS2118.6-2012 as relevant is a mandatory requirement for the project if:-</p> <ul style="list-style-type: none"> ▪ The building effective height exceeds 25m. (If any part of the development exceeds 25m effective height, all parts of the complex require sprinklers.) • Class 2 or 3 building and any other class of building containing a Class 2 or 3 part (Note: residential care buildings are excluded), throughout the whole building including any part of another class, if any part of the building has a rise in storey of 4 or more and an effective height of not more than 25m. • Class 3 building used as a residential care 		Performance Solution



	<p>building.</p> <ul style="list-style-type: none"> • Class 9a health-care building used as a residential care building. • Class 9c aged care building • The building is defined as a large isolated building (Refer to BCA Ref C2.3 above). • An enclosed carpark with more than 40 cars occurs. • A retail fire compartment over 3,500m²/21,000m³ occurs. • The building is used for residential care, residential aged care or shared residential accommodation. • Occupancies of “excessive hazard” that occur in fire compartments over 2,000m² or 12,000m³. <p>Sprinkler pumps and valves must be accessible from the street.</p> <p>Sprinkler system activation must be linked to an audible occupant warning system.</p> <p>Sprinkler hazard Class under AS2118 needs to be agreed where uncertainty of usage under Appendix 1 of the Code occurs.</p>		
E1D5	Where sprinklers are required: all classifications		Applicable
E1D6	Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings		Applicable
E1D7	Where sprinklers are required: Class 3 building used as a residential care building		N/A
E1D8	Where sprinklers are required: Class 6 building		N/A
E1D9	Where sprinklers are required: Class 7a building, other than an open-deck carpark		N/A
E1D10	<p>Where sprinklers are required: Class 9a health-care building used as a residential care building, Class 9c buildings</p> <p>Aged care buildings</p> <p>The following conditions apply with respect to the sprinkler system:</p> <ul style="list-style-type: none"> ▪ Sprinklers are to be to AS2118.4-2012. ▪ Sprinklers must be connected to the fire brigade monitoring system. ▪ Fire orders notices should occur at each exit showing fire alarm operation method, fire equipment and exit locations and evacuation procedures. ▪ The sprinkler system should be linked to an audible occupant warning system to sound an alarm through all occupied areas at prescribed sound levels. <p>Monitored stop valves are required to AS2118.1 in a location accessible to a road or open space.</p>		N/A
E1D11	<p>Where sprinklers are required: Class 9b buildings</p> <p>Sprinklers are required throughout any building containing a Class 9b early childhood centre that is not wholly within a storey that provides direct</p>		N/A



	egress to a road or open space.		
E1D12	Where sprinklers are required: additional requirements		N/A
E1D13	<p>Where sprinklers are required: occupancies of excessive hazard</p> <p>“Excessive hazard” means:</p> <p>a) Hazardous process risks including the following:</p> <ul style="list-style-type: none"> (i) Aircraft hangars (ii) Electrical/electronic manufacturing and assembly (predominantly plastic components. (iii) Fire-lighter manufacturing. (iv) Fireworks manufacturing. (v) Flammable liquid spraying. (vi) Foam plastic goods manufacturing and/or processing. (vii) Foam rubber goods manufacturing and/or processing. (viii) Hydrocarbon based sheet product manufacturing. (ix) Nitrocellulose and nitrocellulose goods manufacturing. (x) Paint and varnish works, solvent based. (xi) Plastic goods manufacturing and/or processing works. (xii) Resin and turpentine manufacturing. (xiii) Vehicle repair shops. <p>b) Combustible goods with an aggregate volume exceeding 2,000m³ and stored to a height greater than 4m such as the following:</p> <ul style="list-style-type: none"> (i) Aerosol packs with flammable contents. (ii) Cartons and associated packing material excluding cartons with densely packed non-combustible content. 		N/A
E1D14	<p>Portable fire extinguishers</p> <p>Portable Fire Extinguishers are required be installed to sections (3) and (4) in Clause E1D14 and AS 2444 requirements, at:</p> <ul style="list-style-type: none"> ▪ Throughout Class 5 buildings ▪ emergency services switchboards ▪ kitchens ▪ flammable liquid stores ▪ at nurses’ stations ▪ special risk areas ▪ where fire hose reels are not installed ▪ Class 2, 3 or 4 residential areas are to be protected by 2.5kg ABE type fire extinguishers located in common areas on the storey served and located not more than 10m from each sole occupancy unit entry door. 		Compliance Readily Achievable



E1D15	Fire control room A fire control centre or Fire Indicator Panel, Fire Fans Control and Emergency Intercom panels is required for buildings of over 25m in effective height or buildings over 18,000m ² in area, at a location readily available for firefighting operations and located at or near the main building entry.		Compliance Readily Achievable
E1D16	Fire precautions during construction 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. When the building reaches 12m effective height: <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. 	Further discussion required with builder to determine that this is included in their program. 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.	Compliance Readily Achievable
E1D17	Provisions for special hazards	The following matters are a special hazard and requires a separate assessment from a fire engineer: - <ul style="list-style-type: none"> ▪ EV charging within the car park ▪ Solar panels and batteries 	Performance Solution
Part E2 - Smoke Hazard Management			
E2D2	Applicable of requirements	Part is not applicable to <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 ▪ sanitary compartments ▪ plant rooms or the like 	Applicable
E2D3	General requirements		Compliance Readily Achievable
E2D4	Fire-isolated exits		Compliance Readily Achievable
E2D5	Buildings more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building		Compliance Readily Achievable
E2D6	Buildings more than 25 m in effective height: Class 5, 6, 7b, 8 or 9b buildings		N/A
E2D7	Buildings more than 25 m in effective height: Class 9a buildings		N/A

E2D8	Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building		N/A
E2D9	Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings		N/A
E2D10	Buildings not more than 25 m in effective height: large isolated buildings subject to C3D4		N/A
E2D11	Buildings not more than 25 m in effective height: Class 9a and 9c buildings		N/A
E2D12	Class 7a buildings		N/A
E2D13	Basements (other than Class 7a buildings)		N/A
E2D14	Class 6 buildings - in fire compartments more than 2000 m ² : Class 6 building (not containing an enclosed common walkway or mall serving more than one Class 6 sole-occupancy unit)		N/A
E2D15	Class 6 buildings - in fire compartments more than 2000 m ² : Class 6 building (containing an enclosed common walkway or mall)		N/A
NSW E2D16	Class 9b – assembly buildings: all		N/A
NSW E2D17	Class 9b – assembly buildings: night clubs, discotheques and the like		N/A
NSW E2D18	Class 9b – assembly buildings: exhibition halls, museums and art galleries		N/A
NSW E2D19	Class 9b – assembly buildings: other assembly buildings (not listed in NSW E2D16 to E2D18)		N/A
NSW E2D20	<i>(NSW variation - This clause has deliberately been left blank.)</i>	-	Applicable
E2D21	Provisions of special hazards	The following matters are a special hazard and requires a separate assessment from a fire engineer: - <ul style="list-style-type: none"> EV charging within the car park Solar panels and batteries 	Performance Solution
Part E3 - Lift Installations			
E3D2	Lift installations Electric and electrohydraulic lifts must comply with the design requirements of BCA Specification 24.	Certification of lift design to be provided.	Compliance Readily Achievable
E3D3	Stretcher facility in 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. The lift must serve every level to which lift access is provided.	Ensure a suitably sized lift serves each level.	Compliance Readily Achievable
E3D4	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.	Signage to be installed stating. <div style="text-align: center;"> </div>	Compliance Readily Achievable
E3D5	Emergency lifts		Compliance



	<p>Emergency lifts of prescribed size, operation and fire isolation are required in buildings where:</p> <ul style="list-style-type: none"> the building has an effective height over 25m, or a patient care area occurs in a health care building at a level that does not have direct access to a road or open space. <p>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.</p> <p>The following requirements apply to an emergency lift:</p> <ul style="list-style-type: none"> Must serve all storeys served by a passenger lift. Must be contained in a fire rated shaft. If the building effective height exceeds 75m, must have a 600kg rating if not provided with a stretcher facility or a 900kg rating if stretcher facility is provided. If serving a patient care area in a health care building, have minimum clear car dimensions of 2280mm depth, 1600mm width and 2300 mm height. Doors must be 1300mm wide and 2100mm high. (All dimensions measured clear of all obstructions including handrails.) If serving a patient care area in a health care building, must be connected to a standby power system where installed. 		Readily Achievable
E3D6	Landings		Compliance Readily Achievable
E3D7	<p>Passenger lift types and their limitations</p> <p>Every passenger lift must be one of the types identified in Sections (1) of Clause E3D7 of the BCA and not rely on a constant pressure device for its operation if the lift car is fully enclosed.</p>		Compliance Readily Achievable
E3D8	<p>Accessible features required for passenger lifts</p> <p>Every passenger lift must have accessible features where applicable as identified in Clause E3D8 of the BCA.</p>		Compliance Readily Achievable
E3D9	<p>Fire service control</p> <p>Where lifts serve a storey above 12m in effective height:</p> <ul style="list-style-type: none"> A fire service control switch is required for each lift or lift group. A lift car fire service drive control is required for each lift. 	Certification of lift design to be provided.	Compliance Readily Achievable
E3D10	Residential care buildings		N/A
E3D11	<p>Fire service recall control switch</p> <p>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</p>	Certification of lift design to be provided.	Compliance Readily Achievable



	service control switch.		
E3D12	<p>Lift car fire service drive control switch</p> <p>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.</p>	Certification of lift design to be provided.	Compliance Readily Achievable
Part E4 - Emergency Lighting, Exit and Warning Systems			
E4D2	<p>Emergency lighting requirements</p> <p>Emergency lighting is to be provided throughout the building.</p>	<p>Emergency lighting is to be provided in:</p> <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 corridor or space that has emergency lighting or to a road or open space. ▪ In any room having a floor area more than 300m². ▪ In every required non-fire isolated stairway. 	Compliance Readily Achievable
E4D3	Measurement of distances		Noted
E4D4	<p>Design and operation of emergency lighting</p> <p>Emergency lighting must comply with to AS2293.1</p>		Compliance Readily Achievable
E4D5	<p>Exit signs</p> <p>Exit signs are to be provided in accordance with Clause E4D5 of the BCA.</p>	<p>Exit signs must be clearly visible to 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. 3. A horizontal exit 4. A door serving as or forming part of a required exit in a storey required to be provided with emergency lighting. 	Compliance Readily Achievable
E4D6	<p>Direction signs</p> <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</p>		Compliance Readily Achievable
E4D7	Class 2 and 3 buildings and Class 4 parts: Exemptions	Note a Performance Solution may restrict the use of such signs	Compliance Readily Achievable



E4D8	Design and operation of exit signs 1. Exit signs are to operate in accordance with AS 2293.1. 2. Photo luminescent exit sign are to comply with Specification 25.		Compliance Readily Achievable
E4D9	Emergency warning and intercom systems An emergency warning and intercom system complying with AS 1670.4 must be installed throughout the building.	Details demonstrating compliance and design certification will be required from services consultants at Construction Certificate stage.	Compliance Readily Achievable

Section F: Health and Amenity			
Part F1 - External waterproofing, rainwater management and rising damp			
F1D1	<p>Deemed-to-Satisfy Provisions</p> <p>(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F1P1 to F1P4 are satisfied by complying with F1D2 to F1D8.</p> <p>(2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.</p>	<p>A test report on the proposed wall system is to be provided. The test report must include the following information:</p> <ul style="list-style-type: none"> (i) Name and address of the person supervising the test. (ii) Test report number. (iii) Date of the test. (iv) Cladding manufacturer's name and address. (v) Construction details of the test specimen, including a description, and drawings and details of the components, showing modifications, if any. (vi) Test sequence with the pressures used in all tests. (vii) For each of the static and cyclic pressure tests, full details of all leakages, including position, extent and timing. 	<p>Performance Solution</p>
F1D3	<p>Stormwater drainage</p> <p>Stormwater drainage must comply with AS/NZS 3500.3.</p>	<p>Hydraulic drawings and design certification to be provided at Construction Certificate stage.</p>	<p>Compliance Readily Achievable</p>
F1D4	<p>Exposed joints</p> <p>Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must be protected in accordance with Section 2.9 of AS 4654.2; and not be located beneath or run through a planter box, water feature or similar part of the building.</p> <div style="text-align: center;"> <p>NOTE: For falls, see Clause 2.5.2.</p> <p>FIGURE 2.13 TYPICAL DISCONTINUOUS ONE-WAY MOVEMENT JOINT</p> <p>NOTE: For falls, see Clause 2.5.2.</p> <p>FIGURE 2.14 TYPICAL CONTINUOUS MOVEMENT JOINT</p> </div>	<p>Structural engineer/architect to confirm compliance.</p>	<p>Compliance Readily Achievable</p>
F1D5	<p>External waterproofing membranes</p> <p>Trafficable roofs, balconies, podiums or similar parts of a building require a waterproofing membrane complying with AS4654.1 and AS4654.2, which must be installed directly on the structural substrate.</p>	<p>A waterproofing detail illustrating compliance with this clause is needed for review.</p>	<p>Compliance Readily Achievable</p>



F1D6	Damp-proofing Moisture from the ground must be prevented from reaching the lowest floor timber 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.		Complies
F1D7	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
F1D8	Subfloor ventilation The lower ground sub floor space is to be cleared of all building debris and vegetation and be cross ventilated in accordance with Table F1D10 evenly distributed openings provided in the external walls Additionally, the sub floor space is to contain no dead air spaces and be graded to prevent water ponding under the building.		N/A
Part F2 - Wet areas and overflow protection			
F2D1	Deemed-to-Satisfy Provisions Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F2P1 and F2P2 are satisfied by complying with F2D2 to F2D4. Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.		Compliance Readily Achievable
F2D2	Wet area construction Water proofing of wet areas within a building to comply with AS 3740. Showers in Class 2 and 3 buildings or a Class 4 part must have a concrete or FC sheet structural substrate for floors and concrete, masonry, or FC sheeted walls. Concrete structural substrates for shower floors must be graded to a 1:80 fall, and the membrane directly applied to the structural substrate. The waterproofing requirements for multi-residential buildings also apply to commercial buildings.		Compliance Readily Achievable
F2D3	Rooms containing urinals Additional requirements apply including falls to floor wastes and impervious materials surrounding urinals.		N/A
F2D4	Floor wastes The floor of each bathroom and laundry in each sole occupancy of the Class 2 and 3 building portions must have a floor waste and floors graded to the floor waste at 1:50.		Compliance Readily Achievable



Part F3 - Roof and wall cladding

F3D1	<p>Deemed-to-Satisfy Provisions</p> <p>Where a Deemed-to-Satisfy Solution is proposed, Performance Requirement F3P1 is satisfied by complying with F3D2 to F3D5.</p> <p>Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.</p>		Compliance Readily Achievable
F3D2	Roof coverings		Compliance Readily Achievable
F3D3	<p>Sarking</p> <p>Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.</p>		Compliance Readily Achievable
F3D4	<p>Glazed assemblies</p> <p>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.</p>		Compliance Readily Achievable
F3D5	<p>Wall cladding</p> <p>External wall cladding must comply with one or a combination of the following:</p> <ul style="list-style-type: none"> ▪ Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700 ▪ Autoclaved aerated concrete: AS 5146.3. ▪ Metal wall cladding: AS 1562.1. 	External wall claddings which are not captured under Clause F3D5 will require a performance solution to be documented by an appropriately qualified practitioner in accordance with <i>Clause A2G2 - Performance Solution</i> .	Compliance Readily Achievable

Part F4 - Sanitary and other facilities

F4D2	Facilities in residential buildings		Compliance Readily Achievable
F4D3	Calculation of number of occupants and fixtures		N/A
F4D4	<p>Facilities in Class 3 to 9 buildings</p> <p>Toilet facilities are required in appropriate numbers based on the number of persons accommodated.</p>	Refer to appendix F4D4 of this report.	N/A
F4D5	<p>Accessible sanitary facilities</p> <p>Facilities should be constructed to AS1428.1 - 2009 although an existing WC facility that fully complies with AS1428.1 - 2001 may substitute as a concession.</p> <p>Separate male and female ambulant facilities are required at each bank of toilets that contains one or more toilets in addition to an accessible unisex facility.</p>	Refer to access consultant's report.	Compliance Readily Achievable
F4D6	<p>Accessible unisex sanitary compartments</p> <p>Accessible unisex toilets for people with a disability are required on each storey and at 50% of toilet banks on any storey.</p>		N/A

F4D7	Accessible unisex showers		N/A
F4D8	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
F4D9	Interpretation: Urinals and washbasins	Each 600mm length of a continuous urinal trough is counted as 1 urinal.	Noted
F4D10	<i>(NSW variation - This clause has deliberately been left blank.)</i>		-
F4D11	Waste management		N/A
F4D12	Accessible adult change facilities Note: applies to- 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 F5 - Room heights			
F5D2	Height of rooms and other spaces Generally, a minimum ceiling height of 2.4m is required throughout. In a Class 9b building in a school classroom or other assembly building with more than 100 persons — 2.4m; A theatre, public hall or other assembly building with more than 100 persons — 2.7 m In a corridor that serves an assembly building with not more than 100 persons — 2.4 m In a corridor that serves an assembly building with more than 100 persons — 2.7 m; in a Class 9a health-care building— (i) a patient care area — 2.4 m; and (ii) an operating theatre or delivery room — 3 m; and (iii) a treatment room, clinic, waiting room, passageway, corridor, or the like — 2.4 m	See separate SEPP 65 requirements	Compliance Readily Achievable
Part F6 - Light and ventilation			
F6D2	Provision of natural light Natural lighting aggregating 10% of room floor area is required as follows:		Compliance Readily Achievable



	<ul style="list-style-type: none"> ▪ To all habitable rooms in residential buildings. ▪ In bedrooms and dormitories of hotels, motels and the like. ▪ To rooms used for sleeping in health care and aged care buildings. ▪ To school classrooms and early childhood centres. 		
F6D3	Methods and extent of natural lighting		Compliance Readily Achievable
F6D4	Natural light borrowed from adjoining room		Compliance Readily Achievable
F6D5	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
F6D6	Ventilation of rooms <i>(NSW variation for Public Health Regulation)</i> Ventilation shall be provided throughout the building in by means of natural ventilation complying with Clause F6D7 or mechanical ventilation complying with the requirements of AS1668.2 as required by Clause F6D6 of the BCA.	Design details and certification from a mechanical engineer is required.	Compliance Readily Achievable
F6D7	Natural ventilation		Compliance Readily Achievable
F6D8	Ventilation borrowed from adjoining room		Compliance Readily Achievable
F6D9	Restriction on location of sanitary compartments		Compliance Readily Achievable
F6D10	Airlocks		Compliance Readily Achievable
F6D11	Carparks Basement carparks must be provided with a system of mechanical ventilation complying with AS 1668.2		Compliance Readily Achievable
F6D12	Kitchen local exhaust ventilation	Applies only to commercial kitchens	N/A
Part F7 - Sound transmission and insulation			
F7D2	Application of Part Applicable to Class 2, 3 and 9c buildings.	A detailed assessment will need to be undertaken by a qualified acoustic consultant at the Construction Certificate stage to verify compliance.	Compliance Readily Achievable
F7D3	Determination of airborne sound insulation ratings Construction required to have an airborne sound insulation rating must have the value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS1276.1 or ISO717.1 using result from		Compliance Readily Achievable



	laboratory measurements or comply with Specification 28 of the BCA.		
F7D4	Determination of impact sound insulation ratings A floor required to have an impact sound insulation rating must have the required value for weighted normalised impact sound pressure level with spectrum adaptation term ($L_{n,w}+C_i$) determined in accordance with AS/ISO 717.2 using results from laboratory measurements or comply with Specification 28 of the BCA. Walls that are required to have an impact sound insulation rating must be of discontinuous construction.		Compliance Readily Achievable
F7D5	Sound insulation rating of floors Floors separating sole occupancy units or separating sole occupancy units from a plant room, lift shaft, public corridor, public lobby or the like or parts of different classifications must have an $R_w + C_{tr}$ of not less than 50 and an $L_{n,w} + C_i$ of not more than 62.		Compliance Readily Achievable
F7D6	Sound insulation rating of walls Walls must have an $R + C_t$ of not less than 50 if it separates sole occupancy units and an R_w of 50 if it separates a sole occupancy unit from a plant room, lift shaft, public corridor, public lobby or the like or parts of different classifications. Compliance with F7D4(2) is required if the wall separates a bathroom, sanitary compartment, laundry or kitchen in one sole occupancy unit from a habitable room (excluding a kitchen) in another adjoining unit or a sole occupancy unit from a plant room or lift shaft. Doors incorporated the walls that separate sole-occupancy units from a stairway, public corridor, public lobby or the like, provided the door assembly has an R_w not less than 30. Where a wall required to have sound insulation has a floor above, the wall must continue to the underside of the floor above or a ceiling that provides the sound insulation required for the wall. Where a wall required to have sound insulation has a roof above, the wall must continue to the underside of the roof above or a ceiling that provides the sound insulation required for the wall.		Compliance Readily Achievable
F7D7	Sound insulation rating of internal services Services passing through more than one sole-occupancy unit must be separated from the rooms by construction with an $R_w + C_{tr}$ (airborne) not less than: a) 40 if the adjacent room is a habitable room (other than a kitchen); or b) 25 if the adjacent room is a kitchen or non-habitable room. Note if a stormwater pipe passes through a sole - occupancy unit it must be separated in accordance		Compliance Readily Achievable



	with (a) and (b).		
F7D8	Sound isolation pumps A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.		Compliance Readily Achievable
Part F8 - Condensation management			
F8D2	Application of part This part applies to a sole-occupancy unit of a Class 2 building or Class 4 part of a building.		Applicable
F8D3	External wall construction Where a pliable building membrane is installed in an external wall it must: <ul style="list-style-type: none">▪ comply with AS/NZS 4200.1; and▪ be installed in accordance with AS 4200.2; and▪ be a vapour permeable membrane for climate zones 6, 7 and 8; and▪ be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building.▪ For single skin masonry and single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity.		Compliance Readily Achievable
F8D4	Exhaust systems An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of— <ul style="list-style-type: none">▪ 25 L/s for a bathroom or sanitary compartment; and▪ 40 L/s for a kitchen or laundry. Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air. Exhaust from a bathroom, sanitary compartment, or laundry must be discharged— <ul style="list-style-type: none">▪ directly or via a shaft or duct to outdoor air; or▪ to a roof space that is ventilated in accordance with F8D5		Compliance Readily Achievable
F8D5	Ventilation of roof spaces Where an exhaust system covered by F8D4 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings. Openings required above must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is greater than 22°, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22°. 30% of the total unobstructed area required above must be located not more than 900 mm below the ridge or highest point of the roof space, measured vertically, with the remaining required area		Compliance Readily Achievable



	provided by eave vents.		
Section G: Ancillary Provisions			
Part G1- Minor Structures and components			
G1P1	Swimming pool drainage		N/A
G1D2	Swimming pools <i>(NSW variation for swimming pools)</i>	No swimming pools are proposed	N/A
G1D3	Refrigerated chambers, strong rooms and vaults		N/A
G1D4	Outdoor play spaces Any outdoor play space in a Class 9b early childhood centre must be enclosed on all sides with a barrier which complies with AS 1926.1 or, for falls greater than 2m, must comply with the additional requirements of this clause. Note walls, windows and doors may not get a concession if they are within the non-climbable zone of an enclosing barrier.		N/A
NSW G1D5	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			
G2D2	Installation of appliances		N/A
G2D3	Open fireplaces		N/A
G2D4	Incinerator rooms		N/A
Part G3 - Atrium Construction			
Part G3	Atrium Construction		N/A
Part G4 - Construction in Alpine Areas			
Part G2	Application of Part		N/A
Part G5 - Construction in Bushfire Prone Areas			
G5D2	Application of Part		N/A
G5D3	Protection - residential buildings <i>(NSW variation for bushfire prone area)</i>		N/A
G5D4	Protection - certain Class 9 buildings		N/A



Part G6 - Occupiable outdoor areas			
G6D1	<p>Application of Part</p> <p>Applies to occupiable outdoor areas in addition to other deemed-to-satisfy provisions of the BCA.</p> <p>Part G6 takes precedent where there is a difference to the deemed-to-satisfy provisions of Sections C, D, E, F & G.</p> <p>Except for clause G6D2, Part G6 does not apply to occupiable outdoor areas of individual resident rooms or outdoor occupiable areas less than 10m².</p>		Compliance Readily Achievable
G6D2	<p>Fire hazard properties</p> <p>A lining, material or assembly in an occupiable outdoor area must comply with C2D11 as for an internal element.</p> <p>The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C2D11:</p> <ul style="list-style-type: none"> (i) Average specific extinction area. (ii) Smoke-Developed Index. (iii) Smoke development rate. (iv) Smoke growth rate index (SMOGR_{RC}) 	Proposed materials used in outdoor occupiable areas are subject to C2D11 requirements as this clause.	Compliance Readily Achievable
G6D3	<p>Fire separation</p> <p>For the purposes of the Deemed-to-Satisfy Provisions of C3D8, C3D9 and C3D10, a reference to a storey includes an occupiable outdoor area, however a fire wall cannot be used to separate an occupiable outdoor area into different fire compartments.</p>		Compliance Readily Achievable
G6D4	<p>Provision for escape</p> <p>For the purposes of the Deemed-to-Satisfy Provisions of Part D2, a reference to a storey or room includes an occupiable outdoor area.</p>	Egress requirements under Part D2 apply to occupiable outdoor areas.	Performance Solution
G6D5	<p>Construction of exits</p> <p>For the purposes of the Deemed-to-Satisfy Provisions of Part D3, a reference to a storey or room includes an occupiable outdoor area.</p>	Construction of exits requirements under Part D3 apply to occupiable outdoor areas.	Compliance Readily Achievable
G6D6	<p>Fire fighting equipment</p> <p>Except for Clause S17C7(2)(a), for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area.</p>	Fire fighting equipment required under Part E1 to be designed to include occupiable outdoor areas.	Compliance Readily Achievable
G6D7	<p>Lift installations</p> <p>For the purposes of the Deemed-to-Satisfy Provisions of Part E3, a reference to a storey includes an occupiable outdoor area.</p>	Lift designs required under Part E3 to be designed to include occupiable outdoor areas.	Compliance Readily Achievable
G6D8	<p>Visibility in an emergency, exit signs and warning systems</p> <p>For the purposes of the Deemed-to-Satisfy Provisions of Part E4, a reference to a storey includes an occupiable outdoor area.</p>	Emergency lighting, exits signs and emergency warning and intercom systems to be designed to include occupiable outdoor areas.	Compliance Readily Achievable
G6D9	<p>Light and ventilation</p> <p>For the purposes of the Deemed-to-Satisfy Provisions of F6D5, F6D9 and F6D10, a reference</p>		Complies



	to a room includes an occupiable outdoor area.		
G6D10	Fire orders For the purposes of the Deemed-to-Satisfy Provisions of G4D8, a reference to a storey includes an occupiable outdoor area.		Compliance Readily Achievable
Part G7 - Livable housing design			
NSW G7D2	Livable housing design <i>This Part has deliberately been left blank. Part G7 does not apply in NSW as livable housing design requirements do not apply to sole-occupancy units in a Class 2 building in NSW.</i>	-	N/A
Section I: Special use buildings			
Part I1 - Class 9b buildings			
part I1	Application of Part <i>(NSW variation for Entertainment Venues)</i> For a Class 9b building that is an entertainment venue refer to NSW Part I4.	Applies every enclosed Class 9b building, which is not an entertainment venue which— <ul style="list-style-type: none">(i) is a school assembly, church or community hall with a stage and any backstage area with a total floor area of more than 300m²; or(ii) otherwise, has a stage and any backstage area with a total floor area of more than 200m²; or(iii) has a stage with an associated rigging loft. Notwithstanding the above- <ul style="list-style-type: none">(i) I1D4 applies to every open or enclosed Class 9b building; and(ii) I1D7 applies to every enclosed Class 9b building.	N/A
Part I2 - Public Transport Buildings			N/A
Part I3 - Farm buildings and farm sheds			N/A
NSW Part I4 - Entertainment venues other than temporary structures and drive-in theatres			
Part I4	Application of Part This Part applies to every entertainment venue as described in the Environmental Planning and Assessment Regulation 2021.	Entertainment Venue is defined as a building used as a cinema, theatre or concert hall or an indoor sports stadium.	N/A
NSW Part I5 Temporary structures			N/A
NSW Part I6 Drive-in theatres			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 ▪ Access for maintenance 	Compliance assumed, although further information is required to confirm compliance. A performance based BCA J1V3 assessment may be adopted for the project if compliance with BCA deemed to satisfy provisions are problematic.	Compliance Readily Achievable
Part J7 - Artificial Lighting and Power			Compliance Readily Achievable
Part J8 - Heated Water Supply and Swimming Pool and Spa Pool Plant			Compliance Readily Achievable
Part J9 - Energy monitoring and on-site distributed energy resources			Compliance Readily Achievable
J9D2	Application of Part	Applies to the building.	Applicable
J9D3	Facilities for energy monitoring A building with a floor area of more than 2,500m ² must have the facility to record individually the energy consumption of: <ol style="list-style-type: none"> i. air-conditioning plant including, where appropriate, heating plant, cooling plant and air handling fans; and ii. artificial lighting; and iii. appliance power; and iv. central hot water supply; and v. internal transport devices including lifts, escalators and travelators where there is more than one serving the building; and vi. other ancillary plant. Energy meters required by (b) must be interlinked by a communication system that collates the time-of-use energy consumption data to a single interface monitoring where it can be stored, analysed and reviewed.	An energy monitoring facility is required for the building.	Compliance Readily Achievable
J9D4	Facilities for electric vehicle charging equipment	See E1D17	Additional Details Required



J9D5	Facilities for solar photovoltaic and battery systems	See E1D17	Additional Details Required
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15. Appendix A - Referenced Documentation

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

Drawing No.	Title	Issue	Date	Drawn By
DA200	Basement 1	A	25/07/2025	DKO
DA201	Ground floor	A	25/07/2025	DKO
DA202	Level 1	A	25/07/2025	DKO
DA203	Level 2	A	25/07/2025	DKO
DA204	Level 3	A	25/07/2025	DKO
DA205	Level 4 -level 5	A	25/07/2025	DKO
DA206	Level 6	A	25/07/2025	DKO
DA207	Level 7 – level 8	A	25/07/2025	DKO
DA208	Level 9	A	25/07/2025	DKO
DA300	North and south elevations	A	25/07/2025	DKO
DA301	East and west elevation	A	25/07/2025	DKO
DA302	Internal elevation	A	25/07/2025	DKO
DA303	Section A & B	A	25/07/2025	DKO
DA304	Section C & D	A	25/07/2025	DKO



16. Appendix B - Statutory Fire Safety Measures

Schedule of Statutory Fire Safety Measures

Measure	Standard of Performance
Access Panels, Doors And Hoppers To Fire Resisting Shafts	BCA 2022 Amendment 2 Clause C4D14 and tested prototypes (AS 1530.4 - 2014)
Automatic Fail Safe Devices	Scheduled devices release upon trip of smoke detection, fire detection and sprinkler activation in accordance with BCA 2022 Amendment 2 Clause D3D26.
Automatic Fire Detection And Alarm System (<i>Smoke Detection System</i>)	BCA 2022 Amendment 2 S20C4 and AS 1670.1 - 2018
Automatic Fire Detection And Alarm System (<i>Smoke Alarm System</i>)	BCA 2022 Amendment 2 S20C3 and AS 3786 - 2014
Automatic Fire Detection And Alarm System (<i>Smoke Detection System To Operate Zone Smoke Control Or Stair Pressurisation System</i>)	BCA 2022 Amendment 2 S20C6 and AS 1670.1 - 2018
Automatic Fire Detection And Alarm System (<i>Smoke Detection System To Automatically Shutdown Air-Handling System</i>)	BCA 2022 Amendment 2 S20C6 and AS 1670.1 - 2018
Automatic Fire Detection And Alarm System (<i>Smoke Detection System To Activate Smoke Exhaust System</i>)	BCA 2022 Amendment 2 S20C6 and AS 1670.1 - 2018
Automatic Fire Suppression Systems (<i>Sprinklers</i>)	BCA 2022 Amendment 2 Specification 17 and AS 2118.1 - 2017
Automatic Fire Suppression Systems (<i>Combined Sprinkler And Hydrant System</i>)	BCA 2022 Amendment 2 Specification 17 and AS 2118.6 - 2012
Building Occupant Warning System	BCA 2022 Amendment 2 S20C7 and AS 1670.1 - 2018
Emergency Lifts	BCA 2022 Amendment 2 Clause E3D5
Emergency Lighting	BCA 2022 Amendment 2 Clause E4D2, E4D4 and AS/NZS 2293.1 - 2018
Emergency Warning And Intercommunication System	BCA 2022 Amendment 2 Clause E4D9, Specification 31 and AS 1670.4 - 2018
Exit Signs	BCA 2022 Amendment 2 Clause E4D5, NSW E4D6, E4D7, E4D8 and AS/NZS 2293.1 - 2018
Fire Alarm Monitoring System	BCA 2022 Amendment 2 S20C8 and AS 1670.3 - 2018
Fire Control Room	BCA 2022 Amendment 2 Specification 19
Fire Dampers	BCA 2022 Amendment 2 Clause C4D15 and AS 1668.1 - 2015 (AS 1682.1 - 2015 and AS 1682.2 - 2015)
Fire Doors	BCA 2022 Amendment 2 Specification 12 and AS/NZS 1905.1 - 2015
Fire Engineering Report	TBC
Fire Hydrants Systems	BCA 2022 Amendment 2 Clause E1D2 and AS2419.1-2021
Fire Seals Protecting Opening In Fire Resisting Components Of The Building	BCA 2022 Amendment 2 Clause C4D15, Specification 13, AS 1530.4 - 2014, AS 4072.1 - 2005 and installed in accordance with the tested prototype.
Hose Reel System	BCA 2022 Amendment 2 Clause E1D3 and AS 2441 - 2005
Lightweight Construction	BCA 2022 Amendment 2 Specification 6, Clause A2G3 and AS 1530.4 - 2014



Measure	Standard of Performance
Mechanical Air Handling System (<i>Automatic Shut Down Of Air-Handling System</i>)	BCA 2022 Amendment 2 Clause E2D3 and AS 1668.1 - 2015
Mechanical Air Handling System (<i>Automatic Air Pressurisation System</i>)	BCA 2022 Amendment 2 Clause E2D4, E2D8, E2D9 and AS 1668.1 - 2015
Mechanical Air Handling System (<i>Zone Smoke Control System</i>)	BCA 2022 Amendment 2 Clause E2D6, E2D7, E2D9, E2D11, E2D13 and AS 1668.1 - 2015
Mechanical Air Handling System (<i>Carpark Mechanical Ventilation System</i>)	BCA 2022 Amendment 2 Clause E2D12, 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
Mechanical Air Handling System (<i>Automatic Smoke Exhaust System</i>)	BCA 2022 Amendment 2 Specification 21
Portable Fire Extinguishers	BCA 2022 Amendment 2 Clause E1D14 and AS 2444 - 2001
Warning And Operational Signs	BCA 2022 Amendment 2 Clauses C4D7, D2D22, NSW D3D24, D3D28, D4D7 E3D4, E3D11, E3D12, G4D3 and NSW I4D14 and Specification 14, E1D15 and G3D8

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



17. Appendix C2D2 - Fire Rating Requirements

17.1. Type A Construction

Table 1 S5C11a: Type A construction: FRL of loadbearing parts of external walls

Distance from a <i>fire-source feature</i>	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	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 m or more	90/60/30	120/60/30	180/120/90	240/180/90

Table 2 S5C11b: Type A construction: FRL of non-loadbearing parts of external walls

Distance from a <i>fire-source feature</i>	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
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	–/–/–	–/–/–	–/–/–	–/–/–

Table 3 S5C11c: Type A construction: FRL of external columns not incorporated in an external wall

Column type	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Loadbearing	90/–/–	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/–/–	–/–/–	–/–/–	–/–/–

Table 4 S5C11d: Type A construction: FRL of common walls and fire walls

Wall type	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Loadbearing or non-loadbearing	90/90/90	120/120/120	180/180/180	240/240/240



Table 5 S5C11e: Type A construction: FRL of loadbearing internal walls

Location	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Fire-resisting lift and stair shafts	90/90/90	120/120/120	180/120/120	240/120/120
Bounding public corridors, public lobbies and the like	90/90/90	120/-/-	180/-/-	240/-/-
Between or bounding sole-occupancy units	90/90/90	120/-/-	180/-/-	240/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion	90/90/90	120/90/90	180/120/120	240/120/120

Table 6 S5C11f: Type A construction: FRL of non-loadbearing internal walls

Location	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Fire-resisting lift and stair shafts	- /90/90	- /120/120	- 120/120	-/120/120
Bounding public corridors, public lobbies and the like	- /60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy units	- /60/60	-/-/-	-/-/-	-/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion	- /90/90	-/90/90	- /120/120	-/120/120

Table 7 S5C11g: Type A construction: FRL of other building elements not covered by Tables S5C11a to S5C11f

Building element	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
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 C2D11 - 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 and AS5637.1-2015

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

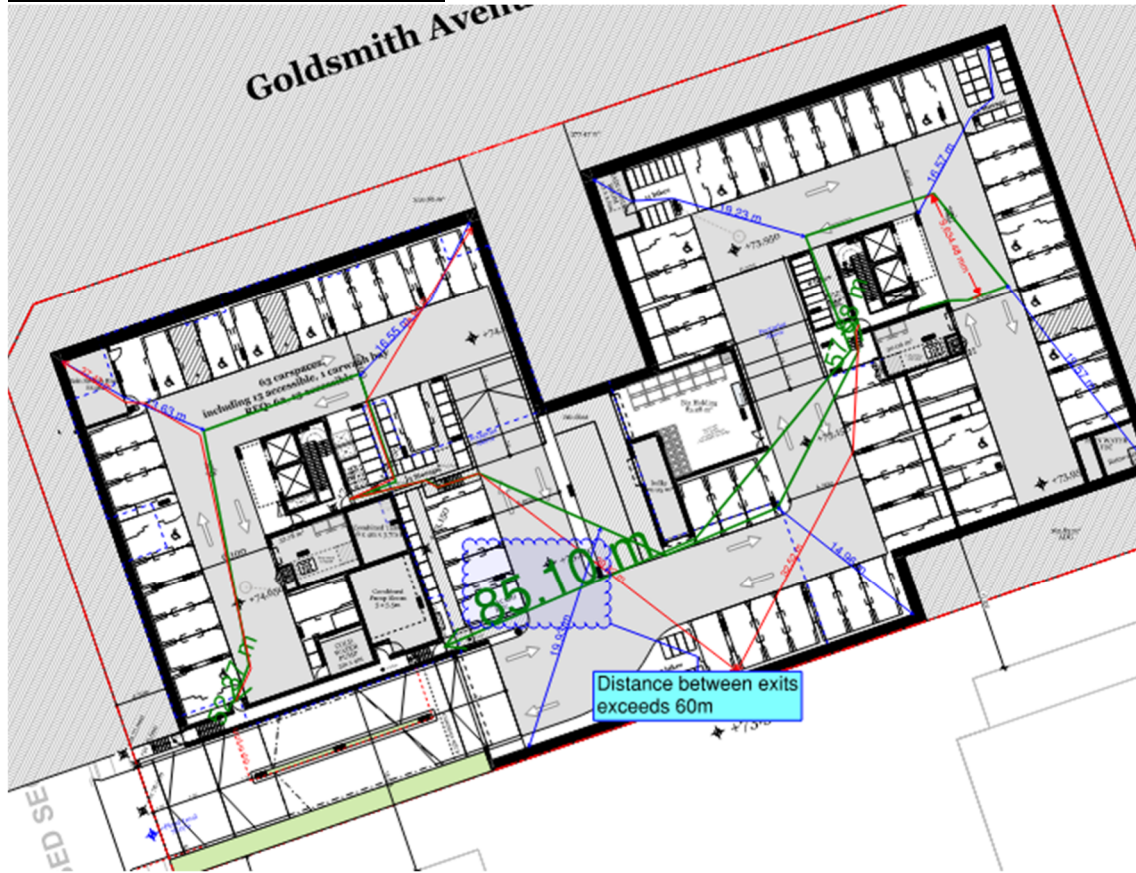
In addition, in non-sprinklered areas, wall and ceiling linings must have a smoke growth rate index not more than 100 or an average specific extinction area less than 250m²/g.

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 D – travel distance markups

Basement 01 – Distance Between Exits

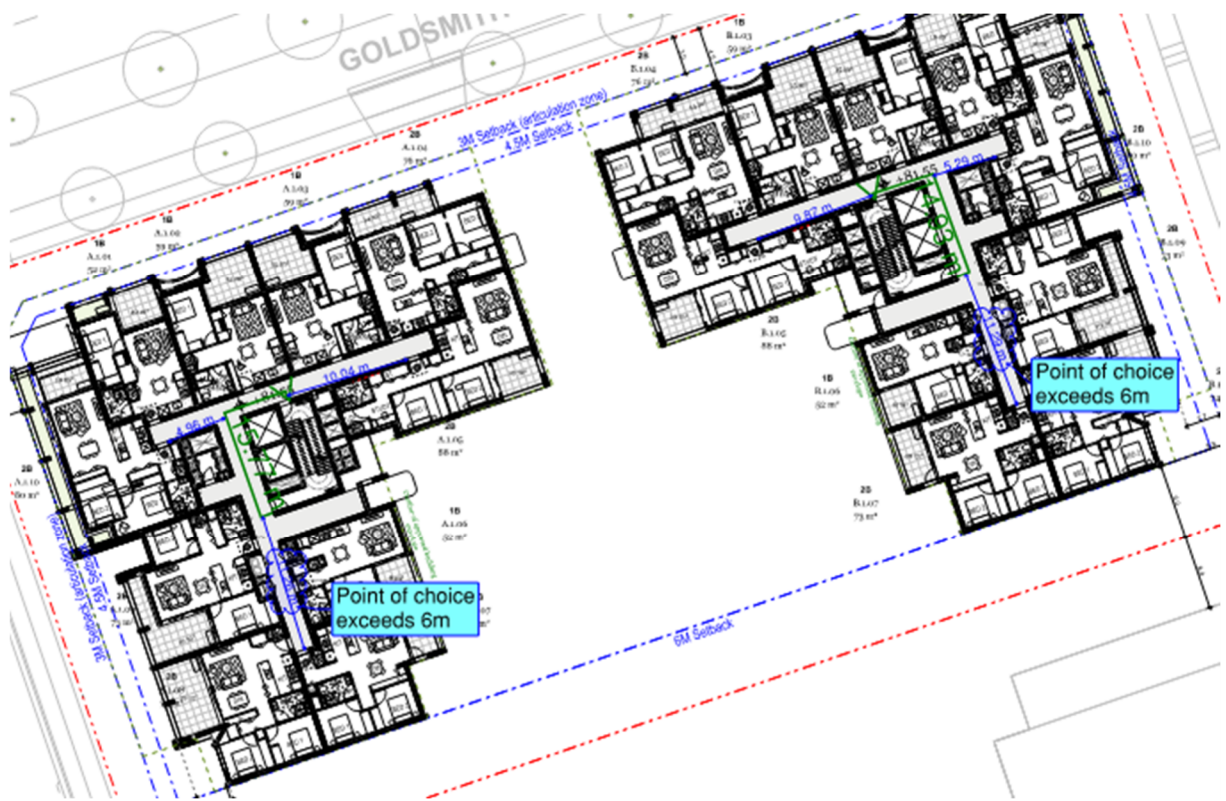


Ground Floor - POC





Level 1-2 (Generic) - POC



Level 3 - POC





20. Appendix D2D5 - Exits

The exits from the building are set out below:

Exit No	Location	Type	Grid Ref	No of storeys connected / passed by	Comments
1.	Basement stair east	Fire isolated	--	2	Egress system still being developed
2.	Basement stair west	Fire isolated scissor stair	--	2	Egress system still being developed
3.	East tower stair A	Fire isolated scissor stair	--	9	Egress system still being developed
4.	East tower stair B	Fire isolated scissor stair	--	9	Egress system still being developed
5.	west tower stair A		--	9	Egress system still being developed
6.	West tower stair B		--	9	Egress system still being developed
7.	Pump room stair / passage	Fire isolated	--	1	Serves pump room and southwest basement 1
8.	East lobby	Main entry exit	--	1	Main entry / egress
9.	West lobby	Main entry exit	--	1	Main entry / egress



21. Appendix D3D29 - Protection of Openable Windows

Building Use	Openable Windows		
	<2m above surface beneath	>2m above surface beneath	>4m above surface beneath
Bedrooms	No restrictions	<p>Window located below 1.7m above bedroom floor:-</p> <ul style="list-style-type: none"> ▪ Must be protected by device to restrict window opening OR screen with secure fittings; AND ▪ No opening greater than 125mm; AND ▪ Device and screen must resist outward horizontal action of 250N; AND ▪ Have child resistant release if device or screen is able to be removed, unlocked or overridden; AND ▪ If device or screen is able to be removed, unlocked or overridden minimum 865mm barrier required to protect window. <p>Note: No 865mm barrier required if device or screen is permanent and <u>cannot</u> be removed, unlocked or overridden</p> <p>Window located min. 1.7m above bedroom floor</p> <ul style="list-style-type: none"> ▪ No restrictions 	Comments as per >2m above surface beneath
Other rooms (i.e. lounge, dining room etc)	No restrictions	No restrictions	<p>Barrier required</p> <ul style="list-style-type: none"> • Min. 865mm above floor • No openings exceeding 125mm • No climbable elements between 150-760mm above floor
All other buildings	No restrictions	No restrictions	<p>Barrier required</p> <ul style="list-style-type: none"> • Min. 865mm above floor • No openings exceeding 125mm • No climbable elements between 150-760mm above floor



22. Appendix D4 - 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



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