

# Moama Bowling Club – North Precinct [Preliminary Assessment]

**BCA Preliminary Assessment** 



# Moama Bowling Club (Shaw Street) [Preliminary Assessment]

# **BCA Preliminary Assessment**

Prepared for

DACCA Architecture Attention: Tony Maluccio Suite 101, 18-20 Victoria Street Erskineville NSW 2043

#### Prepared by

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# **Quality Information**

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Prepared by Aroha Bates

## **Revision History**

	5 5 .	<b>.</b>	Authorised by		
Revision	Revision Date	Details	Name/Position	Signature	
А	30 <sup>th</sup> September 2022	Issued for client review	Luke Trento	1/ph	
В	6 <sup>th</sup> December 2022	Issued for client review	Luke Trento	1/h/b	
С	20 <sup>th</sup> December 2022	Issued for client review	Luke Trento	1615	

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# Introduction

The BCA preliminary report is for the assessment of the proposed North Precinct (Moama Bowling Club) to assess compliance with the 2019 National Construction Code – Volume 1: Amendment 1 ("BCA").

The report is prepared based on and assessment of the Architectural Plans dated 30<sup>th</sup> November 2022 (Rev B) provided by the client and is intended for their use only.

# **Building Description**

Building Use: Moama Bowling Club

Class of Occupancy: Class 9b - Club (Alterations / Extension) / Summerhouse

Type of Construction: Type B - Club (Alterations / Extension)

Type C - Summerhouse

Floor Area: Summerhouse - 232m<sup>2</sup>

Club (Alterations / Extensions) 489m<sup>2</sup>

Assumed No. of Occupants TBA

Rise in Storeys: 2 - Club (Alterations / Extension)

1 - Summerhouse

Levels Contained: 2 - Club (Alterations / Extension)

1 - Summerhouse

Effective Height: < 12m
Importance Level: IL2

We have reviewed the Architectural Plans dated 30<sup>th</sup> November 2022 (Rev B) and offer the following general and routine advice in relation to BCA compliance – please note the following potential performance solutions required to be addressed:

Relevant Performance Requirement (s)	Relevant Deemed-to- Satisfy Provision (s)	Performance Solution
CP2	BCA-C2.7	Potential departures from DtS provisions required for the new / existing fire wall separating fire compartments
CP2	BCA-C3.4	Potential departures from DtS provisions required for protection of openings in a fire wall
DP4	BCA-D1.4	Permit extended travel distances within the Club (Alterations / Extension)

#### **CLASSIFICATION**

The buildings are generally a Class 9b [Assembly Building].

#### **SECTION C - FIRE RESISTANCE**

The existing building has a rise in storey of 2 and the classification has been confirmed as Class 9b meaning the proposed Club (Alterations / Extensions) are required to be constructed to Type B construction.

The Summerhouse is considered Class 9b and is a standalone building with a rise in storeys of 1 and is required to be constructed to Type C construction.

The Club (Alterations / Extensions) New Loadbearing External Walls / Columns located between less than 18m from a Fire Source Feature (FSF) are required to achieve 120min FRL - Specification C1.1 Clause 4.1 (g) allows internal columns immediately below the roof to not comply with Table 4.

The Summerhouse Loadbearing External Walls / Columns located between 1.5m – 3m from a Fire Source Feature (FSF) are required to achieve 60min FRL.



The FRL of all building elements are summarised as follows:

#### Club (Alterations / Extension)

Storey	Class	External Wall	Fire Walls	Lift/Stair Shaft [& corridors served]	Bounding Public Corridors & Units	Services Shafts	Internal Walls, Columns & Beams	^ Floors
Ground	9b	-/-/- if > 18m	120/120/120	n/a	n/a	n/a	120/-/-	30/30/30

<sup>^</sup> A reference to a floor is a reference to the fire rating required to separate the storey from the level above

#### Summerhouse

Storey	Class	External Wall	Fire Walls	Lift/Stair Shaft [& corridors served]	Bounding Public Corridors & Units	Services Shafts	Internal Walls, Columns & Beams	^ Floors
Ground	9b	-/-/- if > 3m	90/90/90	n/a	n/a	n/a	-/-/-	30/30/30

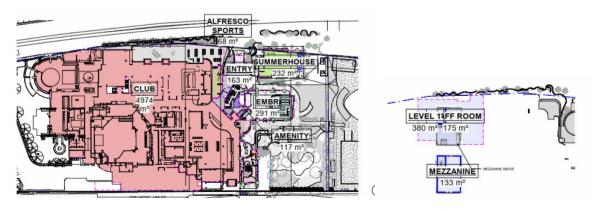
<sup>^</sup> A reference to a floor is a reference to the fire rating required to separate the storey from the level above

In a building of Type B Construction new external walls, including all components in them including façade covering, framing and insulation in the Club (Alterations / Extensions) building must be non-combustible when tested to AS1530.1.

Ancillary elements are not permitted to be attached to the new external walls of the Club (Alterations / Extensions) building unless they are non-combustible when tested to AS1530.1 or a sign that achieves Group Number 1 or 2, does not extend beyond one storey or beyond one fire compartment and is separated vertically from other signs permitted under this clause by at least 2 storeys.

The maximum fire compartment size permitted in a building of Type B construction is a floor area of 5,500m<sup>2</sup> and maximum volume of 33,000m<sup>3</sup>. It has been determined that the proposed extension will create a floor area of in excess of 5,500m<sup>2</sup>.

A fire wall complying with BCA-C2.7 is proposed to limit the size of the fire compartment to less than  $5,500m^2$  ( $4974m^2$ ) please refer D0003 (Rev B) below: -



BCA-C2.7 requires the fire wall to achieve 120min FRL and extend to the underside of a floor having 120min FRL or the roof covering.

BCA-C3.5 requires door openings in fire wall to be self-closing / automatic closing -/120/30 fire doors, Door Schedule to confirm operation / fire rating of doors.

BCA-C3.4 requires windows / glazing to be automatic-closing or permanently fixed closed with internal or external wall wetting sprinklers, automatic closing or permanently fixed -/60/- fire windows or -/60/- automatic closing fire shutters.

Where a departure from DtS provisions is identified, a Performance Solution will be provided by a Fire Engineer.

Consideration of separation of external walls and associated openings in different fire compartments would also need to be considered.

Fire hazard properties of wall, floor, and ceiling linings [material schedule] will be required for assessment to BCA Part C1.10. A breakdown of requirements is shown below:

ELEMENT					
	Specific Areas	Other Areas	Within Rooms	Public Corridors	Fire-isolated exit
Floor	2.2 kW/m2	1.2 kW/m2 -		2.2 kW/m2	4.5kW/m2
Wall	Group 1 or 2	Group 1, 2 or 3	Group 1, 2 or 3	Group 1	Group 1
Ceiling	Group 1 or 2	Group 1, 2 or 3	Group 1, 2 or 3	Group 1	Group 1

#### **SECTION D - EGRESS**

In a Class 9b building any storey that accommodates more than 50 persons must have access to not less than 2 exits. The Summerhouse building is provided with more than 2 exits and complies with this requirement.

No point on the floor must be more than 20m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40m.

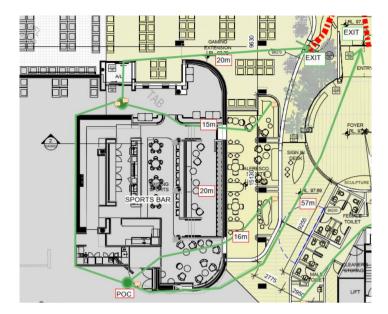
Distance between alternative exits must not be less than 9m and not more than 60m apart.

Egress and travel distances have been assessed in the new building extensions. Please see following for consideration:

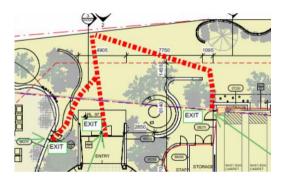
Travel distances in the Summerhouse are compliant.



Based on assumed exit locations, travel distance between alternative exits exceeds 60m (77m) and overall distance to an on of the alternative exits exceeds 40m (50m). Egress paths must be maintained as part of the proposed fire compartmentation.



A clearly identified 1m egress path must be provided from the new required exits providing egress to public road. Plans will also need to indicate where occupants gain access to the public road.



A door hardware schedule is required to confirm selections comply with free lever requirements from BCA-D2.21. Where the building or part accommodates more than 100 people, panic bar door hardware is required, this will also apply to the Summerhouse.

Please refer to DDA Report by Access Consultant for detailed requirements with respect to access for people with disabilities.

#### **SECTION E - SERVICES AND EQUIPMENT**

The fire hydrant and fire hose reel systems, automatic smoke detection / alarm system in the existing building must be extended to the Club (Alterations / Extensions).

The Summerhouse building is less than 500m² and is not required to be provided with fire hydrant, fire hose reel systems. Fire extinguishers will be required.

A smoke exhaust system is required in a Class 9b Assembly building with a floor area of more than 5,000m<sup>2</sup>. The proposed fire wall is intended to limit the size of the fire compartments to not greater than 5,000m<sup>2</sup>, therefore, a smoke exhaust system will not be required.

## **SECTION F - HEALTH AND AMENITY**

Weatherproofing to external walls will need to be accepted as a performance solution (PBDB required).

Existing sanitary facilities are being removed as part of the North Precinct development; the proposed number of sanitary facilities will cater for 4200 occupants (2100 Male / 2100 Female).

#### SECTION G - ANCILLARY PROVISIONS

Not Applicable to new building extensions.

# **SECTION J - ENERGY EFFICIENCY**

Section J Energy Efficiency report will be required for Club (Alterations / Extensions) and the Summerhouse.

We hope this advice is of assistance however if you have any queries in relation to the above please do not hesitate to contact the undersigned.

Yours faithfully

**AROHA BATES** 6 December 2022