- ACCREDITED CERTIFIERS
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- CONSTRUCTION CERTIFICATES
- FIRE SAFETY/BUILDING CONSULTANTS

NSW BUILDING APPROVALS

BCA COMPLIANCE ASSESSMENT REPORT

PROPOSED FARM STAY ACCOMMODATION

13 Bungendore Street, Ingleside

SECTION C FIRE RESISTANCE SECTION D ACCESS & EGRESS SECTION E SERVICES & EQUIPMENT SECTION F HEALTH & AMENITY

DATE > 29 October 2019 REPORT No. > 251019 PREPARED FOR > John Holman PREPARED BY > NSW BUILDING APPROVALS

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1.0 EXECUTIVE SUMMARY

This report provides a Building Code of Australia 2019 (BCA) assessment for the conversion of an existing shed into a farm stay accommodation, located at 13 Bungendore Street, Ingleside. The building comprises a change of use of an existing farm building to 'farm stay accommodation' a type of tourist and visitor accommodation. The use will propose 2 separate sole occupancy units spread over two levels.

The site is irregular in shape with a total site area of 2.6ha (25,880m²) and is located on the western side of Bungendore. As it stands, the subject building comprises of a vacant farm shed with a lettable area of $100m^2$ with $24m^2$ verandah.

The primary purpose of this report is to identify non-compliances with the 'deemed-to satisfy' requirements of the BCA, with respect to the proposed works. The proposed works are assessed under the latest building code, that is, BCA 2019 or BCA version relevant upon receipt of a Construction Certificate.

There are some issues requiring specific attention that have been noted as recommendations (below and in Section 4.0) and should be read in conjunction with the BCA compliance summary contained in Section 3.0 of this report.

1.1 Basis of Report

This report is prepared to address compliance with the fire safety provisions (Sections C, D, E and F) of the Building Code of Australia.

This report is based on a site inspection carried out on 23 October 2019 and a desk top review of the proposed plans prepared by Parker + Associates, building design consultants, sheets 1 to 8 and dated September 2019; incorporates the requirements of the Building Code of Australia 2019, including the NSW Variations (as a guide).

1.2 Purpose of the Report

The purpose of this report is to assess the following:

 Assessment under the current Building Code of Australia 2019, (Sections C, D, E and F) and list any departures from the BCA 2019.

2.0 BCA ASSESSMENT DATA

Assessment data regarding the current Building Code of Australia.

BCA Building Classification/s:	3 (farm stay accommodation) A Class 3 building is a residential building providing long-term or transient accommodation for a number of unrelated persons.
	Why this building cannot be classified as a Class 1b;
	The proposed two storey farm stay accommodation building cannot be classified as 1b as 'Class 1 buildings are not located above or below another dwelling, or another class of building other than a private garage' and
	'A sole-occupancy unit used for residential purposes located over another sole-occupancy unit used for residential purposes will always be a Class 2 or Class 3 building. It cannot be a Class 1 building' (BCA Clause A6.11 Explanatory information).
Building rise in storeys:	2
Type of Construction:	C (Cl. C1.5 - Based upon the entry 're-design' this building may be in Type C construction as each 'SOU' will have its own direct access to a road or open space);
General Floor area limitations:	N/A

2.1 Location of Fire Source features

North:	Side Boundary	(>3m) Location from boundary of allotment
South:	Side boundary	(>3m) Location from boundary of allotment
East:	Side boundary	(>6m) Location from far boundary of Bungendore Street
West:	Rear boundary	(>3m) Location from boundary of allotment

Limitations of the Report

This report does not assess the following:

- Access and facilities for people with disabilities is addressed however compliance with Disability Discrimination Act 1992 (DDA) is outside the scope of this report. It should be noted that BCA compliance does not necessarily meet the requirements of the Disability Discrimination Act (DDA).
- Reporting on hazardous materials, OH&S matters or site contamination
- Assessment of any structural elements or geotechnical matters relating to the building, including any structural or other assessment of the existing fire resistant levels of the building
- Consideration of any fire services operations (including hydraulic, electrical or other systems)
- Assessment of plumbing and drainage installations, including stormwater
- Assessment of mechanical plant operations, electrical systems or security systems
- Heritage significance
- Consideration of energy or water authority requirements
- Consideration of Council's local planning policies
- Environmental or planning issues
- Requirements of statutory authorities
- Glazing, shading, lighting calculations and the like required by Section J of the BCA not been carried out

NOTE: The inspection was a 'visual' inspection, limited to those areas and sections of the property fully accessible and visible to the inspector on the date of inspection. The inspection DID NOT include breaking apart, dismantling, removing or moving objects including but not limited to, foliage, moldings, roof insulation / insulation, floor or wall coverings, sidings, ceilings, floors, furnishings, appliances or personal possessions. The inspector CANNOT see inside walls, between floors, inside skillion roofing, behind stored goods in cupboards, other areas that are concealed or obstructed. The inspector DID NOT dig, gouge, force or perform any other invasive procedures. Visible timbers cannot be destructively probed or hit without the written permission of the property owner.

This report does not and cannot make comment upon: defects that may have been concealed, the assessment or detection of defects (including rising damp and leaks) which may be subject to the prevailing weather conditions, the presence or absence of timber pests, gas fittings, common property areas, environmental concerns; the proximity of the property to flight paths, railways, or busy traffic; noise levels; health and safety issues; heritage concerns; security concerns; site drainage (apart from surface water drainage); swimming pools and spas (non-structural); detection and identification of illegal building work ; detection and identification of illegal plumbing work ; durability of exposed finishes ; neighborhood problems ; document analysis ; electrical installation; any matters that are solely regulated by statute; any area(s) or item(s) that could not be inspected by the consultant. Accordingly this Report is not a guarantee that defects and/or damage does not exist in any inaccessible or partly inaccessible areas or sections of the property. (NB: such matters may upon request be covered under the terms of a special purpose property report.)

3.0 TABLE OF COMPLIANCE

The following table details the BCA compliance of the proposed residential flat building – Note that compliance with all clauses could not be determined.

CLAUSE	REFERENCE	COMMENTS			
Section A -	Section A – General Provisions				
Part A3.2	Classification	As identified under Section 2.3 of this report. ➤ Class 3 (farm stay accommodation)			
A4.1	United Buildings	Not applicable			
Section C -	Fire Resistance				
Part C1 – F	IRE RESISTANCE & STABIL	ITY			
C1.1	Type of Construction	Type 'C' Construction applicable, building elements to comply with Specification C1.1 Table 5 (application of C1.5).			
C1.2	Calculation of Rise In Storeys	The building has a Rise in Storeys of 2			
C1.3	Buildings of Multiple Classification	Noted. Type C Construction applies.			
C1.4	Mixed Types of Construction	N/A			
C1.5	Two Storey Class 2, 3 or 9c Buildings	Based upon the proposed unit entry 're-design' this building may be in Type C construction as each 'SOU' will have its own direct access to a road or open space;			
C1.6	Class 4 Parts of Buildings	N/A			
C1.7	Open Spectator Stands & Indoor Sports Stadiums	N/A			
C1.8	Lightweight Construction	Lightweight construction must comply with Specification C1.8 if it is used in a wall system that is required to have an FRL.			
		If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if—			
		 (i) the covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting; and 			
		(ii) the column is liable to be damaged from the movement of vehicles, materials or equipment, then the covering must be protected by steel or other suitable material.			
C1.9	Repealed	-			

CLAUSE	REFERENCE	COMMENTS
C1.10	Early Fire Hazard Properties	The fire hazard properties of any material or assemblies, and sarking material to comply with Specification C1.10 or C1.10a.
		The fire hazard properties of any material or assemblies, and sarking material to comply with Specification C1.10 or C1.10a.
		Floor Coverings / Materials
		 Critical Radiant Heat Flux not less 2.2 Kw/M2
		And
		 As the building is not sprinkler protected, a maximum smoke development rate of 750 percent minutes.
		Walls & Ceilings – Fire Isolated Exit
		 Group 1 materials
		Walls & Ceilings – Public Corridors
		 Group 1 or 2 materials
		Walls & Ceilings – Specific Areas (within units)
		 Group 1, 2 or 3 materials
		Walls & Ceilings – Other Areas
		- Group 1, 2 or 3 materials
		Lift Car
		 Floor materials / floor coverings must have a Critical Radiant Heat Flux not less 2.2 kW/M2
		And
		- Wall and ceiling linings must be Group 1 or Group 2 material.
		 Lift contractor to confirm fire hazard properties of lift car (as applicable).
		For all other materials compliance with either BCA Specification C1.10 or BCA Specification C1.10a is required.
		Note: Certain materials and assemblies are exempt as listed in BCA Clause C1.10 (c).
		All compliance certification / documentation to be forwarded to Principal Certifying Authority prior to installation or as part of the Occupation Certificate.
C1.11	Performance of External Walls	N/A, external walls are steel construction.
C1.12	Repealed	* * * *
C1.13	Fire-protected timber: Concession	N/A, external walls are steel with concrete slab construction
C1.14	Ancillary elements	Noted; An ancillary element must not be fixed, installed or attached to the internal parts or external face of an <i>external wall</i> that is <i>required</i> to be <i>non-combustible</i> unless it is one of the following:
		(a)An ancillary element that is non-combustible.

CLAUSE	REFERENCE	COMMENTS
		(b)A gutter, downpipe or other plumbing fixture or fitting.
		(c)A flashing.
		(d)A grate or grille not more than 2 m2 in area associated with a building service.
		(e)An electrical switch, socket-outlet, cover plate or the like.
		(f)A light fitting.
		(g)A <i>required</i> sign.
		 (h)A sign other than one provided under (a) or (g) that— (i)achieves a <i>group number</i> of 1 or 2; and (ii)does not extend beyond one <i>storey</i>; and (iii)does not extend beyond one <i>fire compartment</i>; and (iv)is separated vertically from other signs permitted under (h) by at least 2 <i>storeys</i>.
		 (i)An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that— (i)meets the relevant requirements of Table 4 of Specification C1.10 as for an internal element; and (ii)serves a <i>storey</i>— (A)at ground level; or (B)immediately above a <i>storey</i> at ground level; and (iii)does not serve an <i>exit</i>, where it would render the <i>exits</i> unusable in a fire.
		(j)A part of a security, intercom or announcement system.
		(k)Wiring.
		(I)A paint, lacquer or a similar finish.
		(m)A gasket, caulking, sealant or adhesive directly associated with (a) to (k).

Part C2 – Fire Compartmentation & Separation

C2.1	Application	Noted
C2.2	General Floor Area Limitations	N/A
C2.3	Large Isolated Buildings	N/A
C2.4	Requirements for open space	N/A

CLAUSE	REFERENCE	COMMENTS
C2.5 (NSW)	Class 9a & 9c Buildings	N/A
C2.6	Vertical separation of openings in external Walls	N/A
C2.7	Separation by fire walls	Noted;
C2.8	Separation of classifications in the same storey	Noted; See: Spec C1.1
C2.9	Separation of classifications in different storeys	 The separating floor must; i) be constructed so that it is at least of the standard achieved by a floor/ceiling system incorporating a ceiling which has a <i>resistance to the incipient spread of fire</i> to the space above itself of not less than 60 minutes; or ii) have an FRL of at least 30/30/30; or iii) have a <i>fire-protective covering</i> on the underside of the floor, including beams incorporated in it, if the floor is <i>combustible</i> or of metal;
C2.10	Separation of lift shafts	N/A
C2.11	Stairways and lifts in one shaft	N/A
C2.12	Separation of equipment	N/A, no lift motor room present. Separation of on-site fire pumps must comply with the requirements of AS 2419.1.
C2.13	Electricity supply system	Noted; The electrical switchboards throughout all internal areas of the buildings have been enclosed by non-combustible construction with doorways suitably sealed against smoke spreading from the enclosure. Appropriate documentation is to be provided by a suitably qualified person or company attesting compliance upon completion.
C2.14	Public corridors in Class 2 & 3 buildings	Compliant; public corridors all less than 40m in length.
Part C3 – P	rotection of Openings	
C3.1	Application of Part	Noted
C3.2	Protection of openings in external walls	Compliant Openings within 3m of an allotment boundary shall be protected by sprinklers, fire doors, fire windows, in accordance with Clause C3.4 of the BCA. There are no openings within 3m of a boundary.
C3.3	Separation of openings in different fire compartments	Noted;

CLAUSE	REFERENCE	COMMENTS
C3.4	Acceptable methods of protection	 Where protection is required, it must comply with the following: i. Doorways - external wall-wetting sprinklers as appropriate used with doors that are self-closing or automatic closing, or -/60/30 fire doors (self closing or automatic closing); ii. Windows - external wall-wetting sprinklers as appropriate used with windows that are automatic or permanently fixed in the closed position, -/60/- fire windows (automatic or permanently fixed in the closed position) or -/60/- automatic fire shutters; iii. Other openings - external wall-wetting sprinklers as appropriate or construction having an FRL not less than/60/
C3.5	Doorways in fire walls	N/A
C3.6	Sliding fire doors	N/A
C3.7	Protection of doorways in horizontal exits	N/A
C3.8	Openings in fire isolated exits	N/A
C3.9	Service penetrations in fire Isolated exits	N/A
C3.10	Openings in fire isolated lift shafts	N/A
C3.11	Bounding construction Class 2, 3 and 4 buildings	Deficient The first floor is to be fire protected from the ground floor. A redesign is recommended for the entry doorways.
C3.12	Openings in floors for services	Where a service passes through the floor that is required to have an FRL with respect to integrity and insulation; or a ceiling required to have a resistance to the incipient spread of fire, the service must be protected by a shaft that will not reduce the fire performance of the building it penetrates.
C3.13	Openings in shafts	 Noted; Where access to a ventilating, pipe, garbage or other service shaft is provided within a wall, protection must be provided as follows: i) In a sanitary compartment – a door or panel having an FRL not less than/30/30; or ii) A self-closing/60/30 fire door or hopper; or iii) An access panel with an FRL not less than/60/30; or If a garbage shaft – a door or hopper construction.
C3.14	Repealed	-
C3.15	Openings for service installations	Where an electrical, electronic, plumbing, mechanical ventilation, air- conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL or a resistance to the incipient spread of fire, that installation must comply with clause C3.15.

CLAUSE	REFERENCE	COMMENTS
C3.16	Construction Joints	Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL.
C3.17	Columns protected with lightweight construction to achieve an FRL	Columns protected by lightweight construction are to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire.

SPEC C1.1 Fire Resistance Construction

3	Type A Construction;	N/A
4	Type B Construction;	N/A
5	Type C Construction	Noted; The proposed building elements should be examined by a qualified structural engineer to ensure that these elements achieve the acceptable FRL in accordance with table 5; Section C1.1, BCA.

Section D – Access and Egress

Part D1 – Provision for Escape

D1.1	Application	Noted.
D1.2	Number of exits required	Compliant;
		A compliant number of exits from each level in terms of 'Number of exits required' has been achieved.
D1.3	When Fire isolated exits are required	N/A
D1.4	Exit Travel Distances	Deficient
		Within the first floor, the entrance doorway of each sole-occupancy unit i.e. 'bed 3' and 'Media' is more than 6m from the exit (the exit is the 'internal stairway').
		Not more than 20 m travel distance is available to the exit within the ground floor.
		Recommended to create two separate SOU's (sole occupancy units). One upon the ground floor and one upon the first floor level.
D1.5	Distances between alternative exits	Plans considered to comply

CLAUSE	REFERENCE	COMMENTS
D1.6	Dimensions of exits	Generally the dimensions of exits are considered compliant within the building.
		In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2m, except the unobstructed height of any doorway may be reduced to not less than 1980mm.
		The unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than 1m (clear of all handrails) and must not diminish in the direction of travel to a road or open space.
		Numbers of persons are calculated per person m ² . (NSW Table D1.13). Details to be submitted with future Construction Certificate.
D1.7	Travel via fire isolated exits	N/A
D1.8	External stairways in lieu of fire-isolated exits	N/A
D1.9	Travel by non-fire-isolated	Compliant
	stairways or ramps	CI D1.9 requires that occupants in a stairway are able to continue all the way down to the level from which egress to a road or open space is available. A continuous means of travel comprising flights of stairs and landings.
D1.10	Discharge from exits	Noted; An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it.
D1.11	Horizontal exits	N/A
D1.12	Non-Required stairways ramps and escalators	N/A
D1.13	Number of persons accommodated	This report will assume that this restriction is not in place and a population number will be obtained through calculation of egress widths, floor area and toilet numbers. Note: Population numbers are estimates.
		(See D1.6 for population limits above Councils consent)
D1.14	Measurement of distances	Noted.
D1.15	Method of measurement	Noted.
D1.16	Plant rooms & lift motor rooms: Concession	N/A
D1.17	Access to lift pits	Noted.
Part D2 – C	onstruction of Exits	

CLAUSE	REFERENCE	COMMENTS
D2.1	Application of Part	Noted.
D2.2	Fire-Isolated stairways & ramps	N/A
D2.3	Non-Fire-Isolated stairways and ramps	N/A; Building does not have a rise in storeys of more than 2
D2.4	Separation of rising and descending stair flights	N/A
D2.5	Open access ramps and balconies	N/A
D2.6	Smoke lobbies	N/A
D2.7	Installations in exits and	Noted.
paths of travel	Internal electrical switchboards within the building to be fully enclosed by non-combustible construction doorways or openings suitably sealed against smoke spreading from the enclosure. Appropriate documentation is to be provided by a suitably qualified person or company attesting compliance upon completion.	
		Installation of services in exits to comply with D2.7.
D2.8	Enclosure of space under stairs and ramps	Compliance achievable; The space beneath the egress stairway must not be enclosed to form a cupboard or similar enclosed space unless –
		The enclosing walls and ceilings have an FRL of not less than 60/60/60; and
		Any access doorway to the enclosed space is fitted with a self-closing -/60/30 fire door.
		This clause is particularly applicable to the storage area beneath the required exit stairway within the basement car park level.
D2.9	Width of stairways	Compliance achievable;
		Based upon the proposed re-design, the stairway serving the first floor <i>does not</i> have to be 1m in width.
D2.10	Pedestrian ramps	N/A
D2.11	Fire Isolated passageways	N/A
D2.12	Roof as open space	N/A
D2.13	Treads and risers	Plans indicate compliance
D2.14	Landings	Compliance achievable, plans indicate compliance
D2.15	Thresholds	Plans indicate compliance
D2.16	Balustrades	Plans indicate compliance

CLAUSE	REFERENCE	COMMENTS
D2.17	Handrails	Handrails to be provided to comply with the specific requirements of D2.17.
D2.18	Fixed platforms, walkways stairways and ladders	A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail, balustrade or other barrier attached thereto may comply with AS 1657 in lieu of BCA clauses D2.13, D2.14, D2.16 and D2.17 if it only serves machinery rooms, boiler houses, lift-motor rooms, plant-rooms, and the like.
D2.19	Doorways and doors	Generally the number and position of the exit doors and doorways within all levels are considered to be adequate in terms of distribution.
D2.20	Swinging doors	Based upon the re-design each unit <i>does not require</i> to have their final exit doorways swinging outwards (<i>see D2.1</i>)
D2.21	Operation of latch	A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by a single hand downward action or pushing action on a single device which is located between 900mm and 1100mm from the floor.
D2.22	Re-entry from fire isolated exits	N/A
D2.23	Signs on doors	N/A
D2.24	Protection of openable window	Protection of openable bedroom windows where the lowest level of the window opening is less than 1.7m above the floor, a window opening cannot open further than 125mm.
D2.25	Timber stairways: Concession	N/A, fire-isolated stairway not required.

Part D3 – Access for people with disabilities

D3.1	Application of part	The Deemed-to-Satisfy Provisions of this Part Apply. Based upon the proposed re-design there are no common areas, therefore a pedestrian entrance is not required to the upper level sole- occupancy unit.
		However, the ground floor is required to be fit-out as an accessible sole-occupancy unit therefore a compliant accessway must be provided through the ground floor principal pedestrian entrance.
		It is recommended that a Disability Access Report, addressing AS1428 and D3 requirements, (construction of ramps, turning spaces, passing space and the like) be prepared by a suitable qualified disability access consultant.
Section E –	Services and Equipment	

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CLAUSE	REFERENCE	COMMENTS
Part E1 – Fi	re fighting equipment	
E1.1	-	-
E1.2	-	-
E1.3	Fire Hydrants	As the total floor area is <500m ² , fire hydrants are not required to be installed to serve this building.
E1.4	Hose Reels	N/A, no fire compartment is over 500m ²
E1.5	Sprinklers	N/A
E1.6	Portable Extinguishers	N/A Portable fire extinguishers are not required to be located within a <i>sole-occupancy unit</i> unless the <i>sole-occupancy unit</i> has a <i>floor area</i> greater than 500 m ² .
E1.7	Repealed	-
E1.8	Fire Control Centres	Not applicable
E1.9	Fire precautions during construction	In a building under construction- not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit.
E1.10	Provision for special hazards	Not applicable
Part E2 – Sr	noke Hazard Management	
E2.1	Application of Part	Noted
E2.2	General requirements (including Tables E2.2a & b)	Noted; The parts of the building must be provided with either; The Class 3 portion being provided with an automatic smoke detection and alarm system complying with Specification E2.2a. For the purposes of this provision, each sole-occupancy unit in a Class 2 or 3 building is treated as a separate fire compartment.
E2.3	Provision for special hazard	Not applicable
Part E3 – Li	ft Installations	
E3.1	Lift installations	N/A
Part E4 – V	isibility in an emergency, ex	kit signs and warning systems
E4.1	Repealed	-

CLAUSE	REFERENCE	COMMENTS
E4.2	Emergency Lighting	N/A, based upon the re-design, there are no common areas.
E4.5	Exit signs	N/A. Based upon the re-design, Exit signs are not applicable.
E4.6	Direction signs	N/A
E4.7	Class 2 and 3 Buildings and Class 4 parts exemptions	Noted
E4.8	Design and operation of exit signs	N/A
E4.9	Emergency warning and intercom systems	N/A
Section F –	Health and Amenity	
Part F1 – D	amp & Weatherproofing	
F1.1	Stormwater drainage	Stormwater drainage engineering details; where applicable, prepared by an appropriately qualified engineer are to be submitted prior to issue of the Construction Certificate and are to comply with AS 3500 & Council requirements.
F1.2	Repealed	-
F1.3	Repealed	-
F1.4	External above ground membranes	Waterproofing membranes for external above ground use must comply with AS 4654.1 and AS 4654.2.
F1.5	Roof coverings	Noted, sheet metal roofing to comply with AS 1562.1.
F1.6	Sarking	Sarking-type materials used for weatherproofing of roofs and walls to comply with AS/NZS 4200 Parts 1 and 2.
F1.7	Waterproofing of wet areas in buildings	Water proofing of wet areas to comply with the relevant parts of AS 3740.
F1.8	Repealed	-
F1.9	Damp-proofing	Damp-proofing to be provided in accordance with clause F1.9.
F1.10	Damp-proofing of floors on the ground.	If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with <u>AS 2870</u> , except damp-proofing need not be provided if the floor is the base of a stair, lift or similar shaft which is adequately drained by gravitation or mechanical means.

CLAUSE	REFERENCE	COMMENTS
F1.11	Provision of floor wastes	The floor of each bathroom and laundry located at any level above a sole-occupancy unit or public space must be graded to permit drainage to a floor waste.
F1.12	Sub-floor ventilation	Sub-floor ventilation to comply with F1.12.
F1.13	Glazed assemblies	Glazed assemblies in an external wall to comply with AS 2047 requirements for resistance to water penetration.
Part F2 – Sa	anitary & Other facilities	
F2.1	Facilities in residential buildings	<i>Plans indicate compliance</i> , each unit has a bath or shower; a closet pan and a wash basin.
F2.2	Calculation of number of occupants and fixtures	Noted
F2.3	Facilities in Class 3 to 9 Buildings, Table F2.3	Plans indicate compliance
F2.4	Facilities for people with disabilities	<i>To comply;</i> an accessible sanitary facility to be provided accessible SOU's within the ground floor unit.
F2.5	Construction of sanitary compartments	Complaint;
F2.6	Interpretation: urinals and wash basins	N/A
F2.7	Microbial control	Clause F2.7 does not apply in NSW.
F2.8	Waste management	N/A
F2.9	Accessible adult change facilities	N/A
Part F3 – Ro	oom Sizes	
F3.1	Height of rooms	Plans indicate compliance
Part F4 – Li	ght & Ventilation	
F4.1	Provision of Natural light	The plans indicate that the ground and first floor habitable rooms have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions that is more than the required 10% of the <i>floor area</i> of the room.
F4.2	Methods and extent of natural lighting	Based upon the submitted elevations and floor plans not less than 10% of the floor area of the bedrooms within each unit have been provided with natural lighting.

CLAUSE	REFERENCE	COMMENTS
F4.3	Natural light borrowed from adjoining room	Not applicable
F4.4	Artificial lighting	Artificial lighting to comply with AS/NZS 1680.0 and provided to stairways and passageways, and non-habitable rooms where natural lighting is insufficient.
F4.5	Ventilation of rooms	A habitable room, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have natural ventilation complying with F4.6; or a mechanical ventilation or air-conditioning system complying with AS 1668.2.
F4.6	Natural ventilation	If provided, natural ventilation must consist of permanent openings, windows, doors or other devices which can be opened:
		(a) with an aggregate opening or openable size not less than 5% of the floor area of the room required to be ventilated; and
		(b) open to—
		(i) suitably sized court, or space open to the sky; or
		(ii) an open verandan, carport, or the like; or
F4.7	Ventilation borrowed from adjoining rooms	Noted
F4.8	Restriction on position of water closets and urinals	Complies, however it is assumed (due to lack of natural light) that mechanical ventilation will be provided to all sanitary areas within the project.
F4.9	Airlocks	As above (F4.8)
F4.10	Repealed	-
F4.11	Carparks	N/A
F4.12	Kitchen local exhaust ventilation	N/A
Part F5 – Se	ound Transmission & Install	ation
F5.1	Application of Part	Noted; Acoustic engineer to confirm compliance prior to Occupation.
Part F6 – C	ondensation management	
F6.1	Application of Part	The deemed to satisfy only apply to a Class 2 building and a Class 4 part of a building; hence not this project.
Section G -	- Ancillary Provisions	
G1.1	Swimming pools	N/A
G1.2	Coolrooms, strongrooms etc.	N/A

CLAUSE	REFERENCE	COMMENTS
G1.101	Provision for cleaning of windows	N/A
G2	Heating Appliances	Not applicable to the proposed building works
G3	Atriums	N/A
Section I	Maintenance	Essential Fire Safety Measures must be maintained in accordance with the provisions of the Environmental Planning & Assessment Regulations 2000. Building owner/s to note post construction.
Section J	Energy Efficiency	Building fabric (where BCA NSW J1.1 applies), building sealing and services will need to conform with bca nsw parts J1, J2 and J3.

4.0 RECOMMENDED WORKS

The 'Deemed to Satisfy' (i.e. prescriptive) provisions have been recommended within this report. Where considered appropriate, possibility of an alternate, performance based solution (fire-engineered approach) may be considered by the Principal Certifying Authority in lei of these recommendations:

BCA matters raised within the proposed plans

Fire Hazard Properties (C1.10) -

All new surface finishes, assemblies and linings to comply with Specification C1.10 with regard to Fire Hazard Properties. Details of material including material test sheets should be provided to the Certifying Authority prior to the issue of a Construction Certificate.

The critical radiant flux (CRF in kW/m²) of the floor materials and floor coverings within the building is to be no greater than 2.2, material test sheets should be provided prior to occupation.

Bounding construction: Class 2, 3 and 4 buildings (C3.11) -

• The ground floor is recommended to be re-designed so that it is fire protected from the first floor. A redesign is recommended for the entry doorways. See below recommendation;



Openings for service installations (C3.15) -

To maintain the fire performance of building elements; Where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL or a resistance to the incipient spread of fire, that installation must comply with clause C3.15.

Columns protected with lightweight construction to achieve an FRL (C3.17) -

Columns protected by lightweight construction are to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire.

Specification C1.1 (Table 5) -

Cl. C1.5 - Based upon the entry 're-design' this building may be in Type C construction as each 'SOU' will have its own direct access to a road or open space. The proposed primary building elements should be examined by a qualified structural engineer to ensure that these elements achieve the acceptable FRL in accordance with table 5; Section C1.1, BCA.

 The complete floor / ceiling, between the two levels, including areas under the first floor stairway of the building are to be separated from each residence, by construction complying with Clause C2.9 BCA-

A floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or

Have an FRL of at least 30/30/30; or

Have a fire-protective covering on the underside of the floor, including beams incorporated in it, in the floor is combustible or of metal.

Certification attesting that a fire rated ceiling has been installed in accordance with AS 1530.4 and Specification C1.8 of Building Code of Australia 2019. Additionally, in relation to lighting, fire rated kits has been used throughout the ceiling.

Exit travel distances (D1.4) -

Re-design change is recommended, as shown below;

 The ground floor is recommended to be re-designed so that it is fire protected from the first floor. A redesign is recommended for the entry doorways. See below recommendation;



Travel via non-fire-isolated stairways or ramps (D2.8) -

 The space beneath the egress stairway must not be enclosed to form a cupboard or similar enclosed space unless –

The enclosing walls and ceilings have an FRL of not less than 60/60/60; and

Any access doorway to the enclosed space is fitted with a self-closing -/60/30 fire door.

This clause is particularly applicable to the storage area beneath the required exit stairway within the ground floor.



Width of stairway (D2.9) -

Based upon the proposed re-design, the stairway serving the first floor *does not* need to be 1m in width.



Balustrades and Parts of buildings to be accessible (D2.16) -

- Balustrades must be provided along balconies or the like if its level above the surface beneath is more than 1m. A balustrade compromises of a barrier 1m in height, with no more than 125mm openings within it.
- All open-able windows within the first floor of the building, are to incorporate minimum 865mm sills.
- Protection of openable bedroom windows where the lowest level of the window opening is less than 1.7m above the floor, a window opening cannot open further than 125mm.



Access for people with disabilities (D3) -

Based upon the proposed re-design there are no common areas, therefore a pedestrian entrance is not required to the upper level sole-occupancy unit.

However, the ground floor is required to be fit-out as an accessible sole-occupancy unit.

 It is recommended that a Disability Access Report, addressing AS1428 and D3 requirements, be prepared by a suitable qualified disability access consultant.

Smoke Hazard Management (Part E2) -

• Each level of the Farm Stay Accommodation is to be provided with an automatic smoke detection and alarm system, complying with Specification E2.2 and AS3786-2014.

Sound Transmission and Insulation. (Part F5) –

Ensure that sound transmission and insulation complies with Part F5 of the BCA;

Floor

(a) A floor in a building *required* to have an impact sound insulation rating must—

(i) have the *required* value for weighted normalised impact sound pressure level with spectrum adaptation term $(L_{n,w} + C_l)$ determined in accordance with AS/ISO 717.2 using results from laboratory measurements; or

(ii) comply with Specification F5.2.

(b) A wall in a building required to have an impact sound insulation rating must—

(i) for a Class 2 or 3 building be of discontinuous construction; and

(ii) for a Class 9c aged care building, must-

(A) for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or

(B) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Specification F5.5 than a wall listed in Table 2 of Specification F5.2.

(c) For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and

(i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and

(ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery.

(a) A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w} + C_{l}$ (impact) not more than 62 if it separates—

(i) sole-occupancy units; or

(ii) a *sole-occupancy unit* from a plant room, lift *shaft*, stairway, *public corridor*, public lobby or the like, or parts of a different classification.

(b) A floor in a Class 9c aged care building separating sole-occupancy units must have an R_w not less than 45.

Wall

(a) A wall in a Class 2 or 3 building must—

(i) have an R_w + C_{tr} (airborne) not less than 50, if it separates sole-occupancy units; and

(ii) have an R_w (airborne) not less than 50, if it separates a *sole-occupancy unit*from a plant room, lift *shaft*, stairway, *public corridor*, public lobby or the like, or parts of a different classification; and (iii) comply with F5.3(b) if it separates—

(A) a bathroom, *sanitary compartment*, laundry or kitchen in one *sole-occupancy unit* from a *habitable room* (other than a kitchen) in an adjoining unit; or

(B) a sole-occupancy unit from a plant room or lift shaft.

(b) A door may be incorporated in a wall in a Class 2 or 3 building that separates a *sole-occupancy unit* from a stairway, *public corridor*, public lobby or the like, provided the door assembly has an R_w not less than 30.

(c) A wall in a Class 9c aged care building must have an Rw not less than 45 if it separates-

(i) sole-occupancy units; or

(ii) a *sole-occupancy unit* from a kitchen, bathroom, *sanitary compartment* (not being an associated ensuite), laundry, plant room or utilities room.

(d) In addition to (c), a wall separating a *sole-occupancy unit* in a Class 9c *aged care building* from a kitchen or laundry must comply with F5.3(b).

(e) Where a wall required to have sound insulation has a floor above, the wall must continue to-

(i) the underside of the floor above; or

(ii) a ceiling that provides the sound insulation *required* for the wall.

(f) Where a wall required to have sound insulation has a roof above, the wall must continue to-

(i) the underside of the roof above; or

(ii) a ceiling that provides the sound insulation *required* for the wall.

Fire Safety Schedule -

An updated Fire Safety Schedule should be developed for the building and the fire safety measures contained within the Schedule should be maintained annually in the form of an Annual Fire Safety Statement, as required by the Environmental Planning & Assessment Act 1979. This statement should be displayed within the building.

5.0 CONCLUSION

This report has identified a number of matters in relation to the current level of fire and life safety, as well as matters concerning health and amenity in the proposed development, located at 13 Bungendore Street, Ingleside.

The primary purpose of this report is to identify by plan assessment the significant non-compliance matters in comparison to the current Deemed-to-Satisfy provisions of the BCA in relation to fire safety, which are addressed in the executive summary and in further detail in Section 3.0 and 4.0.

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Patrick Doherty A1 Accredited certifier; NSW Planning NSW Building Approvals

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FIRE SAFETY SCHEDULE (Clause 168 of the Environmental Planning and Assessment Regulation 2000).

Premises:

13 Bungendore Street, Ingleside

(two storey farm stay accommodation)

The following essential fire safety measures shall be implemented in the whole of the building premises and each of the fire safety measures must satisfy the standard of performance listed in the schedule which, for the purposes of Clause 168 of the Environmental Planning and Assessment Regulation 2000, is deemed to be the current fire safety schedule for the building.

SCHEDULE

Essential Fire and Other Safety Measures	Standard of Performance	Proposed
Smoke detectors and heat detectors	BCA Spec. E2.2 and AS 3786-2014	✓

Principal Certifying Authority: Accreditation Number: Address: Patrick Doherty BPB 0094 Suite 16 / 2-12 Glebe Point Road, Glebe

Signature:

Joler &

Date of Endorsement:

29 October 2019

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