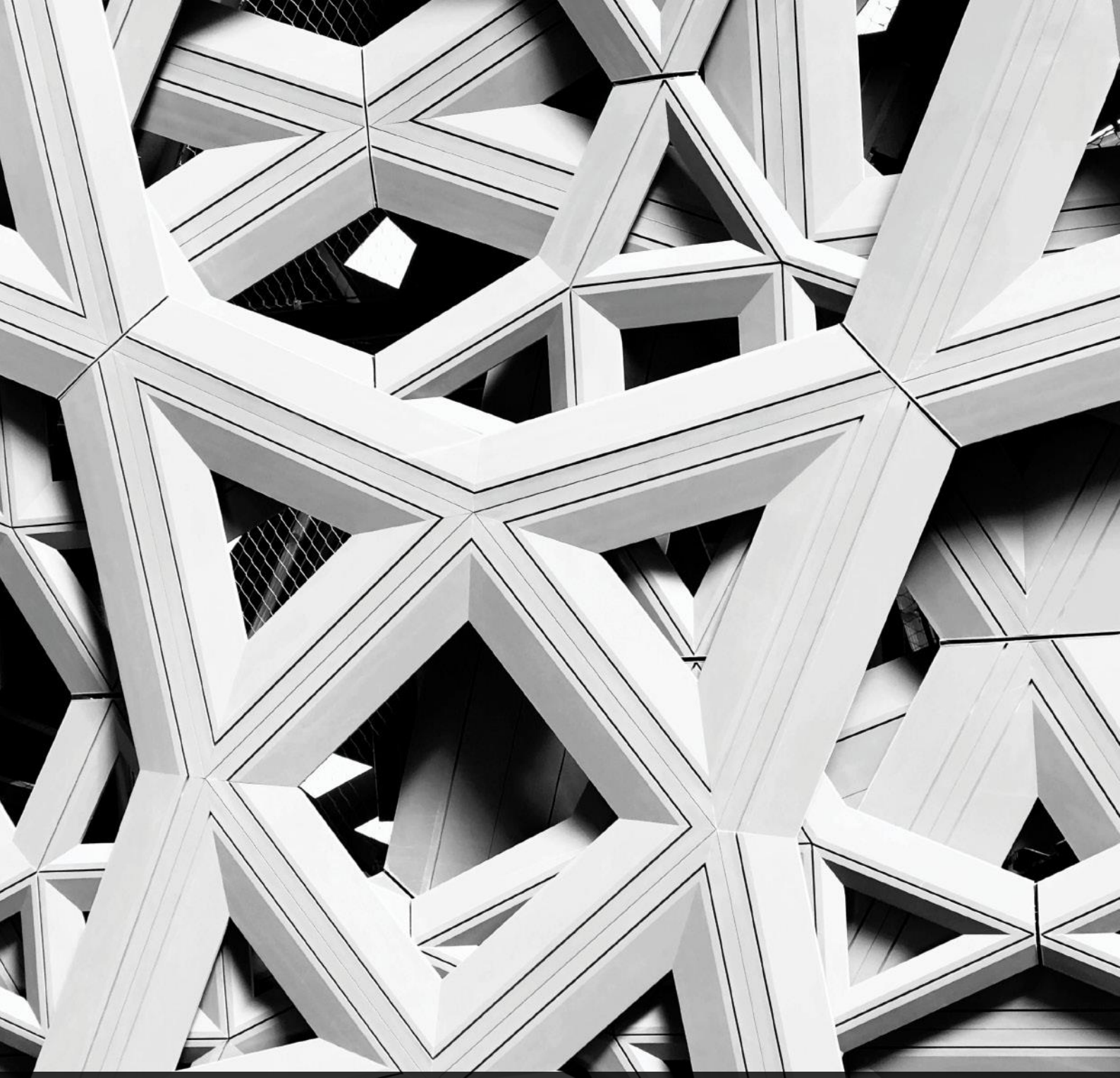

BCA Assessment Report

Dee Why RSL Club Extension

932 Pittwater Road, Dee Why

Prepared for:

Dee Why RSL,

c/- Farrell Coyne Projects

Revision 3

11 February 2025

bm+g

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Executive Summary

The following comprises a summary of the key compliance issues identified under the clause-by-clause assessment in Section 3.0 and 4.0 of this report that will be required to be addressed prior to the Construction Certificate for the project.

A. Matters requiring redesign or additional information at CC Stage:

+ BCA (DtS) Clause		+ Description
1.	**Part B1**	An assessment of the adequacy of the existing structural elements being retained/altered as part of the proposed development is to be provided by the Structural Engineer at the CC Application stage.
2.	**C2D10 / C2D14**	Details of the non-combustible external walls, including all ancillary elements and attachments, to the proposed development are required to be provided for assessment.
3.	**C3D13 / C3D14**	Details of any proposed fire separation of equipment and electrical infrastructure to be provided at CC application stage.
4.	**Spec. 5**	+ An investigation of the FRL of the existing building elements being retained within the areas of the building that are being refurbished/altered will need to be carried out by the Structural Engineer to determine the current level of fire resistance. + Fire rating (FRL) plans to the building are to be provided at CC Application stage.
5.	**D3D14-D3D22**	Details plans of all new stairways, balustrades and handrails are to be provided for review at CC Application stage. Any existing stairs that are proposed to be utilised for access or egress to the new/altered portions of the building will need to be surveyed to ensure the dimensions of the treads and risers, landings and nosings are compliant.
6.	**Part D4 & AS 1428.1 – 2009**	A separate report will be required from an Access Consultant to outline the applicable requirements for the new/altered positions of the building. Specific details regarding the possible application of D4D5 will also be required.
7.	**E1D15**	Details of the proposed Fire Control Centre location in the new main foyer is to be provided for review.
8.	**E3D3**	Details of the existing/proposed stretcher lifts are to be provided.
9.	**F1D5**	Details confirming the grades of the proposed falls to the exposed roof level slab to allow for compliant drainage and waterproofing are to be provided on the CC plans.
10.	**Section J**	Design Certification required at CC Application Stage to confirm compliance with Evolved Engineering Section J Report.

B. Matters requiring fire safety engineered performance solutions:

+	BCA (DtS) Clause	+ Description
1.	**Spec. 5**	Rationalised FRL requirements (new and existing elements – TBC) and compartmentation strategy.
2.	**C3D3**	The existing and proposed fire compartment sizes in the Club building do not comply with Table C3D3 and will need to be subject of a new performance solution.
3.	**C3D7**	As the building is not fully sprinkler protected any non-compliant vertical separation of openings between each level will need to be the subject of a new Performance Solution in addition to the base building FER – further review and assessment required.
4.	**D2D5 / D2D6**	The current plans indicate that exit travel distances, and distances between alternative exits within the altered portions building will not comply with D2D5 & D2D6.
5.	**D2D8**	The egress paths from the Asian Kitchen in the SW corner of Level 2 will be less than 1m wide (approx. 750mm) which is non-compliant with D2D8(1).
6.	**D2D12**	To allow the extended the Fire Stair 07 located on Grids NF/NG-E1/E2 to discharge internally to the carpark on Level 1.
7.	**E1D2**	An updated Performance Solution will be required to address the changes to the existing base building hydrant design specification.
8.	**E1D2 / E1D4**	Modification to the current base building Performance Solution relating to the location of the hydrant / sprinkler booster assemblies.
9.	**E2D2-E2D20**	Confirmation is to be provided if a Performance Solution is proposed to rationalise the requirements associated with the required automatic smoke exhaust system.

C. Other matters requiring performance solutions:

+	BCA (DtS) Clause	+ Description
1.	**Part D4 (TBC)**	TBC – Access consultant to confirm if there are any applicable performance solutions required.
2.	**F3P1**	A Performance Solution report is to be provided by the Architect / Façade Engineer to demonstrate how the external walls are designed to prevent the penetration of water into the building.
3.	**F5D2(5)(b)**	The existing ceiling height in the Class 9b Gaming Area that is being retained is less than 2.7m clear and accommodates more than 100 persons.

+ Contents

+ Report Status

+ Date	11.02.2025
+ Revision	3
+ Status	Updated Plans – Development Application
+ Author	Dean Goldsmith
+ Reviewed	Jack Nicolaou

Prepared by:

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Reviewed by:

Jack Nicolaou
Assistant Building Surveyor
bm+g

+ Revision History

+ Revision	0	**+ Date**	14.05.24
+ Status	Preliminary Assessment – For Review		

+ Revision	1	**+ Date**	09.12.24
+ Status	Updated Design – Development Application		

+ Revision	2	**+ Date**	05.02.25
+ Status	Updated Design – Development Application		

+ Revision	3	**+ Date**	11.02.25
+ Status	Updated Design – Development Application (incl. design team comments)		

1.0 Description of Project

1.1 Proposal

BM+G Pty Ltd have been commissioned by Dee Why RSL, c/- Farrell Coyne Projects to undertake an assessment of the club extension at Dee Why RSL Club at 932 Pittwater Road, Dee Why against the relevant provisions of the Building Code of Australia 2022 (BCA).

An assessment of BCA compliance with respect to the new works is included within Section 3.0 For matters relating to the upgrade of existing building/s, refer to Section 4.0

1.2 Aim

The aim of this report is to:

- Undertake an assessment of the proposed development against the Deemed-to-Satisfy (DtS) provisions of the BCA.
- Identify matters that require plan amendments in order to achieve compliance with the BCA.
- Identify matters that are to be required to be addressed by Performance Solutions.
- Enable the certifying authority to satisfy its statutory obligations under Clause 19(1) of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.
- Identify matters relating to the existing building that are required to be addressed as a result of the statutory upgrade triggers applicable to the works under the Environmental Planning and Assessment Regulations 2021.

1.3 Project Team

The following BM+G team members have contributed to this Report:

- **Dean Goldsmith** – Report Preparation (Director) | Building Surveyor-Unrestricted
- **Jack Nicolaou** – Peer Review (Assistant Building Surveyor) | Building Surveyor-Unrestricted

1.4 Referenced Documentation

The following documentation has been reviewed, referenced and/or relied upon in the preparation of this report:

- Building Code of Australia 2022 (BCA)
- The Guide to the Building Code of Australia 2022

- Population Numbers calculated by Altis Architect, as noted on Drawing WP01 Issue D dated 07.02.25
- Section J Report prepared by Evolved Engineering Rev. 3.0 dated 11.02.25
- Architectural Plans prepared by Altis Architecture numbered:

+ Drawing	+ Revision	+ Date	+ Drawing	+ Revision	+ Date
DA-0000	A	02.02.25	DA-1104	A	02.02.25
DA-0001	A	02.02.25	DA-1105	A	02.02.25
DA-0002	A	02.02.25	DA-1106	A	02.02.25
DA-0003	A	02.02.25	DA-2000	A	02.02.25
DA-0004	A	02.02.25	DA-2100	A	02.02.25
DA-0005	A	02.02.25	DA-2101	A	02.02.25
DA-0007	A	02.02.25	DA-2120	A	02.02.25
DA-1001	A	02.02.25	DA-3000	A	02.02.25
DA-1002	A	02.02.25	DA-3100	A	02.02.25
DA-1003	A	02.02.25	DA-3101	A	02.02.25
DA-1004	A	02.02.25	DA-4000	A	02.02.25
DA-1005	A	02.02.25	DA-4001	A	02.02.25
DA-1101	A	02.02.25	DA-4100	A	02.02.25
DA-1102	A	02.02.25	WP01	D	07.02.25
DA-1103	A	02.02.25	-	-	-

1.5 Regulatory Framework

- Pursuant to Section 19(1) of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 all new building work must comply with the current BCA however the existing features of an existing building need not comply with the BCA unless upgrade is required by other clauses of the legislation.
- Pursuant to Section 60 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021, if a Certifier becomes aware of any significant fire safety issues in the process of determining a CC, there are two options:
  - Address the significant fire safety issue in the proposed development, or
  - Notify Council of the significant fire safety issue (noting Council may potentially then issue a Fire Safety Order on the building compelling the building owner to rectify the issue).
- Pursuant to Section 14 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021, a certifier must not issue a construction certificate for alteration building work unless, on completion of the building work, the fire protection and structural capacity of the building will not be reduced.

The assessment has been undertaken in accordance with Clause 24 and 25 of the Building and Development Certifiers Regulation 2020. BM+G are the proposed Registered Certifier and the advice provided in this Report is limited to whether submitted documentation complies with the Building Code of Australia or a legislative requirement.

1.6 Relevant Version of the NCC Building Code of Australia

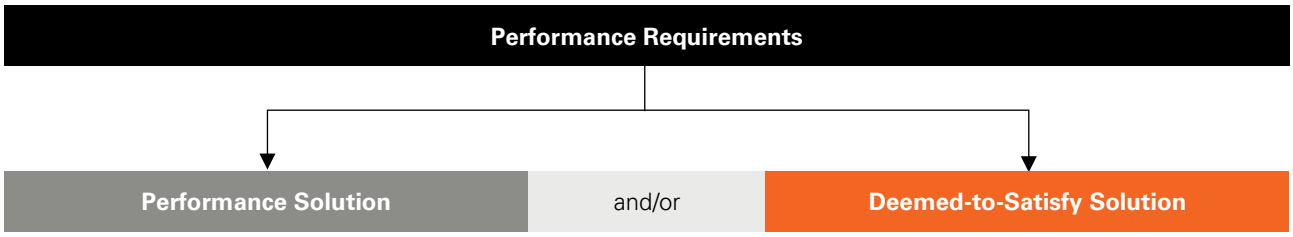
Pursuant to Section 19 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 the proposed building is subject to compliance with the relevant requirements of the BCA as in force at the day on which the application for the Construction Certificate is made. The current version of the BCA is BCA 2022, with the next revision of the BCA coming into effect 1 May 2025. As the Construction Certificate application will likely be lodged before 1 May 2025, this report assesses the design against compliance with the requirements of BCA 2022.

Where the building is a multi-storey building and multiple Construction Certificates will be issued under the same development consent, the relevant version of the BCA may be 'locked in' based on the day in which the application is made for the Construction Certificate which involves the *entrance floor*.

The following parts of the BCA are subject to transitional provisions:

- NCC 2022 Energy Efficiency provisions – 1 October 2023.
- NCC 2022 Condensation Management provisions under BCA Part F8 – 1 October 2023.

1.7 Compliance with the National Construction Code



Compliance with the NCC is achieved by complying with:

- the Governing Requirements of the NCC; and
- the Performance Requirements.

Performance Requirements are satisfied by one of the following, as shown in the Figure below:

- A Performance Solution.
- A Deemed-to-Satisfy Solution.
- A combination of the above two options.

Where a *Performance Requirement* is proposed to be satisfied by a *Performance Solution*, the following steps must be undertaken:

- Prepare a performance-based design brief in consultation with relevant stakeholders.
- Carry out analysis, using one or more of the Assessment Methods listed in A2G2(2), as proposed by the performance-based design brief.
- Evaluation the results against the acceptance criteria in the performance-based design brief.
- Prepare a final report that includes:

- All Performance Requirements and/or Deemed-to-Satisfy provisions identified through A2.2(3) or A2G4(3) as applicable; and
- Identification of all Assessment Methods used; and
- Details of steps (a) to (c); and
- Confirmation that the Performance Requirement has been met; and
- Details of conditions or limitations, if any exist, regarding the Performance Solution.

1.8 Limitations and Exclusions

The limitations and exclusions of this report are as follows:

+ This report is prepared in accordance with the Conflicts of Interest provisions of Part 4 of the Building and Development Certifiers Regulation 2020. BM+G confirm that this report is prepared specifically to address the requirements of Clause 25(5) and (9) of the Regulation with respect to the role of the Registered Certifier. This assessment report is not to be construed as extending any further into providing design advice, which would be contrary to the aims of this legislation.
+ No assessment has been undertaken with respect to the Disability Discrimination Act 1992 (DDA). The building owner needs be satisfied that their obligations under the DDA have been addressed.
+ Please note that whilst the BCA specifies a minimum standard of compliance with AS1428 (Parts 1-3) and Part D4 of the BCA for access and facilities for people with disabilities, compliance with such requirements may not necessarily preclude the possibility of a future complaint made under the DDA 1992. The DDA is a complaint based legislation and is presently not identified by the State Building Codes and Regulations. In this regard the building owner should be satisfied that their obligations under the DDA have been addressed.
+ No assessment has been undertaken with respect to the following areas of the NCC:
  - Structural
  - Weatherproofing
  - Waterproofing
  - Acoustic
  - Passive Fire Protection
  - DDA / Accessibility
  - Section J / ESD
  - Fire Safety Engineering
+ No assessment has been undertaken with respect to SEPP (Housing) 2021. It is understood that suitably qualified consultants will be engaged to determine the relevance of any Council planning requirements or SEPP requirements and provided detailed assessment reports where applicable.

  Where relevant to this development, it is assumed that these assessments will be undertaken by others.
+ This report does not consider BCA Part G5 (Volume 1) which makes provision for construction of buildings in bushfire-prone areas, therefore no assessment has been undertaken in consideration of RFS, Planning for Bushfire Protection and AS 3959. Where Part G is applicable to the site, then it is required that assessment / due diligence is undertaken by a specialist consultant to verify compliance.
+ This report does not constitute a detailed assessment of the architectural documentation against the requirements of Section J. It is understood that a suitably qualified consultant will be engaged to determine compliance in this regard.
+ BM+G has not undertaken an assessment of any Performance Solution Reports at the time of the preparation of this report.
+ The Report does not address matters in relation to the following Local Government Act and Regulations:

- Work Health and Safety Act and Regulations.
- Work Cover Authority requirements.
- Water, drainage, gas, telecommunications and electricity supply authority requirements.
- Disability Discrimination Act 1992.

+ BM+G cannot guarantee acceptance of this report by Local Council, Fire & Rescue NSW or other approval authorities.

+ This report may not be relied upon under the provisions of the Design and Building Practitioners Act & Regulation for the purposes of issuing a Design Compliance Declaration.

+ No part of this document may be reproduced in any form or by any means without written permission from BM+G. This report is based solely on client instructions, and therefore should not be used by any third party without prior knowledge of such instructions.

1.9 Report Terminology

Building Code of Australia – Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and is adopted in NSW under the provisions of the Environmental Planning & Assessment Act & Regulation.

Climatic Zone – Means an area defined in Figure 2 and in Table 2 (of BCA Schedule 3) for specific locations, having energy efficiency provisions based on a range of similar climatic characteristics.

Construction Certificate – Building Approval issued by the Certifying Authority pursuant to Part 6 of the EP&A Act 1979.

Construction Type – The construction type is a measure of a buildings ability to resist a fire. The minimum type of fire-resisting construction of a building must be that specified in Table C2D2 and Specification 5, except as allowed for:

+ certain Class 2, 3 or 9c buildings in C2D6; and
+ a Class 4 part of a building located on the top storey in C2D4(2); and
+ open spectator stands and indoor sports stadiums in C2D8.

Note: *Type A construction is the most fire-resistant and Type C the least fire-resistant of the types of construction.*

Complying Development Certificate – Building Approval issued by the Certifying Authority pursuant to Part 6 of the EP&A Act 1979.

Deemed-to-Satisfy (DtS) Provisions of the BCA – Means the prescriptive provisions of the BCA which are deemed to satisfy the performance requirements.

Effective Height – The 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).

Exit – Any, or any combination of the following if they provide egress to a road or open space:

+ An internal or external stairway.
+ A ramp.
+ A fire-isolated passageway.
+ A doorway opening to a road or open space.

Fire Compartment – The total space of the building; or when referred to in

+ The Performance Requirements – any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or
+ The Deemed-to-Satisfy Provisions – any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to-Satisfy Provisions of the relevant part.

Fire Resistance Level (FRL) – The grading periods in minutes for the following criteria:

- structural adequacy; and
- integrity; and
- insulation.

and expressed in that order.

Fire Source Feature (FSF) – The far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.

National Construction Code Series (NCC) – The NCC was introduced 1 May 2011 by the Council of Australian Governments (COAG). The BCA Volume One (Class 2 to 9 Buildings) is now referenced as the National Construction Code Series Volume One — BCA.

Occupiable Outdoor Area means a space on a roof, balcony or similar part of a building:

- that is open to the sky; and
- to which access is provided, other than access only for maintenance; and
- that is not open space or directly connected with open space.

Occupation Certificate (OC) – Building Occupation Approval issued by the Principal Certifying Authority pursuant to Part 6 of the EPA Act 1979.

Open Space – Means a space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.

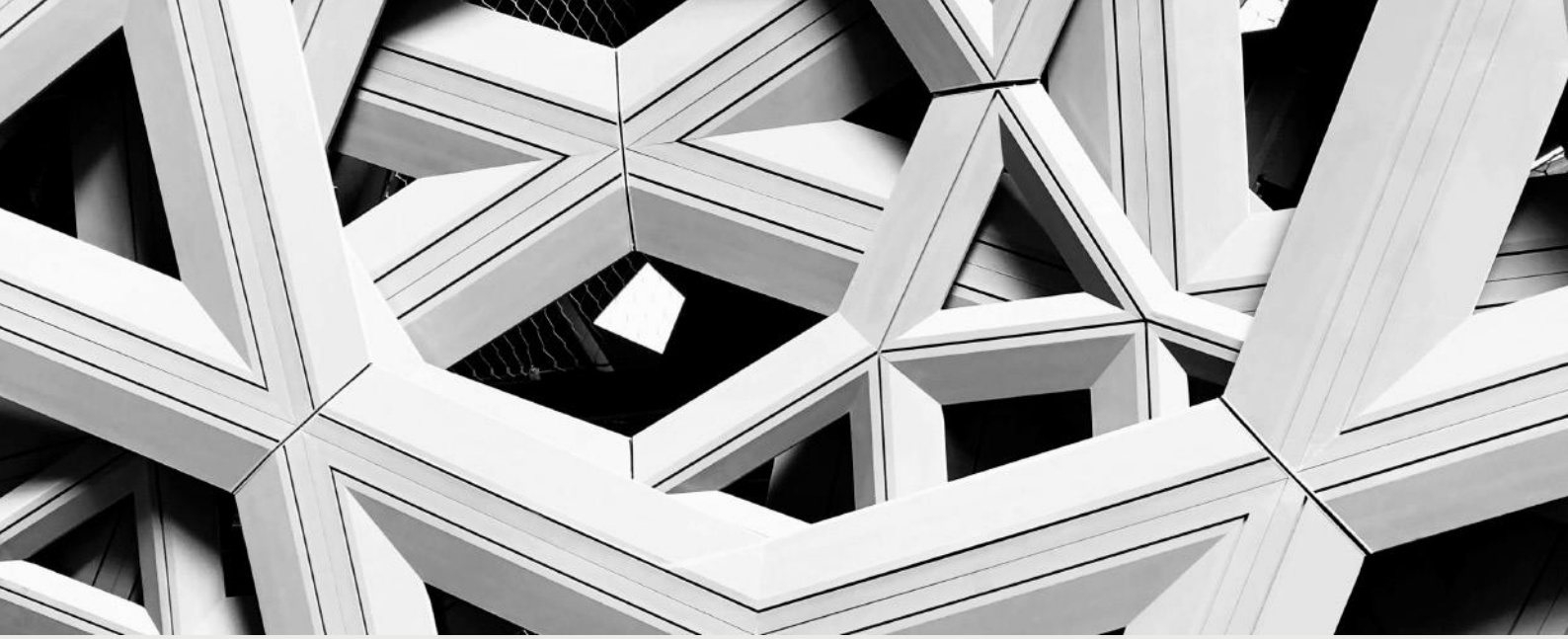
Performance-Based Design Brief – Means the process and the associated report that defines the scope of work for the performance-based analysis, the technical basis for analysis, and the criteria for acceptance of any relevant Performance Solution as agreed by stakeholders.

Performance Requirements of the BCA – A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance requirement states the level of performance that a Building Solution must meet.

Compliance with the Performance Requirements can only be achieved by-

- complying with the Deemed-to-Satisfy Provisions; or
- formulating an Alternative Solution which-
  - complies with the Performance Requirements; or
  - is shown to be at least equivalent to the Deemed-to-Satisfy Provisions; or
- a combination of the above.

Performance Solution – Means a method of complying with the performance requirements other than by a Deemed-To-Satisfy Solution.



2.0 Building Characteristics

2.1 Proposed Development

The proposed development consists of:

- New fire stairs
- Refurbishment to internal gaming, alfresco gaming and bistro areas,
- Relocation of Aqua Cafe
- New enclosed terrace
- Installation of landscaping
- New roof construction

The building is classified as follows:

BCA Classifications:	Class 5 (Office), Class 6 (Restaurant), Class 7a (Carpark), Class 7b/8 (Storage / Loading Dock), Class 9b (Club & Function areas,)
Rise in Storeys:	Four (4)
Storeys Contained:	Nine (9) incl. existing basement carpark
Type of Construction:	Type A Construction
Importance Level (Structural)	3
Sprinkler Protected Throughout	Yes **
Effective Height	14.39m (RL20.840 – RL6.450)
Floor Area	>8,000m2 (GFA – 15,827m^2)
Largest Fire Compartment	TBC by Architect
Climate Zone	Zone 5

***Note: See notes regarding partial sprinkler protection on Level 1 in the report below.*

2.2 Fire Compartment Floor Area Limitations

Maximum size of fire compartments/atria permitted under Table C3D3 is :

+ Classification		+ Type A	+ Type B	+ Type C
6, 7, 8 or 9a	Max. floor area	5,000m^2	3,500m^2	2,000m^2
	Max. volume	30,000m^3	21,000m^3	12,000m^3
5, 9b or 9c	Max. floor area	8,000m^2	5,500m^2	3,000m^2
	Max. volume	48,000m^3	33,000m^3	18,000m^3

Note: Refer to comments in Section 3.2 of the report below (under Clause C3D3) in relation to the assessment of compliance with the above criteria.

2.3 Distance to Fire Source Features

Based upon a review of the plans, it is noted that each elevation of the building is located within the following distances from fire source features on the site.

+ Elevation	+ Fire Source Feature	+ Distance
North	Far Boundary of Hawkesbury Avenue	>6m
East	Far Boundary of Clarence Avenue	>6m
West	Far Boundary of Pittwater Road / Rear Allotment Boundary	>6m / 0m (partially on boundary – existing)
South	Side Allotment Boundary	0m (partially on boundary – existing)

Note: Fire Source Feature (FSF) *– The far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.*

3.0 BCA Assessment

We note the following BCA compliance matters with relation to proposed building works are capable of complying with the BCA. Please note that this is not a full list of BCA clauses, they are the key requirements that relate to the proposed work and the below should be read in conjunction with the BCA.

3.1 Section B – Structure

Part B1

- New building works are to comply with the structural provisions of the BCA 2022 and the following referenced standards including:
  - AS 1170.0 – 2002 General Principles
  - AS 1170.1 – 2002, including certification for balustrades (dead and live loads)
  - AS 1170.2 – 2021, Wind loads
  - AS 1170.4 – 2007, Earthquake loads
  - AS 3700 – 2018, Masonry Structures
  - AS 3600 – 2018, Concrete Structures
  - AS 4100 – 1998, Steel Structures and/or
  - AS 4600 – 2018, Cold formed steel Structures
  - AS 2159 – 2009, Piling Design &Installation
  - AS 1720 – 2010, Design of Timber Structure
  - AS/NZS 1664.1 & 2 – 1997, Aluminium Structures
  - AS 2047 – 2014, Windows and External Glazed Doors in buildings
  - AS 1288 – 2006, Glass in buildings
  - AS 3660.1 – 2014, Termite control (or confirmation no primary building elements are timber).
- Design certification will also be required from the Architect and Services Consultants to confirm compliance with Section 8 of AS1170.4-2007 with regard to the design of non-structural parts and components and their fastenings for horizontal and vertical earthquake forces and inter-storey drift.
- The structural engineer will need to certify that the structural capacity of the existing building elements will not be reduced as a result of the new works and that the building is considered structurally adequate for its intended use.
- The Importance Level 3 provisions of BCA (Section B) are to be acknowledged by the Structural Engineer and addressed to the degree necessary.
- New building works to the existing building (and existing building elements being retained) must be compliant with earthquake provisions of AS1170.4 – Earthquake Actions in Australia.

Comment: Structural design details and certification will be required at CC application stage

3.2 Section C – Fire Resistance

C2D2 / Spec 5

Type of Construction Required: The building is required to comply with the requirements of Type A Construction as stated within Specification 5. The table below provides an overview of the requirements of each. Refer to Table S5C11 of Appendix 1 for the FRL requirements of Type A Construction.

Type A Construction:
+ Load-bearing external walls and columns must achieve an FRL regardless of distance from boundary / separate building per Table S5C11a.
+ Non-load-bearing external walls (and columns incorporated within) need not achieve an FRL if >3m from a boundary or separate building per Table S5C11b.
+ All external load-bearing columns must achieve an FRL per Table S5C11c.
+ Fire Walls must achieve an FRL per Table S5C11d.
+ All Services risers, lift and stair shafts, must achieve an FRL per Table S5C11e & f.
+ Floors and all internal load-bearing elements (columns, beams, walls, etc.) must achieve an FRL per Table S5C11g.
+ Roof must be of non-combustible construction per S5C15 and combustible Roof Lights must not exceed 20% of the roof area).
+ Internal columns on the floor immediately below the roof need only achieve a 1hr FRL per S5C17.

Comment: Type A Construction applies to the proposed new building elements and existing building elements in the areas that are subject to the proposed alterations and refurbishment works – see notes under Spec.5, C2D9 & C2D14 below.

An investigation of the FRL of the existing building elements being retaining within the areas of the building that are being refurbished/altered will need to be carried out by the Structural Engineer to be determine the scope of any required upgrade works to comply with Spec. 5.

C2D10 / C2D14

Non-Combustible Building Elements: All materials and or components incorporated in an external wall or fire-rated wall must be non-combustible. This includes but not limited to:

+ Any external wall claddings.
+ Any framing or integral formwork systems. I.e. timber framing, sacrificial formwork, etc.
+ Any external linings or trims. I.e. external UPVC window linings, timber window blades, etc.
+ Any sarking or insulation contained within the wall assembly.

This is not an exhaustive list, and any element incorporated within any external wall assembly must be identified and approved prior to the issue of a Construction Certificate.

Refer to Table 1 in Appendix 1 for the elements required to be non-combustible.

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 in accordance with this clause.

Comment: The proposed external walls of the building (including all elements incorporated in the walls), the lift pits, the non-loadbearing internal walls that are required to be fire rated, any proposed all services risers, and any ancillary elements are required to be of non-combustible construction in accordance with C2D10 (1) & (2) and C2D14. An external wall disclosure statement with the above details verifying compliance will be required at the CC Application stage.

C2D11 & Spec. 7

Fire Hazard Properties: A schedule of all wall, floor, and ceiling linings along with associated test reports are to be provided for review to ensure compliance with the fire hazard property requirements of the BCA. Noting:

	+ Minimum Group Numbers apply to wall and ceiling linings. AS 5637 test reports must be provided to determine compliance. + Minimum Critical Radiant Flux values apply to floor linings. AS ISO 9239.1 test reports must be provided to determine compliance Refer to Table 3 and 4 in Appendix 1 below for the required fire hazard properties. **Comment:** Details demonstrating compliance are to be included on the CC Application Plans.
C3D3	**General Floor Area and Volume Limitations:** The building is to achieve fire compartment sizes not in excess of the DtS requirements of this clause. **Comment**: The Architect is to provide updated Fire Compartment size plans, identifying the proposed floor area and volume of the new / altered fire compartment formed by the interconnection of Part Level 1, Level 1A, Level 2, and Level 3 , at CC Application stage as part of the Fire Engineering Performance Solution process – see notes below. It is noted that this fire compartment will exceed the Table C3D3 maximum limitation for Class 6 & 9b buildings respectively, which will be required to be addressed as a new Performance Solution – upon confirmation of the extent of non-compliance. The proposed alterations to the building will increase the extent of this non-compliance from that documented in the previous base building FER (prepared by Innova Services Fire Engineering) and as such will need to be re-assessed.
C3D7	**Vertical Separation of Openings in External Walls:** In a building of Type A construction, any part of a window or other opening in an external wall is above another opening in the storey next below and its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by a fire-rated spandrel, or a horizontal fire-rated extension. **Comment:** As the new altered and portions building are proposed to be sprinkler protected, fire rated spandrels between windows or other openings in the external walls are not incorporated into the design, however, similar to the base building FER prepared by Innova Services Fire Engineering, this will need to be addressed as a Performance Solution, given the lack of sprinklers in the Bowling Centre on Level 1.
C3D8	**Separation by Fire Walls:** Separation of fire compartments- A part of a building, separated from the remainder by a fire wall, may be treated as a separate fire compartment if the fire wall extends to the underside of: + A floor having an FRL required for a fire wall; or + The roof covering. **Comment:** Architect to note – see comments regarding fire compartmentation and the required Performance Solutions above and below (particularly C3D6).
C3D9/ C3D10	**Separation of Classifications:** Separate classifications on the same storey will either need to be separated by a fire wall achieving the higher FRL requirement between the two classes, or alternatively the higher FRL must apply to both areas in accordance with Spec 5. Separate classifications in different storeys need to be separated by a fire rated floor with the FRL applicable to lower storey in accordance with Spec. 5. **Comment:** The fire separation between separate classifications (and rationalised FRL's) within the existing building is addressed as a Performance Solution in the base building FER prepared by Innova Services Fire Engineering. This existing Performance Solution will need to be supplemented by the Fire Engineer in the new FER for the proposed new works to modify or continue the current Performance Solution for separation between the Class 7a & 9b areas from the Class 6 & 7b/8 areas that have higher FRL requirements in Spec. 5.
C3D13	**Separation of Equipment / Electricity Supply Systems:** Dependent on plant and equipment to be housed within the plant rooms, FRL 120/120/120 fire separation may be required to separate these areas from the building remainder. The following equipment required FRL120/120/120 fire separation from the building: + Main switch rooms / boards; or + Electricity substations; or

- Light motors and lift control panels; or
- Emergency generators used to sustain emergency equipment operating in the emergency mode; or
- Central smoke control plant; or
- Boilers;
- A battery or batteries installed in the building that have a voltage exceeding 12 volts and a capacity exceeding 200kWh.

Where emergency equipment is required in a building, all switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment switchgear must be separated from the non-emergency equipment switchgear by metal partitions designed to minimise the spread of fault from the non-emergency equipment switchgear.

Note: For the purpose of this clause, 'emergency equipment' includes (but is not limited to) fire pumps, air handling systems for smoke control, emergency lifts, control & indicating equipment, EWIS.

Comment: Where appropriate, details demonstrating compliance are to be included in the CC Application plans.

C4D3
C4D5

Protection of Openings in External Walls: Openings that are less than 3m from the allotment boundary are required to be protected in accordance with BCA Clause C4D5.

Comment: Any new or existing openings in the external walls that are situated less than 3m from the side allotment boundary will require protection in accordance with C4D5 below. Particular attention is drawn to the external wall in the SW corner of the building containing the Bistro - see mark-up below. Details demonstrating compliance are to be included on the CC Application Plans.

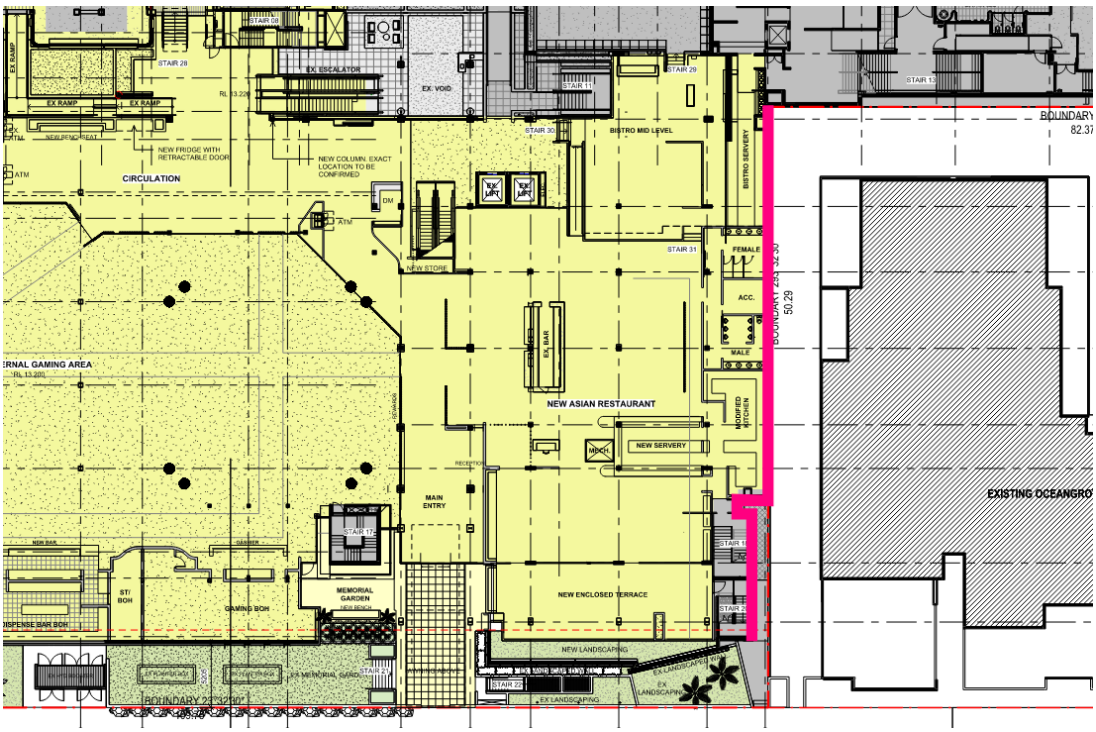


Figure 1 – Protection of Openings

C4D9

Openings in Fire-Isolated Exits: Specifies that the doorways that open into fire-isolated exits must be protected by-/60/30 fire doors that are self-closing or automatic. This clause also details the deemed-to-satisfy methods of activation. This does not apply to doors opening to a road or open space.

A window in the external walls of fire-isolated exits must be protected in accordance with C4D5 if it is within 6m of and exposed to a window or other opening in a wall of the same building other than in the same fire-isolated enclosure.

	Comment: Details demonstrating compliance are to be included in the CC Application plans.
C4D10	**Service Penetrations in Fire-isolated Exits:** Fire isolated exits must not be penetrated by any services other than electrical wiring as permitted by D3D8(6), ducting associated with a pressurisation system or water supply pipes for fire services. **Comment:** Architect/Services Consultants to note and ensure compliance with regards to restriction of services penetrating the fire isolated stairs and passageway.
C4D11	**Openings in Fire-isolated Shafts:** If lift shafts are required to be fire-isolated an entrance doorway must be protected by -/60/- fire doors and the lift indicator panels must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35,000mm². **Comment:** Details demonstrating compliance are to be included in the CC Application plans.
C4D13	**Openings in Floors and Ceilings for Services:** This clause applies to the floors and ceilings in buildings of Types A, B & C Construction and sets out the methods required to limit the spread of fire though openings in these building elements, required to resist the spread of fire. **Comment:** Certification will be required at OC application stage.
C4D15	**Openings for Services Installations:** All opening for services installations in building elements required to be fire-resisting with respect to integrity and insulation must be protected in accordance with the provisions of Spec. 13. **Comment:** Architect/Services Consultants to note and ensure compliance with regards to this clause where certification will be required at OC application stage.
Spec. 5	**Fire Resisting Construction:** The new building works are required to comply with the requirements detailed under Specification 5. The below details the FRL requirements for building elements for each proposed warehouse. **Comment**: As noted in C2D2 above compliance with the requirements of Tables S5C11a-S5C11g in Spec. 5 is required for the new works and existing load bearing elements in the parts of the building that are being retained and are subject to the proposed alterations – refer to Appendix 1 at the end of this report for the required FRLs applicable to the different classifications in the building. As also noted above the base building FER prepared by Innova Services Fire Engineering includes Performance Solutions for rationalised fire ratings and compartmentation requirements. Any proposal to reduce the FRLs of proposed building elements must be addressed as a new Performance Solution from the Fire Engineer. Structural drawings and design certification from a Structural Engineer are to be submitted with the Construction Certificate application confirming that the design complies with the requirements of Specification 5. It will also be necessary for the Structural Engineer to carry out an assessment of the fire ratings achieved by the existing club structure including floors, columns, beams, stair & lift shafts, services risers, external walls and any other load-bearing elements in the areas of new works, having regard to Tables S5C11a-S5C11g in Spec. 5. If significant deficiencies in the fire rating of the existing structure are found they will need to be assessed by the Fire Engineer to determine if a new Performance Solution can be prepared to address the existing non-compliances. The Type A Construction provisions of tables S5C11a to S5C11g are summarised below: + All loadbearing external walls & loadbearing elements incorporated in or attached to an external wall are to achieve the required FRL per Table S5C11a. + All non-loadbearing parts of external walls are to achieve the required FRL per Table S4C11b where located with 3m of the southern side boundary. + All loadbearing external columns are to achieve the required FRL per Table S5C11c. + Any Fire Walls that are proposed to separate different classifications per C3D9 above are to achieve the required FRL per Table S5C11d for Class 7b. + Lift shafts are to achieve the required FRL per Table S5C11e (for loadbearing lift shafts) and S5C11f (for non-loadbearing lift shafts).

	+ Fire stair shafts are to achieve the required FRL per Table S5C11e (for loadbearing fire stairs) and S5C11f (for non-loadbearing fire stairs). + Services shafts are to achieve the required FRL per Table S5C11e (for loadbearing service shafts) and S5C11f (for non-loadbearing service shafts). + All loadbearing internal columns, walls, beams and trusses throughout are to achieve the required FRL per Table S5C11/ S5C11f. Note: The FRL of internal columns providing direct support to the roof may be reduced to a 1-hour FRL per S5C17. + Floors are to achieve the required FRL per Table S5C11f and not less than the FRL of the classification with the highest FRLs in the storey below. + The roof is required to achieve the required FRL per Table S5C11g or the coverings are required to be non-combustible in accordance with Clause S5C15. Where a part of the building required to have an FRL depends on direct vertical or lateral support from another part to maintain its FRL, that supporting part must achieve an FRL in accordance with Clause S5C3 of Spec. 5 and be non-combustible, unless one of the concessions in S5C3 (2) can be applied.
Spec. 7	**Fire Hazard Properties:** As noted above, this Specification sets out the requirements in relation to the fire hazard properties of linings, materials and assemblies in Class 2 to 9 buildings. Table S7C2 outlines the applicable requirements of Spec. 7 to the different types of Linings, Materials and Assemblies. Comment: Certification will be required to be provided at both CC and OC application stages.
Spec. 12	Fire Doors, Smoke Doors, Fire Windows and Shutters: Fire doors and smoke doors must comply with the requirements of this specification. Comment: Architect to note.

3.3 Section D – Access and Egress

D2D3	**Number of Exits Required:** The building is required to be provided with 2 exits to each storey. **Comment:** The proposed design of the new /a altered parts of the building comply with this clause.

D2D4	**When Fire-Isolated Stairways and Ramps are Required:** This clause sets out the requirements for stairways and ramps to be fire-isolated in buildings. Class 5 / 6 / 7 / 8 / 9 Buildings – Every stairway or ramp serving as a required exit must be fire-isolated unless –
	+ It is part of an open spectator stand; or
	+ In any other case, except in a class 9b early childhood centre or a Class 9c – it connects, passes through or passes by not more than 2 consecutive storeys and one extra storey of any classification may be included if –
	  + The building has a sprinkler system; or
	  + The required exit does not provided access to or egress from the additional storey, and is fire and smoke separated.
	Comment: The proposed exit stairs on the northern elevation (Stairs 15 & Stair 16) and Plantroom Stair 19 are not required to be fire-isolated, however the following existing Stairs that serve the new / altered parts of the building are required fire isolated stair: Stair 02, Stair 07, and Stair 08.

D2D5	**Exit Travel Distances:** This clause specifies the permitted travel distances allowable from Class 2 to Class 9 buildings. Sub-clauses (1) to (6) specify the maximum distances to be taken into account for the various uses in each Class of building.

	In a Class 5, 6, 7, 8 & 9 Buildings no point on a floor must be more than 20m for a single exit or to a point of choice to alternative exits; and no point on a floor must be more than 40m to an exit where 2 or more alternative exits are available for egress. **Comment:** The exit travel distances on Level 2 are non-compliant with the requirements of Clause D2D5. A fire engineered performance solution will be required to allow the following: + Approx. 45m to an exit in lieu of the DtS 40m from the Internal Gaming Area (subject to re-assessment upon confirmation of layout of gaming machines). + 45m to a single exit in lieu of the DtS 20m from the proposed Level 4 Rooftop area.
D2D6	**Distance Between Alternative Exits:** The maximum distance permitted between alternative exits in Class 5 / 6 / 7 / 8 / 9 areas is 60m. This must be measured back through the point of choice. Alternative egress paths are not permitted to converge to less than 6m, and alternative exits must be located more than 9m apart. **Comment:** The exit travel distances on Level 2 are non-compliant with the requirements of Clause D2D6. A fire engineered performance solution will be required to allow 87m distance between exits in lieu of the DtS 60m through the western side of the Internal Gaming Area.
D2D7/ D2D8/ D2D9/ D2D10/ D2D11	**Dimensions of Paths of Travel to an Exit:** The minimum clear height through all egress paths is required to be no less than 2m, and a minimum of 1m wide (this width dimension is measured clear of any obstructions such as handrails and joinery). Aggregate exit widths must be achieved which are driven by occupancy numbers of each floor. **Comment:** An assessment of the available exit width on Level 2 has been carried out and the maximum population that can be accommodated based on the 19.5m of available exit width is 2,402 persons based on the requirements of D2D8(3). Given the proposed population on this level is 2,304 persons (see D2D18 below) – compliance is readily achievable. It has been noted by the Architect, however, that egress paths from the Asian Kitchen in the SW corner of Level 2 will be less than 1m wide (approx. 750mm) which is non-compliant with D2D8(1) and as such a Fire Engineered Performance Solution will be required. All other egress path dimensions will be required to be identified as compliant on the CC Application plans.

D2D12	**Travel via Fire Isolated Exits:** A fire isolated stairway is required to provide independent egress from each storey that it serves and discharge directly –
	
	+ To a road open space; or
	+ To a point –
	  - In a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter; and
	  - From which an unimpeded path of travel, not further than 20m, is available to a road or open space
	
	External walls and openings exposed to the discharge path of a fire-isolated stairway (less than 6m, measured perpendicular to the path of travel) must be protected with a 1-hour fire-rating for external walls, and C4D5 for openings.
	
	Comment: The discharge of the new (extended) Exit Stair 07 serving Level 4 on the northern side of the building on Grids NF/NG-E1/E2 is located with the carpark on Level 1. This area does not comply with the internal discharge options above, and as such will be required to be addressed as a Performance Solution by the Fire Engineer.

D2D14	**Travel Via Non Fire Isolated Required Stairways:** A non-fire-isolated stairway or non-fire-isolated ramp serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided. The distance from any point on the floor to a point of road or open space must not exceed 80m. The stair must discharge at a point not more than 20m to a point of road or open space, or from a fire-isolated passage, or 40m from one of two such points.

	Comment: Egress via the existing and new non-fire-isolated stairs on Level 2 are capable of achieving compliance. There are no non-compliance issues identified as a result of the assessment of the architectural plans.
D2D15	**Discharge from Exits:** The path of travel to the road from a required exit leading to open space must have an unobstructed exit width of that of the required exit, or if larger, 1m. **Comment:** All exit discharge points from the building are required to be unobstructed as required by this clause.
D2D18	**Number of Persons Accommodated:** Clause D2D18 and Table D2D18 are used to calculate the anticipated number of people in particular types of buildings so that minimum exit widths and the required number of sanitary and other facilities can be calculated. This clause and table are not to be used for non-BCA purposes. **Comment:** The population numbers on Level 2 have been calculated by Altis Architect, as noted on Drawing WP01 Issue D dated 07.02.25 as follows: + Battery House – 418 Persons + Cafe – 182 Persons + Courtyards – 345 Persons + Cocktail – 142 persons + Flame Restaurant – 182 Persons + Bistro – 323 Persons + Yum Cha – 156 persons + Gaming – 496 Persons + Staff – 60 Persons Level 2 Total – 2,304 persons
D3D3	**Fire-isolated Stairways & Ramps:** A stairway or ramp, including landings that are required to be within a fire-resisting shaft must be constructed of non-combustible materials to protect the structural integrity of the shaft. **Comment:** Architect to note. Details are to be provided with the Construction Certificate documentation.
D3D4	**Non-Fire Isolated Stairways and Ramps:** In a building with a rise in storeys of more than 2, required non-fire-isolated stairways and ramps must be either constructed of + Reinforced or prestressed concrete; or + Steel at least 6mm thick at all points; or + Timber that has a finished thickness of at least 44mm, has an average density of at least 800 kg/m3 at a moisture content of 12% and has not been joined by means of glue unless it has been laminated and glued with resorcinol/phenol formaldehyde; or + Non-combustible materials, and such that if there is a structural failure it will not cause damage to or impair the fire-resistance of the shaft in which the stair is located. **Comment:** The requirements of D3D4 apply to any proposed non-fire isolated exit stairs - details are to be provided of the stair design at CC application stage.
D3D8	**Installations in Exits and Paths of Travel:** This clause restricts the installation of certain services in fire-isolated exits, non-fire-isolated exits and certain paths of travel to exits. Sub-clauses (1) to (6) prescribe which services shall not be installed as well as the circumstances in which certain services may be installed in fire-isolated and non-fire-isolated exits. **Comment:** This requirement applies to all cupboards containing electrical distribution boards or comms. equipment that are located in a path of travel to an exit. In this regard, such cupboards are to be enclosed in non-combustible materials and are to be suitably sealed against the spread of smoke.

D3D9	**Enclosure of Space under Stairs and Ramps:** The space below a required, non-fire isolated stairway/ramp must not be enclosed to form a cupboard or other enclosed space, unless the cupboard is bound by construction achieving an FRL of at least 60/60/60, with a self-closing -/60/30 door. **Comment:** If the space under any of the required exit stairs are proposed to be enclosed to form a cupboard or the like, the enclosing walls and ceilings will need to achieve an FRL of 60 minutes and the doorway will need to be fitted with a self-closing -/60/30 fire door. Details demonstrating compliance are to be shown on the CC/CDC Application plans where applicable.
D3D14 – D3D16	**Stairways, Landings, and Thresholds:** The following requirements are applicable to new stairs in the building: + Stairway dimensions must comply with Table D3D14. + A stairway must have no more than 18, nor less than 2, risers in each flight. + Landings must be not less than 750mm in length. + Slip Resistance of stair nosings and landings must comply with Table D3D15. + A step is not permitted on either side of a doorway, closer than the width of the door swing. Doorways leading to external areas are exempted if the step down is ≤190mm, though an accessible threshold ramp is required in accessible areas (refer to Part D4). **Comment:** All stairs are to have dimensions that comply with Table D3D14, have solid risers, and are to have contrasting nosings and slip resistant surfaces throughout in accordance with clause 11 of AS 1428.1-2009. (See diagram in Part D4 below). Architect to note, details demonstrating compliance will be required to be included in the CC plans.
D3D17 – D3D21	**Balustrades or Other Barriers:** These clauses detail where balustrades are required to be provided and sets out in specific detail the construction requirements. Typically, the following will apply to this class of building: + Balustrades are required where the fall to the level below is more than 1m in height. The minimum height of a balustrade is 1m above the floor of the landing, walkway or the like; and 865mm above the floor of a stairway or a ramp. + For a fall of more than 4m to the surface level below, a window sill must be a minimum of 865mm in height above the height of the floor surface. + Where the floor is more than 4m above the surface beneath the balustrade any horizontal or near horizontal members between 150mm and 760mm above the floor must not facilitate climbing. + Balustrades must be constructed so as to not permit a sphere of 125mm diameter to pass through. The exception to this is within fire isolated exits within the building, or internal stairs within a Class 7b or 8 building, where the rails can be positioned a maximum of 460mm apart, so long as a bottom rail is located so a sphere of 150mm cannot pass through the opening between the nosing of the stair treads and the rail or between the floor of the landing, balcony or the like. + Note: any wire barriers must be complaint with D3D21 and tables D3D21(a) to D3D21(c). **Comment:** Details demonstrating compliance are to be submitted with the CC Application drawings for assessment against the above criteria.
D3D22	**Handrails:** This Clause sets out the requirements regarding the location, spacing and extent of handrails required to be installed in buildings. **Comment:** Architect to note, details demonstrating compliance will be required to be included in the CC plans. Handrails serving all stairs and ramps both internally to the buildings are required to comply with the accessibility requirements of Clause D4D4 and AS 1428.1-2009.
D3D23	**Fixed Platforms, Walkways, Stairways and Ladders:** A fixed platform, walkway, stairway, ladder, any going and riser, landing, handrail or barrier attached thereto may comply with AS 1657 if it only serves a machinery room, boiler house, lift-machine rooms, plant rooms or the like. **Comments:** Details of where any AS 1657 compliant stairs or ladders are to be used for access/egress in the building are to be included on the CC Application plans. It is understood these

	provisions may be applied to any maintenance ladders or walkways used to access mechanical equipment on the Level 4 rooftop plant areas
D3D24	**Doorways and Doors:** This clause applies to all doorways that form an exit and refers to the types of doors that cannot be used in buildings of prescribed uses, the use of power operated doors and the force required to operate sliding doors. If an exit door is power operated, it must be opened manually under a force of not more than 110N if there is a malfunction or failure to the power source; and it must open automatically if there is a power failure to the door and upon the activation of a fire or smoke alarm anywhere in the fire compartment served by the door. **Comment:** Architect to note. Details demonstrating compliance will be required to be included in the CC plans.
D3D25 / D3D26	**Swinging Doors and Latching:** All egress doorways must swing in the direction of egress and must be readily openable without a key from the side that faces a person seeking egress, by a single handed downward or pushing action on a single device which is located between 900mm and 1100mm from the floor. Note: In a Class 9b building all egress doors are to be fitted with a panic bar or equivalent pushing device (at a height between 900mm to 1200mm from the floor) in areas that accommodate more than 100 persons **Comment:** The proposed exit doors are required to swing in the direction of egress in accordance with D3D25(a) – compliance is readily achievable. In addition, all exit doors and doors in a path of travel are to comply with the requirements of D3D26. Particular attention is drawn to the requirement for panic bars to all egress doors in the Level 2 club areas.
Part D4	**Access for People with a Disability:** The extent of access required depends on the classification of the building. Buildings and parts of buildings must be accessible as set out in Table D3.1 unless exempted by Clause D4D5 The building is required to comply with AS1428.1-2009. **Comment**: We understand an Access Consultant has been engaged to provide advice in this regard.

3.4 Section E – Services and Equipment

E1D2	**Fire Hydrants:** Fire hydrants are required to be provided as follows: + E1D2(1) – A fire hydrant system must be provided to serve a building having a total floor area greater than 500m² and where a fire brigade is available to attend a building fire. + E1D2(2) – Requires that the fire hydrant system must be installed in accordance with the provisions of AS2419.1-2021 and details where internal hydrants must be located. + E1D2(3) – details concessions to AS 2419.1-2021 compliance associated with Class 8 Electricity Network Substations, and Hydrant Booster assembly locations where buildings are sprinkler protected. + E1D2(4) – states that internal fire hydrants must serve the level in which they are installed. **Comment:** Detailed plans showing the proposed modifications to the existing hydrant system layout are to be provided with the relevant CC application(s). The plans must also demonstrate how coverage is achieved to all new/altered areas of the building. Note 1: The base building FER prepared Innova Services Fire Engineers includes a Performance Solution for the location of the Booster Assemblies – this will need to be modified as part of the new FER for the proposed work, given that the location of the main building entry is being modified. Note 2: Given the change in Hydrant design standard to AS 2419.1-2021, a Section 74 EP&A(DC&FS) Reg. Exemption may be required for the use of existing hydrant infrastructure on the site to serve the new/modified parts of the building – Hydraulic Engineer to review and advise.

E1D3	**Fire Hose Reels:** A fire hose reel system must be provided to serve a building where one or more internal fire hydrants are installed or in a building with a floor area greater than 500m². This clause requires that the fire hose reel system must be installed in accordance with AS 2441 and sets out the detail for location and uses of fire hose reels. **Comment:** The new/modified parts of the building are required to be served by a compliant fire hose reel system. Details demonstrating compliance are to be provided at the CC application stage. Note: Fire hose reels must be located within 4m of an exit.
E1D4 – E1D13	**Sprinklers:** A sprinkler system must be installed in a building or part of a building when required by Clauses E1D5 to E1D13 and comply with Specification 17. **Comment:** It is noted that new works are proposed to be sprinkler protected in accordance with Spec. 17. Detailed plans and certification demonstrating compliance are to be provided at the CC application stage. In accordance with Clause 4.14.1 of AS2118.1-2017, sprinkler boosters are required to comply with the requirements of AS2419.1-2021 for a hydrant booster. It is understood that the location of the sprinkler booster was the subject of a Performance Solution in the base building FER prepared Innova Services Fire Engineers, which will need to be modified as part of the new FER for the proposed work, given that the location of the main building entry is being modified.
E1D14	**Fire Extinguishers:** To be provided and designed in accordance with AS 2444-2001. **Comment:** Fire extinguishers will be required to be installed in the building in accordance with sub-clauses (1), (3) & (5) and AS 2444-2001.
E1D15	**Fire Control Centre:** A fire control centre is to be provided based on the total building floor area comprising more than 18,000m2. A fire control centre must: + Be located in a building so that egress from any part of its floor to a public road or open space does not involve changes in level which in aggregate exceed 300mm. + Provide an area from which fire-fighting operations or other emergency procedures can be controlled. Must not be used for any other purpose. **Comment:** The total floor area of the extended building is greater than 18,000m² and as such a Fire Control Centre facility is required per Spec. 19. The existing Fire Control Centre location (as documented in the base building FER prepared Innova Services Fire Engineers) is proposed to be deleted and the main FIP and associated equipment relocated to the new main entry. Details of the proposed FCC location in the new foyer that demonstrate compliance with Spec. 19 Clauses S19C3-S19C6 will need to be provided with the CC Application plans and referenced in the new Fire Engineering Report.
E2D3	**General Requirements:** Class 2 to 9 buildings must comply with the provisions of this Clause to remove smoke during a fire, to control the operation of air handling systems and to prevent the spread of smoke between compartments. An Air Handling Systems that does not form part of a Smoke Hazard Management System must operate in accordance with the requirements of AS/NZS 1668.1 – 2015, must shutdown on activation of a smoke detection system, and must be provided with smoke dampers where it is capable of recycling air from one fire compartment to another. Buildings must comply with the provisions of E2D4, as applicable to Class 2 to 9 buildings. It deals with the design and construction of air handling systems that are part of a smoke hazard management system and air handling system that are not part of a smoke hazard management system. The details relating to the installation and operation of the required systems are set out in Specifications 20, 21, & 22. **Comment:** See Specific requirements below.
E2D9	**Smoke Hazard Management:** At least one of following smoke hazard management systems are to be required installed to the building and will be required throughout: + An Automatic Fire Detection and Alarm System complying with AS 1670.1 – 2018 and Spec. 20; OR

	+ Stairway Pressurisation complying with AS 1668.1 – 2015; OR + Smoke and Heat Vents in accordance with Specification 22 and AS 2665 – 2001; OR + Automatic Sprinkler System in accordance with AS 2118-2017 and Spec. 17. **Comment:** It is noted that this requirement will be addressed by the provision of an automatic sprinkler system in the new/altered parts of the building – design details and certification required at CC Application stage.
E2D20	**Class 9b Other Assembly Buildings:** A building containing a Class 9b Assembly Building which is not covered by Clause E2D16-E2D19, must be provided with a Smoke Exhaust System in accordance with Spec. 21, where the fire compartment has a floor area of more than 2,000m^2 and the rise in storeys of the building is greater than 2. **Comment:** The base building FER prepared by Innova Services includes a Performance Solution for a rationalised smoke exhaust design in the existing parts of the Club on Level 2. It is noted that this existing Performance Solution will need to be supplemented to address the egress non-compliances above , and where a rationalised smoke exhaust design is proposed for new/altered parts of Level 2 a new Performance Solution will need be provided.
E3D3	**Stretcher Facilities in Lifts:** Stretcher facilities, complying with this clause, must be provided in lifts in at least one emergency lift as required by E3D4 or in building where lifts serve any storey above an effective height of 12m. A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600mm wide x 2000mmm long x 1400mm high above the floor level. Comment: A nominated Stretcher Lift facility is required to serve all levels of the building. Details confirming compliance are to be incorporated in the CC Application drawings and lift design certification.
E3D4	**Warning Against use of Lifts in Fire:** Warning signs required be provided must be displayed where they can be readily seen and must comply with the details and dimensions of Figure E3D4. **Comment:** Architect and Lift Consultant to note.
E3D6	**Landings:** Access and egress to and from lift well landings must comply with the Deemed-to-Satisfy Provisions of Parts D2 & D3. **Comment:** Architect to note.
E3D7	**Passenger Lift Types and Their Limitations:** In an accessible building, every passenger lift must be one of the types identified in sub-clause (1) and not rely on a constant pressure device for its operation if the lift car is fully enclosed. **Comment:** Design certification from the lift supplier shall be provided with the documentation submitted with the Construction Certificate application.
E3D9, E3D11, E3D12	**Fire Service Controls and Recall Switches:** These clauses set out requirements for fire service control and recall switches for lifts serving storeys above an effective height of 12m. **Comment:** Design Certification and/or confirmation of compliance (for the existing lifts) from the Lift Consultant will be required at CC Application stage.
E4D2 – E4D8	**Emergency Lighting and Exits Signs:** Emergency lighting and exit signage to be provided in accordance with E4D2 - E4D5 complying with AS 2293.1 – 2018. **Comment:** Emergency Lighting is required throughout in accordance with E4D2, E4D4 and AS/NZS 2293.1-2018.
E4D4	**Design & Operation of Emergency Lighting:** Every required emergency lighting system must comply with AS 2293.1-2018. **Comment:** Electrical Consultant to note. Details demonstrating compliance will be required to be included in the CC plans.

E4D5	**Exit Signs:** An exit sign must be clearly visible to persons approaching the exit and must be installed on, above or adjacent to each door providing egress from a building. Sub-clauses (a) to (d) set out the situations where exit signs are required to be installed. **Comment:** Electrical Consultant to note. Details demonstrating compliance will be required to be included in the CC plans.
E4D6	**Direction Signs:** If an exit is not readily apparent to persons occupying or visiting the building then exit signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit. **Comment:** Electrical Consultant to note. Details demonstrating compliance will be required to be included in the CC plans.

3.5 Section F – Health and Amenity

F1D3	**Stormwater Drainage:** A roof balcony, podium or similar must have a system of stormwater drainage and the structural substrate must be graded with a minimum fall of 1:80 to a drainage outlet. **Comment:** Details of stormwater disposal are required to be prepared by a suitably qualified consultant and submitted with documentation for the CC.
F1D4	**Exposed Joints:** 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 **Comment:** Details of compliance with the above are to be prepared by a suitably qualified consultant and submitted with documentation for the CC.
F1D5	**External Waterproofing Membranes:** External waterproofing membranes are required to comply with AS 4654.1 & 2. **Comment:** Any roof areas which are a concrete slab are to be externally waterproofed. Confirmation to be provided of the proposed grades to the falls to floor wastes to be shown in the highlighted areas (red/orange).

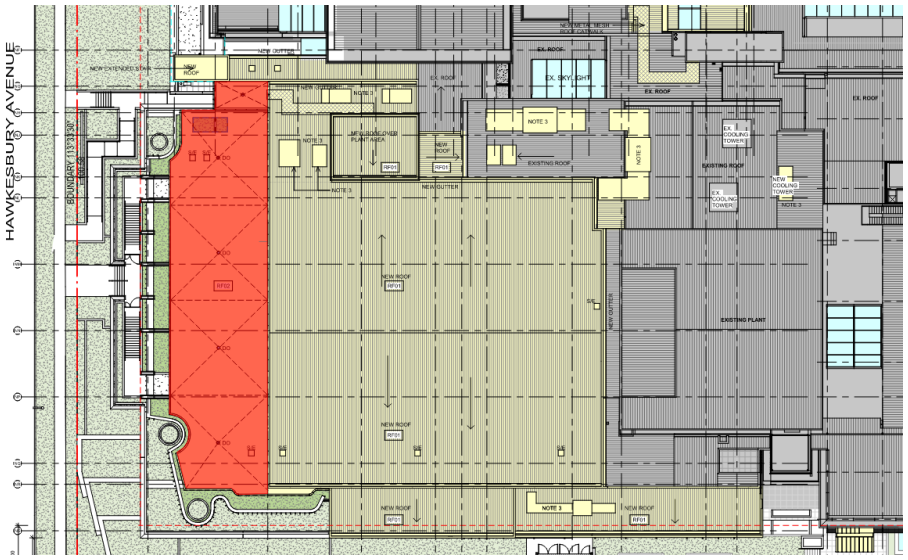


Figure 2 – Roof Plan

	Details of compliance with the above are to be prepared by a suitably qualified consultant and submitted with documentation for the CC.
F1D6	**Damp-Proofing:** + This sub-clause requires that moisture from the ground must be prevented from reaching certain parts of buildings as listed. + This sub-clause requires that all damp-proofing materials and termite shields used as damp-proofing must comply with AS/NZS 2904 and AS 3660.1. + This sub-clause lists the buildings and parts of a building that do not need to comply with (a). **Comment:** Details of compliance with the above are to be submitted with documentation for the CC.
F2D2, F2D3 & F2D4	**Wet Area Construction:** These clauses set out the construction requirements for wet areas in Class 2-9 Building, in relation to floor and wall materials, surface grading, floor wastes and drainage. **Comment:** Note - Design Certification required at CC Application stage.
F2D4	**Floor Wastes:** Where a floor waste is provided for drainage in all parts of the building, the fall of the floor plane to the floor waste is required to be between 1:80–1:50. **Comment:** Architect to note.
F3D2	**Roof Coverings:** This clause details the materials and appropriate standards, with which roofs must be covered with. The roofing requirements are set out in sub-clauses (a) to (g) which identifies the types of materials that may be used and the adopted Australian Standards that apply to their quality and installation. **Comment:** Note - design certification required at CC Application stage.
F3D3	**Sarking:** Sarking-type materials used for weatherproofing of roofs must comply with AS/NZS 4200 parts 1 and 2 **Comment:** Note.
F3D4	**Glazed Assemblies:** Glazed assemblies in an external wall must comply with AS2047 requirements for resistance to water penetration for windows, sliding doors with a frame, adjustable louvres, shop fronts and windows with one-piece framing **Comment:** Details to be provided with the application for the Construction Certificate.
F3D5	**Wall Cladding:** The following ng wall cladding materials are deemed to satisfy Performance Requirement F3P1: + Masonry, including masonry veneer, unreinforced and reinforced masonry, complying with AS 3700, + Autoclaved aerated concrete, complying with AS 5146.3, + Metal wall cladding, complying with AS 1562.1. **Comment:** Details are the be provided together with the F3P1 Performance Solution Report, demonstrating compliance, prior to the issued of the relevant CC(s).
F3P1 & F3D5	**Performance Requirement F3P1:** A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause + Unhealthy or dangerous conditions, or loss of amenity for occupants; and + Undue dampness or deterioration of building elements. Note 1: There are limited Deemed-to-Satisfy provisions for this Performance Requirement in respect to External Walls. DtS wall types include; masonry; autoclaved aerated concrete; and metal wall cladding only. Note 2: Refer to Clause F3D2 for roof coverings.

Comment: A Performance Solution Report will be required to address the above, noting that the proposed design does not comprise of wholly DtS materials.

F4D3

Calculation Of Number Of Occupants And Facilities: This clause sets out the requirements for the calculation of the number of occupants and the number of sanitary facilities required to be installed in Class 2 to 9 buildings. The parameters for the calculation are set out in sub-clauses (a) to (d).

Comment: Noted – refer to D2D18, confirmation of population numbers have been provided by Altis Architects (refer to Drawing WP01 Rev. B dated 03/12/24).

F4D4

Facilities in Class 3 to 9 Buildings: This clause provides the requirements for sanitary facilities to be installed in Class 3-9 buildings in accordance with Tables F4D4a – F4D4l. The requirements and variations are set out in sub-clauses (1)-(11).

Comment: Details demonstrating compliance will be required to be included in the CC plans.

Based on the population numbers have been provided by the architect., the minimum required sanitary facilities for DYRSL have been calculated as per Tables F4D4f and F4D4g and are as follows:

+ Level 2 – Patrons (2,304 persons: 1,152 Males & 1,152 Females)

Occupancy Class as per F4D4

	Closet Pans		Urinals		Washbasins		Complies
	Required	Proposed	Required	Proposed	Required	Proposed	Yes/No
Male	7	14	15	24	7	19	Yes
Female	16	28	-	-	8	22	Yes

+ Level 2 – Staff (60 persons: 30 Males & 30 Females)

Occupancy Class as per F4D4

	Closet Pans		Urinals		Washbasins		Complies
	Required	Proposed	Required	Proposed	Required	Proposed	Yes/No
Male	2	1	2	2	1	1	Yes
Female	2	2	-	-	1	2	Yes

Note 1: Sanitary compartments may not be allocated as Unisex (with exception of Accessible facilities per F4D5 below) and all facilities are required to be allocated as either Male or Female per Clause F2D4(1).

Note 2: The above staff sanitary facilities area adequately provided in the excess numbers provided for patrons or can be allocated in other BOH areas in the building.

F4D5

Accessible Sanitary Facilities: Accessible unisex sanitary compartments must be provided, in accordance with F4D6 and unisex showers must be provided in accordance with Table F4D7, in buildings or parts that are required to be accessible. The details for the provision of accessible facilities and the standard, AS 1428.1, are set out in sub-clauses (a) to (i).

Comments: Refer to Access Consultant Report – compliance is readily achievable by the existing sanitary facilities on Level 2.

F4D8

Construction of Sanitary Compartments: Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend:

+ From floor level to the ceiling in the case of a unisex facility; or
+ A height of not less than 1.5m above the floor if primary school children are the principal users; or
+ 1.8m above the floor in all other cases.

The door to a fully enclosed sanitary compartment must open outwards; or slide: or be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2m, measured in accordance with Figure F4D8 between the closet pan within the sanitary compartment and the doorway.

	Early childhood centres must have a partition which except for the doorway is opaque for a height of at least 900mm but not more than 1200mm above the floor level. **Comment:** Details to be provided at CC application stage confirming compliance with the above requirements.
F5D2	**Height of Rooms and Other Spaces:** The ceiling heights in Class 2 to 9 buildings must not be less than required in sub-clauses (1) to (8) of this clause. The minimum ceiling heights for a Class 5, 6 & 7 building are as follows: + Corridor or Passage, Bathroom, Storeroom, etc. – 2.1m + Remainder – 2.4m. The minimum ceiling heights for a Class 9b building are as follows: + A part (including a corridor serving the part) that accommodates not more than 100 persons – 2.4m; A part (including a corridor serving the part) that accommodates more than 100 persons – 2.7m. **Comment:** Architect to ensure compliance. Ceiling heights to be reviewed at the CC application stage with the detailed section drawings. Note: AS the existing ceiling height in the gaming area (that is being retained) on Level 2 is less than 2.7m in height a Performance Solution will be required at the CC Application stage that demonstrates compliance with Performance Requirement F5P1
F6D5	**Artificial Lighting:** Artificial lighting is required where it is necessary to minimise the hazard to occupants during an emergency evacuation. Sub-clauses (1) - (3) sets out the places where artificial lighting is always required in all classes of buildings and the standard to which it must be installed. **Comment:** Design certification to be submitted at CC Application.
F6D6	**Ventilation of Rooms:** A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have natural ventilation complying with F6D7 or a mechanical or air-conditioning system complying with AS1668.2 and AS/NZS 3666.1. **Comment:** Design certification to be submitted at CC Application.
F6D8	**Ventilation Borrowed from Adjoining Room:** Natural ventilation must consist of openings, windows, doors or other devices which can be opened— with a ventilating area not less than 5% of the floor area of the room required to be ventilated. Additionally, open to a suitably sized space open to the sky or an adjoining room in accordance with F6D8. **Comment:** Design certification to be submitted at CC Application.
F6D9	**Restriction on Location of Sanitary Compartments:** A room containing a water closet pan or urinal must not open directly into a kitchen or pantry, public dining room or restaurant, a dormitory in a Class 3 building, a room used for public assembly (which is not an early childhood centre, primary school or open spectator stand) or a workplace normally occupied by more than 1 person. **Comment:** Architect to Note – compliance readily achievable.
F6D10	**Airlocks:** If a room containing a closet pan or urinal is prohibited under F6D9 from opening directly into another room then the provisions of sub-clauses (a) & (b) apply relating to the requirements of airlocks and mechanical ventilation standards. **Comment:** Architect to Note – compliance readily achievable.
F6D12	**Kitchen Local Exhaust Ventilation:** A commercial kitchen must be provided with a kitchen exhaust hood complying with AS 1668.1 and 1668.2. **Comment:** Design certification to be submitted at CC Stage for each building.

3.6 Section G – Ancillary Provisions

Part G3	**Atrium Provisions:** The provision of Part G3 apply to an atrium that connects greater than 3 storeys in a sprinkler protected building, where one of the storeys is at the level of direct access to road or open space. **Comment:** This existing atrium over the lobby from the Porte Cochere on Level 1 connecting into Level 2 does not connect greater than 3 storeys and as such is not subject to compliance with Part G3.
G1D3	**Refrigerated Chambers, Strong-Rooms and Vaults:** A refrigerated or cooling chamber, strongroom or vault which is of sufficient size for a person to enter must be capable of being opened from the inside by hand without a key. This clause also sets out the acceptable safety standards for a cooling chamber or strongroom by installation of dedicated controls within the chamber and the external lights that indicate that the space is in use. Additionally, a door in a cooling chamber must have a doorway with a clear width of at least 600 mm and a clear height of at least 1.5 m. **Comments:** Design certification demonstrating compliance is to be provided with the Construction Certificate application.
NSW G1D5	**Provision for Cleaning Windows** A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. A building satisfies this requirement where the windows can be cleaned wholly from within the building; or provision is made for the cleaning of the windows by a method complying with the occupational Health and Safety Act 2000 and regulations made under that Act. - A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. - A building satisfies (a) where- (i) the windows can be cleaned wholly from within the building; or (ii) provision is made for the cleaning of the windows by a method complying with the occupational Health and Safety Act 2000 and regulations made under that Act. **Comments:** Design certification demonstrating compliance is to be provided with the Construction Certificate application.

3.7 Section J – Energy Efficiency

Part J4	**Building Fabric:** The provision of insulation of the building envelope will be required in the proposed Building, in accordance with Clauses J4D3 to J4D7, and the Tables therein, including Thermal Construction General, Roof and Ceiling Construction, Rooflights, Walls, and Floors. Design details and/or certification of design will be required to be provided in this regard. **Comment:** Refer to Evolved Engineering Section J Report (Rev.3.0) – design certification will be required to be submitted with the application for a Construction Certificate.
Part J5	**Building Sealing:** The provision of a compliant building sealing is required to all chimneys & flues, roof lights, windows & doors, Exhaust Fans, Ceilings Walls, & floors in accordance with Clauses J5D3 to J5D7. **Comment:** Refer to Evolved Engineering Section J Report (Rev.3.0) – design certification will be required to be submitted with the application for a Construction Certificate.
Part J6	**Airconditioning & Ventilation Systems:** Details and/or design certification which confirm that any proposed air-conditioning system or unit within the proposed building achieves compliance with the relevant requirements of Part J6 will be required to be provided from the mechanical engineer.

	Comment: Refer to Evolved Engineering Section J Report (Rev.3.0) – design certification will be required to be submitted with the application for a Construction Certificate.
Part J7	**Artificial Light & Power:** Details and/or design certification which confirm that all artificial lighting, power control, and boiling/chilled water units within the proposed building achieves compliance with the relevant requirements of Part J7 will be required to be provided from the electrical engineer **Comment:** Refer to Evolved Engineering Section J Report (Rev.3.0) – design certification will be required to be submitted with the application for a Construction Certificate.
Part J8	**Hot Water Supply, & Swimming Pool & Spa Pool Plant:** Details and/or design certification which confirm that any proposed hot water supply system within the proposed building achieves compliance with the relevant requirements of Part J8 (Section 8 of AS 3500.4) will be required to be provided from the hydraulic engineer. **Comment:** Refer to Evolved Engineering Section J Report (Rev.3.0) – design certification will be required to be submitted with the application for a Construction Certificate.
Part J9	**Facilities for Energy Monitoring:** Provision for monitoring of energy consumption must be provided to a building where the floor area exceeds 500m², and must be capable of recording the consumption of gas and electricity. In addition, where the floor area of the building exceeds 2,500m² the energy monitoring facilities must be capable of individually recording air-conditioning, lighting, appliance power, central hot water supply, lifts/escalators, and other ancillary plant and being connected to a single interface monitoring system. **Comment:** Refer to Evolved Engineering Section J Report (Rev.3.0) – design certification will be required to be submitted with the application for a Construction Certificate.

4.0 Existing Building Upgrade

4.1 Statutory Upgrade Requirements – BCA Fire and Life Safety

+ Approval Trigger	+ Requirement	+ Applicability
Significant Fire Safety Issues – Environmental Planning and Assessment Regulations 2021		
Review of fire safety matters constituting a significant fire safety issue, requiring upgrade or Council notification within the proposed approvals process.		
s.60 of EPA Reg (DCFS) 2021	If a Certifier becomes aware of any *significant fire safety issues* in the process of determining a CC, OC, there are two options: + Address the *significant fire safety issue* in the proposed development, or + Notify Council of the *significant fire safety issue* (noting Council may then issue a Fire Safety Order on the building compelling the building owner to rectify the issue).	All required issues have been identified above. Refer to above report recommendations.
Change of Use – Environmental Planning and Assessment Regulations 2021		
Review of matters requiring upgrade as triggered by a change of use being proposed in the development.		
s.142 of EPA Reg 2021	+ The building must contain measures that are adequate to facilitate safe egress from that part of the building affected by the change of use. + The fire protection and structural capacity of the building must be appropriate to the proposed use. + The building will comply with the Category 1 fire safety measures applicable to the proposed use.	N/A
s.14 of EPA Reg (DCFS) 2021	A certifier must not issue a construction certificate for building work under a development consent that authorises a change of building use unless— + the fire protection and structural capacity of the building will be appropriate to its new use, and + the building will comply with such of the Category 1 fire safety provisions as are applicable to the new use.	N/A
s.62 of EPA Reg 2021	+ The fire protection and structural capacity of the building must be appropriate to the proposed use. + The building will comply with the Category 1 fire safety measures applicable to the proposed use.	N/A

+ Approval Trigger	+ Requirement	+ Applicability
Alterations to an Existing– Environmental Planning and Assessment Regulations 2021		
Review of matters requiring upgrade due to undertaking alterations within an existing building.		
s.14 of EPA Reg (DCFS) 2021	A certifier must not issue a construction certificate for the work unless, on completion of the building work, the fire protection and structural capacity of the building will not be reduced, assuming that the building work is carried out in accordance with the plans and specifications to which the construction certificate relates and any conditions to which the construction certificate is subject.	All required issues have been identified above. Refer to above report recommendations.
s.64 of EPA Reg 2021	Where the works either; + Represent more than half the volume of the building, or + The measures contained in the building are inadequate to protect persons using the building, and to facilitate egress in the event of a fire, or to restrict the spread of fire from the building to other buildings nearby. The consent authority (Council) must take to in to account whether to upgrade the building (either partially or totally) into conformity with the BCA	All required issues have been identified above. Refer to above report recommendations.

+ Note: **Category 1** fire safety measures mean the following:

- Fire Hydrants
- Fire Control Centres
- Smoke Hazard Management
- Emergency Lifts
- Sprinkler Systems

A.

5.0 Conclusion

This report contains an assessment of the referenced architectural documentation for the proposed Dee Why RSL Stage 7 alterations at 932 Pittwater Road, Dee Why against the deemed-to-satisfy provisions of the Building Code of Australia 2022.

Arising from the assessment, key compliance issues have been identified that require further resolution, either by way of fire engineered Performance Solutions or plan amendments prior to the BCA Certification stage.

Notwithstanding the above, it is considered that the proposed development can readily achieve compliance with the BCA subject to resolution of the matters identified in this report.

Appendices

+ Appendix 1 – References Tables

Table 1: Non-Combustibility Requirements

+ Building Element	+ Type A Construction
External wall	Non-combustible
Common wall	Non-combustible
Floor and floor framing of lift pit	Non-combustible
All loadbearing internal walls (including those of shafts)	Concrete, masonry or fire-protected timber
Loadbearing fire walls	Concrete, masonry or fire-protected timber
Non-loadbearing internal walls required to be fire-resistant	Non-combustible
Non-loadbearing lift, ventilating, pipe, garbage and the like shafts which do not discharge hot products of combustion.	Non-combustible (subject to conditions outlined in C2D10)
Non-loadbearing lift, ventilating, pipe, garbage and the like shafts which do not discharge hot products of combustion.	Non-combustible (subject to conditions outlined in C2D10)

Table 2: Fire Hazard Properties Requirements – Floor Linings

+ Table S7C3 of Specification 7 ñ Critical Radiant Flux or Floor Linings and Floor Coverings			
Class of Building	**Building Not Fitted with a Sprinkler System**	**Building Fitted with a Sprinkler System** (other than a FPAA101D or FPAA10H System)	**Fire-isolated Exits and Fire Control Rooms**
Class 2, 3, 5, 6, 7, 8 or 9b, excluding: Class 3 accommodation for the aged; and Class 9b as specified below.	2.2 kW/m2	1.2 kW/m2	2.2 kW/m2

Table 3: Fire Hazard Properties Requirements – Wall and Ceiling Linings

+ Table S7C4 of Specification 7 – Wall and Ceiling Lining Materials (Materials Groups Permitted)				
Class of Building	**Fire-isolated Exits and Fire Control Rooms**	**Public Corridors**	**Special Areas**	**Other Areas**
Class 5, 6, 7, 8 or 9b schools, Unsprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 5, 6, 7, 8 or 9b schools, Sprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 9b other than schools, Unsprinklered	Walls: 1 Ceilings: 1	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 9b other than schools, Sprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3

Table 3: Fire-Resisting Construction – Type A Construction

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

Notes:

1. Any lightweight construction in a fire wall or an internal wall required to have an FRL is to comply with Specification 11.
2. A loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be constructed from; concrete or masonry.
3. Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must typically achieve the same FRL. Where that part is also required to be non-combustible, the supporting part must also be non-combustible.
4. The method of attaching or installing a finish, lining, ancillary element, or service installation to a building must not reduce the fire-resistance of that element to below that required.
5. Fire rated shafts are required to be enclosed at the top and bottom by construction having an FRL of not less than what the shaft requires (in both directions)
6. The concession granted under S5C15 results in the roof of the building not being required to be fire rated (the building is provided throughout with sprinklers). Notwithstanding, the Atrium provisions override this general concession in BCA Specification 5.
7. Lift shafts are required to be enclosed at the top of the shaft with fire rated construction having an FRL of 120/120/120.
8. Fire isolated exits are to be provided with a fire rated "lid" that achieves an FRL of 120/120/120.
9. Where roof lights are proposed they are required to be located not less than 3 metres from a roof light in an adjoining fire separated part; and must not be more than 20% of the area of the roof.
10. Any loadbearing internal walls or loadbearing fire walls are to be masonry or concrete.
11. External walls must be non-combustible construction. Non-loadbearing parts of an external wall that are more than 3m from a fire source feature need not be fire rated.
12. Internal columns in this building (being less than 25m in effective height) that are in the storey immediately below the roof, can be constructed as follows:
    a. Building with a rise in storeys exceeding 3 – FRL 60/60/60
    b. Building with a rise in storeys not exceeding 3 – no FRL

+ Appendix 2 – Fire Safety Schedule

The following table is a list of the required fire safety measures within the building. These measures may be subject to further change pending the outcomes of the final Fire Safety Engineering Review to confirm the works are permissible and do not contradict the base building Performance Solutions.

Table 7: Fire Safety Schedule

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Access Panels, Doors & Hoppers	BCA 2022 Clause C4D14 AS 1530.4 – 2014 Manufacturer's Specifications	✓	✓
Alarm Signalling Equipment	AS 1670.3 – 2018	✓	✓
Automatic Fail Safe Devices	BCA 2022 Clause D3D26	✓	✓
Automatic Fire Detection & Alarm System	BCA 2022 Spec. 20 AS 1670.1 – 2018 Base Building FER (Innova Services)	✓	✓
Automatic Fire Suppression Systems	BCA 2022 Spec. 17 AS 2118.1 – 2017 Base Building FER (Innova Services)	✓	✓
Building Occupant Warning System activated by the Sprinkler System	BCA 2022 Spec. 17 Clause 8 and / or Clause 3.22 of AS 1670.1 – 2018	✓	✓
Emergency Lighting	BCA 2022 Clause E4D2 & E4D4 AS 2293.1 – 2018	✓	✓
Emergency Evacuation Plan	AS 3745-2010 Base Building FER (Innova Services)	✓	✓
Exit Signs	BCA 2022 Clauses E4D5, NSW E4D6 & E4D8 AS 2293.1 – 2018	✓	✓
Fire Control Centres	BCA 2022 Spec 19	✓	✓
Fire Dampers	BCA 2022 Clause C4D15 AS 1668.1 – 2015 & AS 1682.1 & 2 – 2015 Manufacturer's Specification	✓	✓
Fire Doors	BCA 2022 Clauses C3D13, C3D14, C4D7, C4D8 & C4D12 AS 1905.1 – 2015 and Manufacturers Specification Base Building FER (Innova Services)	✓	✓
Fire Hose Reels	BCA 2022 Clause E1D3 AS 2441 – 2005	✓	✓
Fire Hydrant Systems	BCA 2022 Clause E1D2 AS 2419.1 – 2021	✓	✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Fire Seals	BCA 2022 Clause C4D15, AS 1530.4 – 2014 & AS 4072.1 – 2014 and Manufacturer's Specification	✓	✓
Fire Shutters (Loading Dock)	BCA 2022 Spec. 12 AS 1905.2 – 2005 Base Building FER (Innova Services)	✓	
Lightweight Construction	BCA 2022 Clause C2D9 AS 1530.4 – 2014 and Manufacturer's Specification	✓	✓
Mechanical Air Handling Systems (Automatic Shutdown)	BCA 2022 Clause E2D3 AS/NZS 1668.1 – 2015 & AS 1668.2 – 2012 Base Building FER (Innova Services)	✓	✓
Portable Fire Extinguishers	BCA 2022 Clause E1D14 AS 2444 – 2001	✓	✓
Required Exit Doors (Power Operated)	BCA 2022 Clause D3D24(2)	✓	✓
Smoke Baffles	BCA 2016 C2.5 Base Building FER (Innova Services)	✓	
Smoke Hazard Management Systems + Basement Carpark Fire Stair Pressurisation + Smoke Exhaust	BCA 2022 Part E2 AS/NZS 1668.1 –2015 Base Building FER (Innova Services)	✓	✓
Smoke Dampers (Club Levels 1 and 3)	AS/NZS 1668.1 – 2015 Base Building FER (Innova Services)	✓	
Smoke Doors (Club Levels 1 and 3)	BCA 2016 C2.5 Base Building FER (Innova Services)	✓	
Smoke Seals (Levels 2 Kitchen)	AS 6905 – 2007 Base Building FER (Innova Services)	✓	
Stretcher Lift	BCA 2022 Clause E3D3	✓	
Wall-Wetting Sprinklers (Loading Dock, Level 1 Entry Lobby/Southern Carpark & AMF Bowling Centre/Northern Carpark)	BCA 2016 C3.4 AS 2118.2 – 1995 Base Building FER (Innova Services)	✓	
Warning & Operational Signs	BCA 2022 Clause C4D7, D3D28, D4D7, E4D4 & I4D14. AS 1905.1 – 2015 EP&A (DCFS) Regulations 2021 Section 108 Base Building FER (Innova Services)	✓	✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Base Building Fire Engineered Performance Solutions	Fire Engineering Report prepared by Innova Services numbered 16344-R03, Rev 8, dated 20.09.2021	✓	
Proposed Fire Engineered Performance Solutions – Stage 7 (TBC)	TBC		✓