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02/10/2024

Stanton Dahl Architects
P.O. Box 833,
Epping NSW1710
Attn: Mahi Lau

Dear Mahi,

Building Code of Australia 2022 (BCA) Capability Assessment
Property: 82 Regent Street, Moama NSW 2731
Project Number: GDL240437

This proposed development subject to this review, involves the conversion of existing Aged Care Building to Boarding House Accommodation. The proposal will include the separation of the existing building into 2 separate buildings (known as House A and B).

The purpose of this initial BCA Assessment is to provide preliminary feasibility advice in relation to the proposed change of use which will form a scope of works so that the buildings can be adapted for the proposed new uses as a Class 3 (Boarding House) to achieve compliance with the provisions of the National Construction Code 2022, Volume 1, Building Code of Australia, BCA Class 2 to 9 Buildings (BCA).

BCA 2022 Details:

	Existing Building	**House A & B – Change of Use**
Building Use:	Age-Care Building	Boarding House, Multipurpose Hall & Chapel
Building Classification:	Class 9c	Class 3, 5 & 9b
Type of Construction:	Type C (assume fire compartment < 3,000sqm).	Type C
Rise in Storeys:	1	1
BCA Defined Effective Height:	Less than 12m	Less than 12m

Definitions:

Class 9c **(Residential care building):**	A Class 3 or 9c building which is a place of residence where 10% or more of the persons who reside there need physical assistance in conducting their daily activities and to evacuate the building during an emergency.
Class 3 **(Boarding House):**	A Class 3 building is a residential building providing long-term or transient accommodation for a number of unrelated persons.

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Assessment of "Change inbuilding use"

Alteration and additions which **involve change of use** must satisfy the following under the Planning Legislation.

(a) 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.

(b) Category 1 fire safety provision that will apply to areas subject to a change of building use include E1P3 (fire hydrants), E1P4 (sprinklers), E2P2 (automatic fire detection and alarm system).

The change of use is a trigger for fire safety to be upgraded in affected part of the building. It is considered the following will need to be addressed to achieve compliance with the BCA.

Fire Protection and structural Adequacy	Existing building elements (external walls, firewalls, separating walls between units) being reviewed against the required FRL's for Class 3 & 9b for Type C Construction in accordance with Spec. 5, S5C24 of the BCA.	
Category 1 – fire safety measures	Fire Hydrants	Review the standard of installation for the fire hydrant system that serves the existing building, nominated as AS 2419.1 – 1994. This may require upgrade to the BCA 2022 and AS 2419.1-2021. **Hydraulic Consultant to review and confirm any upgrade required.**
	Sprinklers	The existing Class 9c (Age-Care Building) is served by a sprinkler system. A sprinkler system is required to serve a building used as a **Class 3 residential care building**. Further advice to establish the particular use of the building (i.e. residential care **or** boarding house). **Note – a Class 3 (Boarding House) is not required to be protected with a sprinkler system.**
	Smoke detection and alarm system	A Class 3 building must be provided with smoke alarms within each sole occupancy unit with a smoke detection and alarm system to serve common areas. This may require the current AS 1670.1-2015 smoke detection and alarm system to be upgraded to satisfy BCA 2022 and to comply **AS1670.1- 2018**. Fire Services Consultant to review and provide further advice in relation to any potential fire safety upgrade to the current systems.
	Automatic Shutdown of Mechanical Ventilation System	Class 9b - Shutdown of Air Handling system: Class 9b portions will require Automatic shutdown of mechanical ventilation system in accordance with NSW Table E2.2a and Spec E2.2a (clause 6).

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BCA PROVISIONS

The following is a clause-by-clause assessment of the architectural drawings in relation to the conversion of existing Aged Care Building to Boarding House Accommodation against the deemed-to-satisfy provisions of the BCA 2022.

Key of Figures:

✓	The building as designed / indicated complies with this clause.
X	The building does not comply with this clause.
?	Further information or documentation required to clarify compliance.
CR	Design statement (or other means) required from appropriately qualified designer/person that the building will comply with this clause at the design stage &/OR installation certification will be required on completion of the project from the relevant installer or engaged consultant.
N/A	This clause is not applicable to this project.
PS	Performance Solution using Performance Requirements has been utilised/proposed to address this item – see separate report for details of requirements.
Noted	This clause is for information of the Design Team / Builder and if applicable to be complied with.

Note re FRL's : Where the BCA / NCC requires an FRL, unless noted otherwise the fire rating is required to be in both directions of fire i.e. inside and outside for example, and not one way fire rated, where one way fire rating is allowed the BCA identifies that, and not the other way around.

Part A6 - Building Classification		
Clause	**Reference**	**Comment**
A6G1	**Determining a building classification**	
Noted	(1) The classification of a building or part of a building is determined by the purpose for which it is designed, constructed or adapted to be used. (2) Each part of a building must be classified according to its purpose and comply with all the appropriate requirements for its classification. (3) A room that contains a mechanical, thermal or electrical facility or the like that serves the building must have the same classification as the major part or principal use of the building or *fire compartment* in which it is situated. (4) Unless another classification is more suitable an *occupiable outdoor area* must have the same classification as the part of the building to which it is associated.	The proposed development compromises a building Class 3, 5 & 9b

A6G4	**Class 3 buildings**	
Noted	(1) A **Class 3 building** is a residential building providing long-term or transient accommodation for a number of unrelated persons. (2) Class 3 buildings include the following: **(a) A boarding house, guest house, hostel, lodging house or backpacker accommodation.** (b) A residential part of a hotel or motel. (c) A residential part of a *school*. (d) Accommodation for the aged, children, or people with disability. (e) A residential part of a *health-care building* which accommodates members of staff. (f) A residential part of a *detention centre*. (g) A *residential care building*	The existing Class 9c (age-care building) will be re-adapted as a Class 3 (Boarding House).
A6G6	**Class 5 buildings**	
Noted	A Class 5 building is an office building used for professional or commercial purposes.	The administration areas – Class 5
A6G10	**Class 9 buildings**	
Noted	(1) A Class 9 building is a building of a public nature. (2) Class 9 includes the following sub-classifications: (a) Class 9a — a *health-care building* including any parts of the building set aside as laboratories, and includes a *health-care building* used as a *residential care building*. (b) **Class 9b — an *assembly building*** including a trade workshop or laboratory in a primary or secondary *school*. (c) Class 9c — a *residential care building.* **Note**: Class 9b Entertainment Venues in NSW attract additional BCA Requirements	The Multi-purpose Hall and Chapel will be assessed as Class 9b.
A6G12	**Multiple classification**	
Noted	A building (or part of a building) may be designed, constructed or adapted for multiple purposes and have more than one classification.	Considered

Section C: Fire Provisions

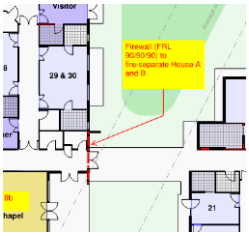
Part C1 – Fire Resistance Performance Requirements

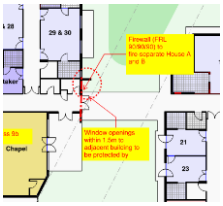
Clause	Reference	Comment
Part C2 - Fire resistance and stability		
Clause	**Reference**	**Comment**
C2D2	**Type of construction required**	
✓	(1) The minimum Type of *fire-resisting construction* of a building must be determined in accordance with Table C2D2, except as allowed for— (a) certain Class 2, 3 or 9c buildings in C2D6; and (b) a Class 4 part of a building located on the top *storey* in C2D4(2); and (c) *open spectator stands* and indoor sports stadiums in C2D8. (2) Each building element must comply with Specification 5 as applicable Table C2D2: Type of construction required	Type C Construction is required.
C2D3	**Calculation of rise in storeys**	

Rise in storeys	Class of building 2, 3, 9	Class of building 5, 6, 7, 8
4 or more	A	A
3	A	B
2	B	C
1	C	C

✓	(1) The *rise in storeys* is the sum of the greatest number of *storeys* at any part of the *external walls* of the building and any *storeys* within the roof space— (a) above the finished ground next to that part; or (b) if part of the *external wall* is on the boundary of the allotment, above the natural ground level at the relevant part of the boundary. (2) A *storey* is not counted if— (a) it is situated at the top of the building and contains only heating, ventilating or lift equipment, water tanks, or similar service units or equipment; or (b) it is situated partly below the finished ground and the underside of the ceiling is not more than 1 m above the average finished level of the ground at the *external wall*, or if the *external wall* is more than 12 m long, the average for the 12 m part where the ground is lowest. (3) In a Class 7 or 8 building, a *storey* that has an average internal height of more than 6 m is counted as— (a) one *storey* if it is the only *storey* above the ground; or (b) 2 *storeys* in any other case. (4) For the purposes of calculating the *rise in storeys* of a building— (a) a *mezzanine* is regarded as a *storey* in that part of the building in which it is situated if its *floor area* is more than 200 m^2 or more than ⅓ of the *floor area* of the room, whichever is the lesser; and (b) two or more *mezzanines* are regarded as a *storey* in that part of the building in which they are situated if they are at or near the same level and have an aggregate *floor area* more than 200 m^2 or more than ⅓ of the *floor area* of the room, whichever is the lesser	The building has a rise in storeys of one (1) in accordance with the BCA definition.
C2D4	**Buildings of multiple classification**	
Noted	(1) In a building of multiple classifications, the Type of construction *required* for the building is the most *fire-resisting* Type resulting from the application of Table C2D2 on the basis that the classification applying to the top *storey* applies to all *storeys*. (2) In a building containing a Class 4 part on the top *storey*, for the purpose of (1), the classification applying to the top *storey* must be— (a) when the Class 4 part occupies the whole of the top *storey*, the classification applicable to the next highest *storey*; or (b) when the Class 4 part occupies part of the top *storey*, the classification applicable to the adjacent part.	Caretakers and staff Sleepover rooms will be assessed as Class 3.
C2D7	**Class 4 parts of buildings**	
Noted	For the Type of construction *required* by C2D4, a Class 4 part of a building requires the same FRL for building elements and the same construction separating the Class 4 part from the remainder of the building as a Class 2 part in the same Type of construction.	

<table>
<tr><td>C2D9</td><td colspan="2">Lightweight construction</td></tr>
<tr><td>CR</td><td>(1) Lightweight construction must comply with Specification 6 if it is used in a wall system—
(a) that is required to have an FRL; or
(b) for a lift shaft, stair shaft or service shaft or an external wall bounding a public corridor including a non fire- isolated passageway or non fire-isolated ramp, in a spectator stand, sports stadium, cinema or theatre, railway station, bus station or airport terminal.
(2) If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if—
(a) 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
(b) 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</td><td>Compliance required where lightweight fire rating is proposed, examples include fire rated plaster board, fire rated sprays, fire rated boards or the like (anything other than Concrete or Masonry for example).</td></tr>
<tr><td colspan="3">Part C3 – Compartmentation and Separation</td></tr>
<tr><td>Clause</td><td>Reference</td><td>Comment</td></tr>
<tr><td>C3D3</td><td colspan="2">General floor area and volume limitations</td></tr>
<tr><td>CR</td><td>(1) The size of any fire compartment or atrium in a Class 5, 6, 7, 8 or 9 building must not exceed the relevant maximum floor area nor the relevant maximum volume set out in Table C3D3 and C3D6 except as permitted in C3D4.
(2) A part of a building which contains only heating, ventilating, or lift equipment, water tanks, or similar service units is not counted in the floor area or volume of a fire compartment or atrium if it is situated at the top of the building.
(3) In a building containing an atrium, the part of the atrium well bounded by the perimeter of the openings in the floors and extending from the level of the first floor above the atrium floor to the roof covering is not counted in the volume of the atrium for the purposes of this clause.
Table C3D3: maximum size of fire compartments or atria:
<table>
<tr><th>Classification</th><th>Type A construction</th><th>Type B construction</th><th>Type C construction</th></tr>
<tr><td rowspan="2">5, 9b or 9c</td><td>Max floor area - 8 000 m^2</td><td>Max floor area - 5 500 m^2</td><td>Max floor area - 3 000 m^2</td></tr>
<tr><td>Max volume - 48 000 m^3</td><td>Max volume - 33 000 m^3</td><td>Max volume – 18 000 m^3</td></tr>
</table></td><td>The building is Type C Construction as it is under the size limitation from Table C2.2.</td></tr>
</table>

C3D8	Separation by fire walls	
?	(1) Construction — A *fire wall* must be constructed in accordance with the following: (a) The *fire wall* has the relevant FRL prescribed by Specification 5 for each of the adjoining parts, and if these are different, the greater FRL, except where S5C18(c), S5C21(3) and S5C24(3) permit a lower FRL on the *carpark* side (b) Any openings in a *fire wall* must not reduce the FRL *required* by Specification 5 for the *fire wall*, except where permitted by the *Deemed-to-Satisfy Provisions* of Part C4 (c) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or *sarking-type material*, must not pass through or cross the *fire wall* unless the *required fire-resisting* performance of the *fire wall* is maintained. **(2) Separation of buildings — A part of a building separated from the remainder of the building by a *fire wall* may be treated as a separate building for the purposes of the *Deemed-to-Satisfy Provisions* of Sections C, D and E if it is constructed in accordance with (1) and the following:** (a) The *fire wall* extends through all *storeys* and spaces in the nature of *storeys* that are common to that part and any adjoining part of the building (b) The *fire wall* is carried through to the underside of the roof covering (c) Where the roof of one of the adjoining parts is lower than the roof of the other part, the *fire wall* extends to the underside of— (i) the covering of the higher roof, or not less than 6 m above the covering of the lower roof; or (ii) the lower roof if it has an FRL not less than that of the *fire wall* and no openings closer than 3 m to any wall above the lower roof; or (iii) the lower roof if its covering is *non-combustible* and the lower part has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 (3) Separation of *fire compartments* — A part of a building separated from the remainder of the building by a *fire wall* may be treated as a separate *fire compartment* if it is constructed in accordance with (a) and the *fire wall* extends to the underside of— (a) a floor having an FRL *required* for a *fire wall*; or (b) the roof covering.	The development brief is for House A and B to be separate buildings.  Firewall will be required to separate House A and B into 2 separate buildings.

C3D15	**Public corridors in Class 2 and 3 buildings**	
?	In a Class 2 or 3 building, a *public corridor*, if more than 40 m in length, must be divided at intervals of not more than 40 m with smoke-proof walls complying with S11C2.	Details of Smoke-proof doors/walls to be provided in the corridors over 40m length on the design.
Part C4 – Protection of Openings		
Clause	**Reference**	**Comment**
C4D3	**Protection of openings in external walls**	
?	(1) Subject to (2), openings in an *external wall* that is *required* to have an FRL must be protected in accordance with C4D5, and if wall-wetting sprinklers are used they must be located externally (2) The requirements of (1) only apply if the distance between the opening and the *fire-source feature* to which it is exposed is less than— (a) 3 m from a side or rear boundary of the allotment; or (b) 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a *storey* at or near ground level; or **(c) 6 m from another building on the allotment that is not Class 10.** (3) Openings in an *external wall* that is *required* to have an FRL, if *required* to be protected under (1), must not occupy more than 1/3 of the area of the *external wall* of the *storey* in which it is located unless they are in a Class 9b building used as an *open spectator stand.*	 Protection to openings is required in external walls where any openings are exposed to adjoining building situated within a radius of 1.5m.

C4D6	Doorways in fire walls	
?	(1) The aggregate width of openings for doorways in a *fire wall*, which are not part of a *horizontal exit*, must not exceed ½ of the length of the *fire wall*, and each doorway must be protected by— (a) 2 fire doors or fire shutters, one on each side of the doorway, each of which has an FRL of not less than ½ that *required* by Specification 5 for the *fire wall* except that each door or shutter must have an *insulation* level of at least 30; or (b) a fire door on one side and a fire shutter on the other side of the doorway, each of which complies with (a); or (c) a single fire door or fire shutter which has an FRL of not less than that *required* by Specification 5 for the *fire wall* except that each door or shutter must have an *insulation* level of at least 30. (2) A fire door or fire shutter *required* by (1)(a), (b) or (c) must be *self-closing*, or *automatic* closing in accordance with (3) and (4) (3) The *automatic* closing operation *required* by (2) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located on each side of the *fire wall* not more than 1.5 m horizontal distance from the opening (4) Where any other *required* suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system in either *fire compartment* separated by the *fire wall* must also initiate the *automatic* closing operation.	Fire doors are required within the fire wall to achieve an FRL -/90/30.
NSW C4D12	**Bounding construction: Class 2 and 3 buildings and Class 4 parts**	

?	(1) A doorway in a **Class 2 or 3** building must be protected if it provides access from a *sole-occupancy unit* to— **(a) a *public corridor*, public lobby, or the like; or** (b) **a room not within a *sole-occupancy unit*;** or (c) the landing of an internal non *fire-isolated stairway* that serves as a *required exit*; or (d) another *sole-occupancy unit*. (2) A doorway in a **Class 2 or 3** building must be protected if it provides access from a room not within a *sole-occupancy unit* to— (a) a *public corridor*, public lobby, or the like; or (b) the landing of an internal non *fire-isolated stairway* that serves as a *required exit*. (3) A doorway in a Class 4 part of a building must be protected if it provides access to any other internal part of the building. (4) Except as provided in NSW C4D12 (5), protection for a doorway required under 1) 2) or 3) must be at least— (a) in a building of Type A construction — a *self-closing* –/60/30 fire door; and **(b) in a building of Type B or C construction — a *self-closing*, tight fitting, solid core door, not less than 35 mm thick.** (5) In a Class 3 building used as a *residential care building* protected with a sprinkler system complying with Specification 17, protection for a doorway must be at least— (a) a tight fitting, solid core door not less than 35 mm thick that is self-closing; or (b) fitted with a free-arm closing device which closes the door or causes the door to remain closed (without preventing manual re-opening) upon the detection of smoke caused by a smoke detector located within the room. (6) Other openings in *internal walls* which are *required* to have an FRL with respect to *integrity* and *insulation* must not reduce the *fire-resisting* performance of the wall. (7) A door *required* by (4) or (5) may be *automatic*-closing in accordance with the following: (a) The *automatic*-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located not more than 1.5 m horizontal distance from the approach side of the doorway. (b) Where any other *required* suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system must also initiate the *automatic*-closing operation.	Investigate if existing doorways within Class 3 portions satisfy (4) (b).

Specification 5 – Fire Resisting Construction		
Clause	**Reference**	**Comment**
S5C1	**Scope**	
Noted	This Specification contains requirements for the *fire-resisting construction* of building elements	
S5C10	**Residential care building: Concession**	
Noted	(1) In a Class 3 building protected with a sprinkler system complying with Specification 17 and used as a *residential care building*, any FRL criterion prescribed in Tables S5C11a to S5C11g, S5C21a to S5C21f or S5C24a to S5C24e— (a) for any floor and any *loadbearing* wall, may be reduced to 60, except any FRL criterion of 90 for an *external wall* must be maintained when tested from the outside; and (b) for any non-*loadbearing internal wall*, need not apply if— (i) it is lined on each side with standard grade plasterboard not less than 13 mm thick or similar *non- combustible* material; and (ii) it extends— (A) to the underside of the floor next above; or (B) to the underside of a ceiling lined with standard grade plasterboard not less than 13 mm thick or a material with at least an equivalent level of fire protection; or (C) to the underside of a *non-combustible* roof covering; and (iii) any insulation installed in the cavity of the wall is *non-combustible*; and (iv) any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material. (2) The concession described at (1) does not apply to *fire-protected timber* building elements	It is assumed these concessions can be applied to the existing Class 9c (residential care building). However, with the change of use to Class 3 (boarding house) this concession cannot be applied. **<u>Therefore – internal walls that separate each SOU must comply with Table S5C24d and have an (FRL 60/60/60).</u>**
S5C24	**Fire-resistance of building elements – Type C Construction**	

X	(1) In a building *required* to be of Type C construction— (a) a building element listed in Tables S5C24a to S5C24e and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and (b) an *external wall* that is *required* by Tables S5C24a to S5C24e to have an FRL need only be tested from the outside to satisfy the requirement; and (c) a *fire wall* or an *internal wall* bounding a *sole-occupancy unit* or separating adjoining units must comply with Specification 6 if it is of *lightweight construction* and is *required* to have an FRL; and (d) in a Class 2 or 3 building, an internal *wall* which is *required* by Tables S5C24a to S5C24e to have an FRL must extend— (i) to the underside of the floor next above if that floor has an FRL of at least 30/30/30 or a *fire-protective covering* on the underside of the floor; or **(ii) to the underside of a ceiling having a *resistance to the incipient spread of fire* to the space above itself of not less than 60 minutes; or** **(iii) to the underside of the roof covering if it is *non-combustible*, and except for roof battens with dimensions of 75 mm x 50 mm or less or *sarking-type material*, must not be crossed by timber or other *combustible* building elements; or** (iv) 450 mm above the roof covering if it is *combustible*; and (2) For the purposes of Table S5C24a and Table S5C24b, *external wall* includes any column and other building element incorporated within it) or other external building element (3) For building elements in a *carpark* as described in (1) and (2), the following minimum FRLs are applicable: (a) *External walls:* (i) Less than 1.5 m from a *fire-source feature* to which it is exposed: (A) *Loadbearing*: 60/60/60 (B) Non-*loadbearing*: –/60/60 (ii) 1.5 m or more from a *fire-source feature* to which it is exposed: –/–/–. (b) *Internal walls*: –/–/– (c) *Fire walls*: (i) From the direction used as a *carpark*: 60/60/60 (ii) From the direction not used as a *carpark*: 90/90/90 (d) Columns: (i) Steel column less than 1.5 m from a *fire-source feature*— (A) 60/–/–; or (B) ESA/M not greater than 26m^2/tonne. (ii) Any other column not less than 1.5 m from a *fire-source feature*: 60/–/–. (iii) Any other column not covered by (i) or (ii): –/–/–. (e) Beams:	The building elements (external walls, firewalls and internal walls) being reviewed against the required FRL's applicable for a Class 3 building. Any departures from these provisions may be able to be address by a performance solution from a fire engineer based upon a sprinkler system provided throughout the building.

(i) Steel floor beam in continuous contact with a concrete floor slab:

(A) 60/–/–; or

(B) 60/–/–.

(ii) Any other beam: –/–/–.

(f) Roof, floor slab and vehicle ramp: –/–/–.

(4) For the purposes of (3), ESA/M means the ratio of exposed surface area to mass per unit length.

Table S5C24a: Type C construction: FRL of parts of external walls

Distance from a *fire-source feature*	FRL (in minutes): Structural adequacy/ Integrity / Insulation			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	90/90/90	90/90/90	90/90/90	90/90/90
1.5 m less than 3 m	–/–/–	60/60/60	60/60/60	60/60/60
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–

Table S5C24b: Type C construction: FRL of external columns not incorporated into an external wall

Distance from a *fire-source feature*	FRL (in minutes): Structural adequacy/ Integrity / Insulation			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	90/–/–	90/–/–	90/–/–	90/–/–
1.5 m less than 3 m	–/–/–	60/–/–	60/–/–	60/–/–
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–

Table S5C24c: Type C construction: FRL of common walls and fire walls

Wall Type	FRL (in minutes): Structural adequacy/ Integrity / Insulation			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Loadbearing or Non-loadbearing	90/90/90	90/90/90	90/90/90	90/90/90

Table S5C24d: Type C construction: FRL of internal walls

Location	FRL (in minutes): Structural adequacy/ Integrity / Insulation			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Bounding *public corridors*, public lobbies and the like	60/60/60	–/–/–	–/–/–	–/–/–
Between or bounding *sole-occupancy units*	60/60/60	–/–/–	–/–/–	–/–/–
Bounding a stair if *required* to be rated	60/60/60	60/60/60	60/60/60	60/60/60

Table S5C24e: Type C construction: FRL of roof

Location	FRL (in minutes): Structural adequacy/ Integrity / Insulation			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Roofs	–/–/–	–/–/–	–/–/–	–/–/–

Specification 11 – Smoke Proof Walls in Health Care and Aged Building

Clause	Reference	Comment
S11C1	**Scope**	
Noted	(1) This Specification sets out requirements for the construction of smoke-proof walls in Class 9a *health-care buildings* and Class 9c buildings. (2) Smoke proof walls *required* to have an FRL are to be in accordance with A5G4	Noted

S11C3	**Class 9c aged care buildings**	
?	Smoke-proof walls *required* by C3D6 in Class 9c buildings must comply with the following: (a) The wall may be lined on one side only. (b) Linings on the wall must be *non-combustible* and extend to the underside of— (i) the floor above; or (ii) a *non-combustible* roof covering; or (iii) a flush plasterboard ceiling lined with 13 mm standard grade plasterboard or a *fire-protective covering*, with all penetrations sealed against the free passage of smoke. (c) If plasterboard is used in the lining on a wall, it must be a minimum of 13 mm standard grade plasterboard. (d) Not incorporate any glazed areas unless the glass is safety glass as defined in AS 1288. (e) Only have doorways which are fitted with smoke doors complying with Specification 12. (f) Have all openings around penetrations and the junctions of the smoke-proof wall and the remainder of the building stopped with *non-combustible* material to prevent the free passage of smoke. (g) Incorporate smoke dampers where air-handling ducts penetrate the wall unless the duct forms part of a smoke hazard management system *required* to continue air movement through the duct during a fire	It is assumed the existing building is separated into smoke compartments. Class 3 building requires the public corridors to be separated by smoke proof walls and doorways under BCA Clause C3D15.
S11C4	**Doorways in smoke-proof walls**	
?	A door *required* by C3D6 or this Specification to be smoke-proof or have an FRL, other than one that serves a *fire compartment* provided with a zone pressurisation system in accordance with AS 1668.1, must provide a smoke reservoir by not extending within 400 mm of the underside of— (a) a roof covering; or (b) the floor above; or (c) an imperforate false ceiling that will prevent the free passage of smoke	Refer to BCA Clause C3D15.

Specification 12 – Fire Doors, Smoke Doors, Fire Windows and Shutters		
Clause	**Reference**	**Comment**
S12C1	**Scope**	
Noted	This Specification sets out requirements for the construction of fire doors, smoke doors, fire *windows* and fire shutters	Noted
S12C2	**Fire Doors**	
?	A *required* fire door must— (a) comply with AS 1905.1; and (b) not fail by radiation through any glazed part during the period specified for *integrity* in the *required* FRL	Fire doors required with firewalls to separate House A and B.
S12C3	**General requirements for smoke doors**	
?	Smoke doors must be constructed so that smoke will not pass from one side of the doorway to the other and, if they are glazed, there is minimal danger of a person being injured by accidentally walking into them.	Class 3 buildings require smoke doors along public corridors in accordance with BCA Clause C3D15.
S12C4	**Construction Deemed-to-Satisfy**	
Noted	A smoke door of one or two leaves satisfies S12C3 if it is constructed as follows: (a) The leaves are side-hung to swing— (i) in the direction of egress; or (ii) in both directions. (b) The leaves are solid-core and at least 35 mm thick or are capable of resisting smoke at 200°C for 30 minutes. (c) The leaves are fitted with smoke seals. (d) The leaves— (i) are normally in the closed position; or (ii) operate such that— (A) they are closed *automatically* with the *automatic* closing operation initiated by smoke detectors, installed in accordance with the relevant provisions of AS 1670.1, located on each side of the doorway not more than 1.5 m horizontal distance from the doorway; and (B) in the event of power failure to the door, they will fail-safe in the closed position. (e) The leaves return to the fully closed position after each manual opening. (f) Any glazing incorporated in the door complies with AS 1288. (g) If a glazed panel is capable of being mistaken for an unobstructed *exit*, the presence of the glass must be identified by an opaque mid-height band, mid-rail, crash-bar or other opaque construction	

Specification 11 – Smoke Proof Walls in Health Care and Aged Building		
Clause	**Reference**	**Comment**
S11C1	**Scope**	
Noted	(3) This Specification sets out requirements for the construction of smoke-proof walls in Class 9a *health-care buildings* and Class 9c buildings. (4) Smoke proof walls *required* to have an FRL are to be in accordance with A5G4	Noted
S11C3	**Class 9c aged care buildings**	
Noted	Smoke-proof walls *required* by C3D6 in Class 9c buildings must comply with the following: (h) The wall may be lined on one side only. (i) Linings on the wall must be *non-combustible* and extend to the underside of— (i) the floor above; or (ii) a *non-combustible* roof covering; or (iii) a flush plasterboard ceiling lined with 13 mm standard grade plasterboard or a *fire-protective covering*, with all penetrations sealed against the free passage of smoke. (j) If plasterboard is used in the lining on a wall, it must be a minimum of 13 mm standard grade plasterboard. (k) Not incorporate any glazed areas unless the glass is safety glass as defined in AS 1288. (l) Only have doorways which are fitted with smoke doors complying with Specification 12. (m) Have all openings around penetrations and the junctions of the smoke-proof wall and the remainder of the building stopped with *non-combustible* material to prevent the free passage of smoke. (n) Incorporate smoke dampers where air-handling ducts penetrate the wall unless the duct forms part of a smoke hazard management system *required* to continue air movement through the duct during a fire	It is assumed the existing building is separated into smoke compartments. Class 3 building requires the public corridors to be separated by smoke proof walls and doorways under BCA Clause C3D15.

S11C4	**Doorways in smoke-proof walls**	
Noted	A door *required* by C3D6 or this Specification to be smoke-proof or have an FRL, other than one that serves a *fire compartment* provided with a zone pressurisation system in accordance with AS 1668.1, must provide a smoke reservoir by not extending within 400 mm of the underside of— (d) a roof covering; or (e) the floor above; or (f) an imperforate false ceiling that will prevent the free passage of smoke	Class 3 buildings require smoke doors along public corridors in accordance with BCA Clause C3D15.

Section D: Access and Egress

Part D2 – Provision for Escape

Clause	Reference	Comment
D2D2	**Application of Part**	
Noted	The *Deemed-to-Satisfy Provisions* of this Part do not apply to the internal parts of a *sole-occupancy unit* in a Class 2 or 3 building or a Class 4 part of a building	
D2D3	**Number of exits required**	
✓	(1) All buildings — Every building must have at least one *exit* from each*storey* (2) Class 2 to 8 buildings — (a) In addition to any *horizontal exit*, not less than 2 *exits* must be provided from the following: (i) Each *storey* if the building has an *effective height* of more than 25 m. (ii) A Class 2 or 3 building subject to C2D6. (3) Basements — In addition to any *horizontal exit*, not less than 2 *exits* must be provided from any *storey* if egress from that *storey* involves a vertical rise within the building of more than 1.5 m, unless— (a) the *floor area* of the *storey* is not more than 50 m²; and (b) the distance of travel from any point on the floor to a single *exit* is not more than 20 m	Compliance is achieved.
D2D5	**Exit travel distances**	

?	(1) Class 2 and 3 buildings — (a) The entrance doorway of any *sole-occupancy unit* must be not more than— (i) 6 m from an exit or from a point from which travel in different directions to 2 exits is available; or (ii) 20 m from a single exit serving the storey at the level of egress to a road or open space; and (b) no point on the floor of a room which is not in a *sole-occupancy unit* must be more than 20 m from an *exit* or from a point at which travel in different directions to 2 *exits* is available. Note: Depending on the type of sprinklers system certain Class 2 or 3 buildings under 25m in *effective height* get increased travel distances in Clause S18C4 of the BCA concessions. (2) Class 4 parts of a building — The entrance doorway to any Class 4 part of a building must be not more than 6 m from an *exit* or a point from which travel in different directions to 2 *exits* is available. (3) Class 5, 6, 7, 8 or 9 buildings — Subject to (4), (5) and (6)— (a) no point on a floor must be more than 20 m 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 40 m; and (b) in a Class 5 or 6 building, the distance to a single *exit* serving a *storey* at the level of access to a road or *open space* may be increased to 30 m. (4) Class 9a buildings — In a *patient care area* in a Class 9a building— (a) no point on the floor must be more than 12 m from a point from which travel in different directions to 2 of the *required exits* is available; and (b) the maximum distance to one of those *exits* must not be more than 30 m from the starting point (5) Open spectator stands — The distance of travel to an *exit* in a Class 9b building used as an *open spectator stand* must be not more than 60 m. (6) Assembly buildings — In a Class 9b building other than a *school* or *early childhood centre*, the distance to one of the *exits* may be 60 m if— (a) the path of travel from the room concerned to that *exit* is through another area which is a corridor, hallway, lobby ramp or other circulation space; and (b) the room is smoke-separated from the circulation space by construction having an FRL of not less than 60/60/60 with every doorway in that construction protected by a tight fitting, *self-closing*, solid-core door not less than 35 mm thick; and (c) the maximum distance of travel does not exceed 40 m within the room and 20 m from the doorway to the room	**Refer to markup egress assessment.** **House A and B have been assessed as separate buildings. Consequently, additional exit doorway will be required to the link between House A and B to provide a point of choice to alternative exits.** **Note**: Depending on the type of sprinklers system selected certain Class 2 or 3 buildings under 25m in *effective height* get increased concessions for travel distances and other requirements in Clause S18C4 of the BCA concessions.

	through the circulation space to the *exit.*	
D2D6	**Distance between alternative exits**	
?	*Exits* that are *required* as alternative means of egress must be— (a) distributed as uniformly as practicable within or around the *storey* served and in positions where unobstructed access to at least 2 *exits* is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— (i) in a Class 2 or 3 building — 45 m apart; or (ii) in a Class 9a *health-care building*, if such *required exit* serves a *patient care area* — 45 m apart; or (iii) in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart	Refer to markup egress assessment. House A and B have been assessed as separate buildings. Consequently, additional exit doorway will be required to House A and B to provide alternative means of egress not more than 45m apart.
D2D11	**Determination and measurement of exits and paths of travel to exits**	
Noted	For the purposes of D2D7 to D2D10 the following apply: (a) The *required* width of a stairway or ramp in a *required exit* or path of travel to an *exit* must— (i) be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and (ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing. (b) To determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D2D18	

NSW D2D15	Discharge from exits	
?	(1) 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. (2) If a *required exit* leads to an *open space*, the path of travel to the road must have an unobstructed width throughout of not less than— (a) the minimum width of the *required exit*; or (b) 1 m, whichever is the greater. (3) If an *exit* discharges to *open space* that is at a different level than the public road to which it is connected, the path of travel to the road must be by— (a) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if *required* by the *Deemed-to-Satisfy Provisions* of Part D4; or (b) except if the *exit* is from a Class 9a building, a stairway complying with the *Deemed-to-Satisfy Provisions* of the BCA. (4) The discharge point of alternative *exits* must be located as far apart as practical. (5) In a Class 9b building which is an *open spectator stand* that accommodates more than 500 persons, a *required* stairway or *required* ramp must not discharge to the ground in front of the stand. (6) In a Class 9b building used as an *entertainment venue*, at least half of the required number of *exits* from each storey or mezzanine, and at least half of the aggregate width of such exits must discharge otherwise than through the main entrance, or the area immediately adjacent to the main entrance to the building. (7) The number of persons accommodated must be calculated according to D2D18	Refer to markup egress assessment. Provision being made for all weather path of travel from the point of discharge from required exits which connect with the public roadway.

Part D4 – Access for People with Disabilities		
Clause	**Reference**	**Comment**
D4D1	**Deemed-to-Satisfy Provisions**	
D4D2	**General building access requirements**	
?	a. Buildings and parts of buildings must be *accessible* as *required* by this clause, unless exempted by D4D5. b. A boarding house, bed and breakfast, guest house, hostel or the like, other than those described in (a) — to and within— i. 1 bedroom and associated sanitary facilities; and ii. not less than 1 of each type of room or space for use in common by the residents or guests, including a cooking facility, sauna, gymnasium, swimming pool, laundry, games room, eating area, or the like; and iii. rooms or spaces for use in common by all residents on a floor to which access by way of a ramp complying with AS 1428.1 or a passenger lift is provided. c. For a Class 3 building, access requirements are as follows: a. Common areas: I. From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level. II. To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunch room, lounge room, or the like. III. Where a ramp complying with AS 1428.1 or a passenger lift is installed— a. to the entrance doorway of each sole-occupancy unit; and b. to and within rooms or spaces for use in common by the residents. IV. The requirements of (iii) only apply where the space referred to in (A) and (B) are located on the levels served by the lift or ramp. b. To and within sole-occupancy units — in accordance with Table D4D2b. (6)For Class 5, 6, 7b, 8 and 9a buildings, access must be provided to and within all areas normally used by the occupants. (Sole-occupancy units — to and within a number of sole-occupancy units determined in accordance with Table D4D2b.	Based upon 30 SOU for House A & B – at least 2 SOU within House A & B are required to be accessible. These are the same provisions that also apply to a Class 9c building.

D4D3	Access to buildings	
?	1. An *accessway* must be provided to a building *required* to be*accessible*— (a) from the main points of a pedestrian entry at the allotment boundary; and (b) from another accessible building connected by a pedestrian link; and (c) from any required accessible carparking space on the allotment. 2. In a building *required* to be *accessible*, an *accessway* must be provided through the principal pedestrian entrance, and— (a) through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and (b) in a building with a total *floor area* more than 500 m^2, a pedestrian entrance which is not *accessible* must not be located more than 50 m from an *accessible* pedestrian entrance, (c) except for pedestrian entrances serving only areas exempted by D4D5	Accessibility Consultant to review the accessibility requirement applicable to a Class 3 building.

Section E: Services and Equipment		
Part E1 – Fire Fighting Equipment		
Clause	**Reference**	**Comment**
Deemed-to-satisfy Provisions		
?	**Clause E1D2 – Fire Hydrants** (1) A fire hydrant system must be provided to serve a building— (a) having a total *floor area* greater than 500 m^2; and (b) where a *fire brigade* is— (i) no more than 50 km from the building as measured along roads; and (ii) equipped with equipment capable of utilising a fire hydrant. (2) The fire hydrant system must be installed in accordance with AS 2419.1-2021.	Review the standard of installation for the existing fire hydrant system **(AS 2419.1-1994)** that serves the existing building. This may require upgrade to the BCA 2022 and AS 2419.1-2021. Hydraulic Consultant to review and confirm any upgrade required from current **AS 2419.1- 1994** hydrant system.
?	**Clause E1D3 – Fire Hose Reels** (1) E1D3 does not apply to— (a) a Class 2, 3 or 5 building or Class 4 part of a building; or (b) a Class 8 *electricity network substation*; or (c) a Class 9c building; or (d) classrooms and associated corridors in a primary or secondary *school*. (2) A fire hose reel system must be provided— (a) to serve the whole building where one or more internal fire hydrants are installed; or (b) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500 m2.	Fire Hose Reels will be required to serve Class 9b, hall portion, of the building only.

E1D4	**Sprinklers**	
Noted	A sprinkler system must— (a) be installed in a building or part of a building when *required* by E1D5 to E1D12 as applicable; and (b) comply with Specification 17 and Specification 18 as applicable. **Note**: NSW has requirements for sprinklers in certain residential aged care facilities, see Department of Planning and Environment Website for details of the "Fire Sprinkler Standard" https://www.planning.nsw.gov.au/Policy-and-Legislation/Buildings/Fire-safety-in-buildings/Fire-Sprinklers-in-Aged-Care-Facilities	A sprinkler system is required to serve a building used as a Class 3 residential care building. Further advice to establish the particular use of the building (i.e. residential care or boarding house). **Note – a Class 3 (Boarding House) with rise in storey less than 4 is not required to be protected with a sprinkler system. Refer to Clause E1D6.**
E1D6	**Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings**	
Noted	(1) Sprinklers are *required* throughout a Class 2 or 3 building, or any other class of building containing a Class 2 or 3 part, if any part of the building has— (a) a *rise in storeys* of 4 or more; and (b) an *effective height* of not more than 25 m. (2) The requirements of (1) do not apply to a *residential care building.*	The building has a rise in storey of one. Therefore – the change of use from class 9c to class 3 is not required to be served by a sprinkler system.
E1D7	**Where sprinklers are required: Class 3 building used as a residential care buildings**	
Noted	Sprinklers are *required* throughout — (a) a Class 3 building used as a *residential care building*; and (b) any *fire compartment* containing a Class 3 part used for residential care.	The existing Class 9c (Age-Care Building) is served by a sprinkler system. A sprinkler system is required to serve a building used as a **Class 3 residential care building. Note: Further advice required to establish the particular use of the building (i.e. residential care or boarding house).**

Part E2 – Smoke Hazard Management		
Clause	**Reference**	**Comment**
Deemed-to-satisfy Provisions		
E2D8	**Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building**	
?	In a Class 2 and 3 building or part of a building and Class 4 part of a building, if the building is not more than 25 m in effective height— (a) it must be provided with an *automatic* smoke detection and alarm system complying with Specification 20; and (b) the Class 5, 6, 7 (other than an *open-deck carpark*), 8 and 9b parts must be provided with— (A) an *automatic* smoke detection and alarm system complying with Specification 20; or (B) a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17; and	Fire Services Consultant to review and provide smoke hazard management for a Class 3 (Boarding House).
E2D16	**Class 9b – Assembly buildings: All**	
?	The following provisions apply to all Class 9b assembly buildings — (a) A building or part of a building used as an assembly building must be provided with *automatic shutdown of any air-handling system* (other than non-ducted individual room units with a capacity not more than 10000L/s and miscellaneous exhaust air systems installed in accordance with Sections 5 and 6 of AS 1668.1) which does not form part of the smoke hazard management system, on the activation of— (i) smoke detectors installed complying with S20C6; and (ii) any other installed fire detection and alarm system, including a sprinkler system (other than an FPAA 101D or H system) complying with Specification 17.	Mechanical Consultant to review and provide smoke hazard management for a Class 9b portion of a building.

Specification 20 – Smoke Detection and Alarm Systems		
Clause	**Reference**	**Comment**
S20C1	**Scope**	
Noted	This Specification describes the installation and operation of *automatic* smoke detection and alarm systems	
S20C2	**Type of system**	
?	A *required automatic* smoke detection and alarm system must be provided in accordance with the following: (a) Class 3 buildings— (i) with a Class 3 part located more than 2 *storeys* above ground level — a smoke detection system complying with S20C4; or (ii) which accommodate more than 20 residents and are the residential part of a *school*, accommodation for the aged, children or people with a disability — a smoke detection system complying with S20C4; or (iii) all other Class 3 buildings— (A) a smoke alarm system complying with S20C3; or (B) a smoke detection system complying with S20C4; or (C) a combination of a smoke alarm system and a smoke detection system complying with S20C5. (b) Class 5, 6, 7, 8, 9b and 9c buildings — a smoke detection system complying with S20C4	Fire Services Consultant to review and provide smoke hazard management for a Class 3 (Boarding House).
S20C3	**Smoke alarm system**	

?	(1) All Class 2 - 9 buildings: (a) A smoke alarm system must— (i) consist of smoke alarms complying with AS 3786; and (ii) be powered from the consumer mains source. (b) In kitchens and other areas where the use of the area is likely to result in smoke alarms causing spurious signals, subject to (c)— (i) any other alarm deemed suitable in accordance with AS 1670.1 may be installed provided that smoke alarms are installed elsewhere in the *sole-occupancy unit* in accordance with (2)(a) and (2)(b); or (ii) an alarm acknowledgement facility may be installed. (c) Where a kitchen or other area referred to in (b) is in a building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D system), alarms need not be installed in the kitchen or other area likely to result in spurious signals. (2) Class 2 or 3 buildings or Class 4 parts of a building — In a Class 2 or 3 building or Class 4 part of a building provided with a smoke alarm system, the following applies: (a) Alarms must be installed within each *sole-occupancy unit*, and located on or near the ceiling in any storey— (i) containing bedrooms— (A) between each part of the *sole-occupancy unit* containing bedrooms and the remainder of the *sole- occupancy unit*; and (B) where bedrooms are served by a hallway, in that hallway; and (ii) not containing any bedrooms, in egress paths. (b) Where there is more than one alarm installed within a *sole-occupancy unit*, alarms must be interconnected within that *sole-occupancy unit*. (c) Subject to (d), alarms must be— (i) installed in *public corridors* and other internal public spaces, located in accordance with the requirements for smoke detectors in AS 1670.1; and (ii) connected to activate a building occupant warning system in accordance with S20C7. (d) In a Class 2 or 3 building or Class 4 part of a	Fire Services Consultant to review and provide smoke hazard management for a Class 3 (Boarding House).

	building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D system), alarms are not *required* in *public corridors* and other internal public spaces.	
S20C4	**Smoke detection system**	

	(1) All Class 2 - 9 buildings: (a) A smoke detection system must— (i) subject to (2) and (3), comply with AS 1670.1; and (ii) activate a building occupant warning system in accordance with S20C7. (b) In kitchens and other areas where the use of the area is likely to result in smoke detectors causing spurious signals, subject to (c)— (i) any other detector deemed suitable in accordance with AS 1670.1 may be installed provided that smoke detectors are installed elsewhere in the *sole-occupancy unit* in accordance with the requirements for alarms in S20C3(2)(a) and (2)(b); or (ii) an alarm acknowledgement facility may be installed. (c) Where a kitchen or other area referred to in (b) is in a building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D or FPAA101H system), detectors need not be installed in the kitchen or other areas likely to result in spurious signals. (2) Class 2 or 3 buildings or Class 4 parts of a building — In a Class 2 or 3 building or Class 4 part of a building provided with a smoke detection system, the following applies: (a) Smoke detectors must be installed— (i) within each *sole-occupancy unit*, in accordance with the requirements for alarms in S20C3(2)(a) and (2)(b); and (ii) subject to (b), in *public corridors* and other internal public spaces. (b) In a Class 2 or 3 building or Class 4 part of a building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D or FPAA101H system), smoke detectors are not *required* in *public corridors* and other internal public spaces. (3) Class 9c buildings — In a Class 9c building— (a) remote automatic indication of each zone must be given in each smoke compartment by means of— (i) mimic panels with an illuminated display; or (ii) annunciator panels with alpha numeric display; and (b) if the building accommodates more than 20 residents, manual call points must be installed in paths of travel so that no point on a floor is more than 30 m from a manual call point.	Fire Services Consultant to review and provide smoke hazard management for a Class 3 (Boarding House).

S20C5	**Combined smoke alarm and smoke detection system**	
?	(1) A Class 2 or 3 building or Class 4 part of a building provided with a combination of a smoke alarm system and smoke detection system in accordance with S20C2 must— (a) be provided with a smoke alarm system complying with S20C3 within *sole-occupancy units*; and (b) subject to (2), be provided with a smoke detection system complying with S20C4 in areas not within *sole- occupancy units*. **(2) In a Class 2 or 3 building or Class 4 part of a building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D or FPAA101H system), smoke detectors are not *required* in *public corridors* and other internal public spaces.**	Fire Services Consultant to review and provide smoke hazard management for a Class 3 (Boarding House).
S20C6	**Smoke detection for smoke control systems**	
?	(1) Smoke detectors *required* to activate— (a) *automatic* shutdown of air-handling systems in accordance with E2D14 to E2D20; or (b) a smoke exhaust system in accordance with Specification 21, (c) must comply with the requirements of (3). (2) Smoke detectors referred to in (2) must— (a) be spaced— (i) not more than 20 m apart and not more than 10 m from any wall, bulkhead or smoke curtain; and (ii) in enclosed malls and walkways in a Class 6 building not more than 15 m apart and not more than 7.5 m from any wall, bulkhead or curtain; and (b) have a sensitivity— (i) in accordance with AS 1670.1 in areas other than a multi-*storey* walkway and mall in a Class 6 building; and (ii) not exceeding 0.5% smoke obscuration per metre with compensation for external airborne contamination as necessary, in a multi-*storey* walkway and mall in a Class 6 building.	

S20C7	Building occupant warning system	
?	Subject to E4D9, a building occupant warning system provided as part of a smoke hazard management system must comply with clause 3.22 of AS 1670.1 to sound through all occupied areas except— (a) in a Class 2 and 3 building or Class 4 part of a building provided with a smoke alarm system in accordance with S20C3(2)(c)— (i) the sound pressure level need not be measured within a *sole-occupancy unit* if a level of not less than 85 dB(A) is provided at the door providing access to the *sole-occupancy unit*; and (ii) the inbuilt sounders of the smoke alarms may be used to wholly or partially meet the requirements; and (b) in a Class 2 and 3 building or Class 4 part of a building provided with a smoke detection system in accordance with S20C4(2), the sound pressure level from a building occupant warning system need not be measured within a *sole-occupancy unit* if a level of not less than 100 dB(A) is provided at the door providing access to the *sole- occupancy unit*; and (c) in a Class 3 building used as a *residential care building*, the system— (i) must be arranged to provide a warning for occupants; and (ii) in areas used by residents, may have its alarm adjusted in volume and content to minimise trauma consistent with the type and condition of residents; and (d) in a Class 9c building, the system— (i) must be arranged to provide a warning for occupants; and (ii) must notify staff caring for the residents of the building; and (iii) in areas used by residents, may have its alarm adjusted in volume and content to minimise trauma consistent with the type and condition of residents	Fire Services Consultant to review and provide smoke hazard management for a Class 3 (Boarding House).

S20C8	System monitoring	
?	The following installations must be connected to a fire alarm monitoring system connected to a fire station or fire station dispatch centre in accordance with AS 1670.3: (a) A smoke detection system in a Class 3 building provided in accordance with S20C2(b)(i) or S20C2(b)(ii). ~~(b) A smoke detection system in a Class 9a *health-care building*, if the building accommodates more than 20 patients.~~ (c) A smoke detection system in a Class 9c building.	Fire Services Consultant to review and provide smoke hazard management for a Class 3 (Boarding House).

Part F4 – Sanitary and other facilities		
Clause	**Reference**	**Comment**
Deemed-to-satisfy Provisions		
F4D2	**Facilities in residential buildings**	
?	(1) For facilities in Class 3 buildings other than *residential care buildings*, the following applies: (a) For residents in each building or group of buildings, for each 10 residents for whom private facilities are not provided, provide— (i) a bath or shower; and (ii) a closet pan; and (iii) a washbasin. (b) Notwithstanding (a), if one urinal is provided for each 25 males up to 50 and one additional urinal for each additional 50 males or part thereof, one closet pan for each 12 males may be provided. (c) Facilities for employees must be provided in accordance with F4D4 (d) Facilities required by (a), (b) or (c) need not be situated in the same building (2) For facilities in Class 3 *residential care buildings*, the following applies: (a) For residents in each building or group of buildings, provide— (I) a shower, closet pan and wash basin for each 8 residents or part thereof where private facilities are not provided; and (II) a suitable bath for each 30 residents or part thereof. (b) For the purposes of (a), urinals must not be taken into consideration in calculating the number of facilities. (3) In a Class 4 part of a building, the following applies: (a) For the *sole-occupancy unit*, provide— (I) a kitchen sink and facilities for the preparation and cooking of food; and (II) a bath or shower; and (III) a closet pan; and (IV) a washbasin; and (V) clothes washing facilities, comprising a washtub and space in the same room for a washing machine; and (VI) a clothesline or hoist, or space for a heat-operated drying cabinet or similar appliance for the exclusive use of the occupants. (b) For the purposes of (a), a kitchen sink or washbasin must not be counted as a laundry washtub.	Sanitary facilities are required to be provided within each SOU and shared laundry facilities within common areas.

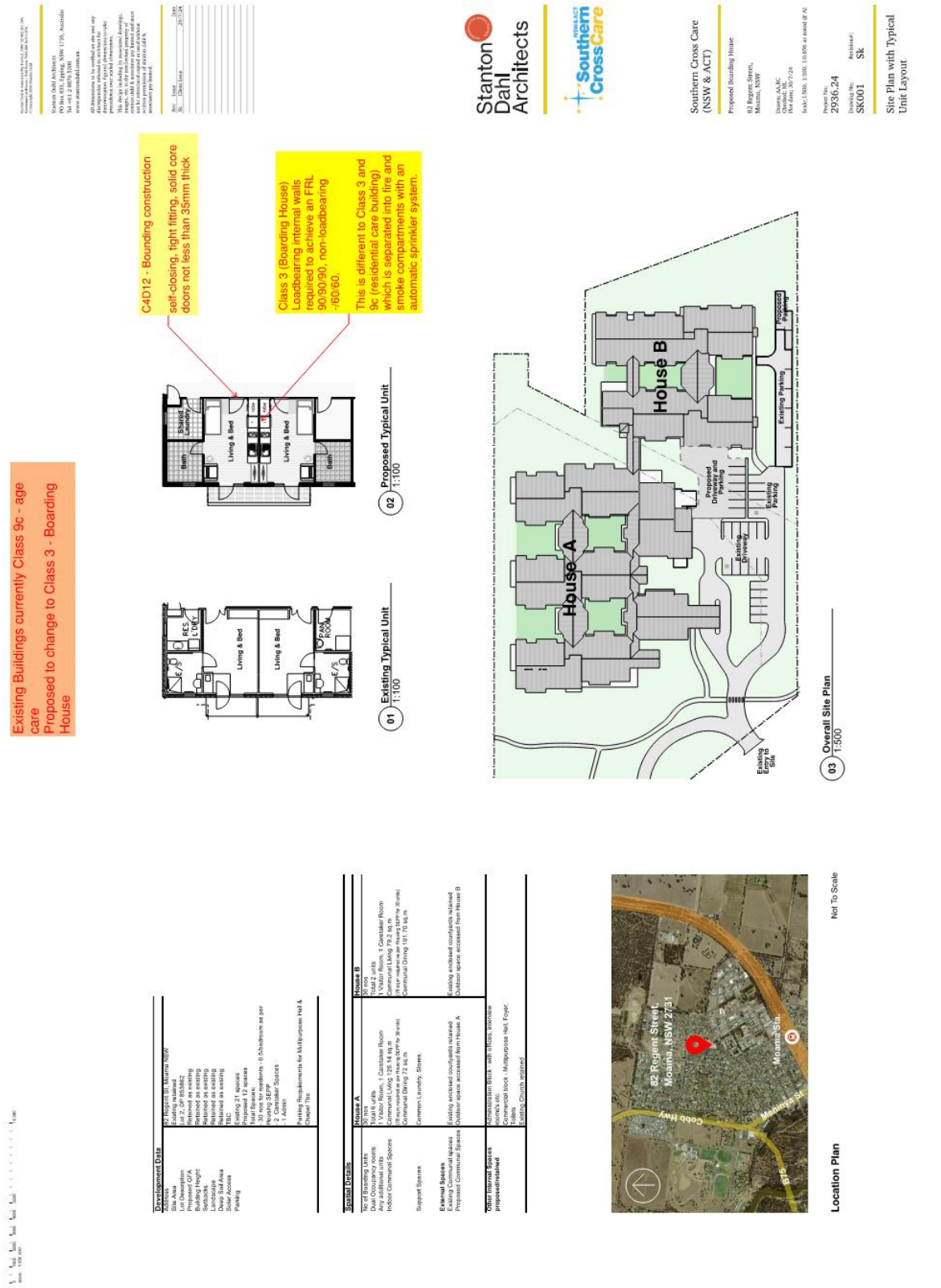
F4D5	Accessible sanitary facilities	
?	In a building *required* to be *accessible*— (a) accessible unisex sanitary compartments must be provided in accessible parts of the building in accordance with F4D6; and (b) accessible unisex showers must be provided in accordance with F4D7; and (c) at each bank of toilets where there is one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, not less than one sanitary compartment suitable for a person with an ambulant disability for use by males and one sanitary compartment suitable for a person with an ambulant disability for use by females, must be provided. (d) an *accessible* unisex *sanitary compartment* must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary products; and (e) the circulation spaces, fixtures and fittings of all *accessible* sanitary facilities provided in accordance with F4D6 and F4D7 must comply with the requirements of AS 1428.1; and (f) an *accessible* unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and (g) where two or more of each type of *accessible* unisex sanitary facility is provided, the number of left and right handed mirror image facilities must be provided as evenly as possible; and (h) where male sanitary facilities are provided at a separate location to female sanitary facilities, *accessible* unisex sanitary facilities are only *required* at one of those locations; and (i) an *accessible* unisex *sanitary compartment* or an *accessible* unisex shower need not be provided on a *storey* or level that is **not *required*** by D4D4(f) to be provided with a passenger lift or ramp complying with AS 1428.1	Accessible sanitary facilities being provided within each accessible SOU. Separate unisex accessible facility for staff and located adjacent to the multipurpose hall.

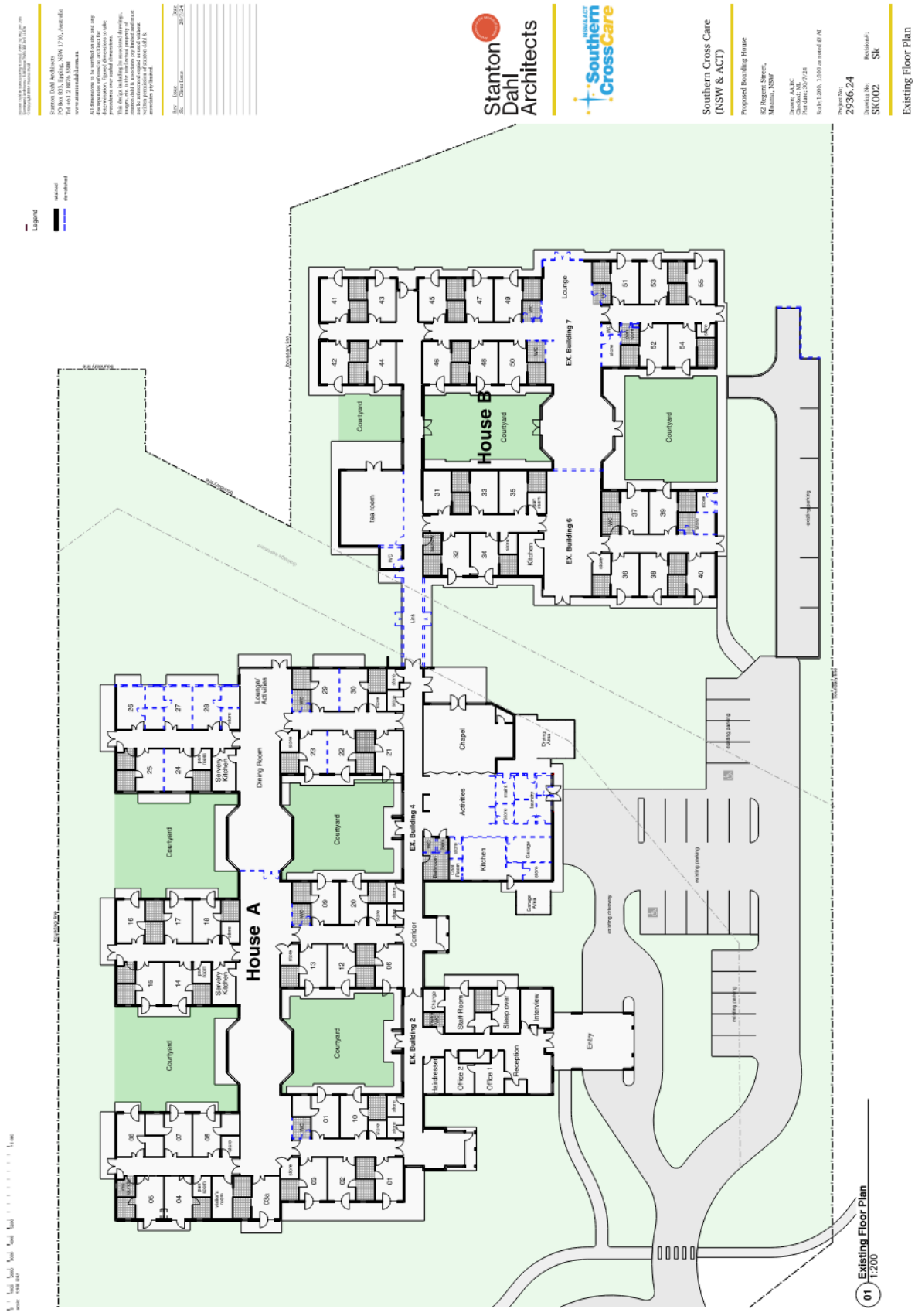
F4D6	**Accessible unisex sanitary compartments**	
?	(1) Where *required* by F4D5(a), the minimum number of *accessible* unisex *sanitary compartments* for each Class of building is as follows: (a) For Class 3 and Class 9c buildings— (i) in every *accessible sole-occupancy unit* provided with *sanitary compartments* within the *accessible sole-occupancy unit*, not less than 1; and (ii) at each bank of *sanitary compartments* containing male and female *sanitary compartments* provided in common areas, not less than 1. (b) For Class 5, 6, 7, 8 or 9 buildings, where F4D4 requires closet pans— (i) 1 on every *storey* containing *sanitary compartments*; and (ii) where a *storey* has more than 1 bank of *sanitary compartments* containing male and female *sanitary compartments*, at not less than 50% of those banks	Accessible sanitary facilities being provided within each accessible SOU. Separate unisex accessible facility for staff and located adjacent to the multipurpose hall.
F4D7	**Accessible unisex showers**	
?	(1) Where *required* by F4D5(b), the minimum number of *accessible* unisex showers for each Class of building is as follows: (a) For Class 3 and 9c buildings— (i) in every *accessible sole-occupancy unit* provided with showers within the *accessible sole-occupancy unit*, not less than 1; and (ii) 1 for every 10 showers or part thereof provided in common areas.	

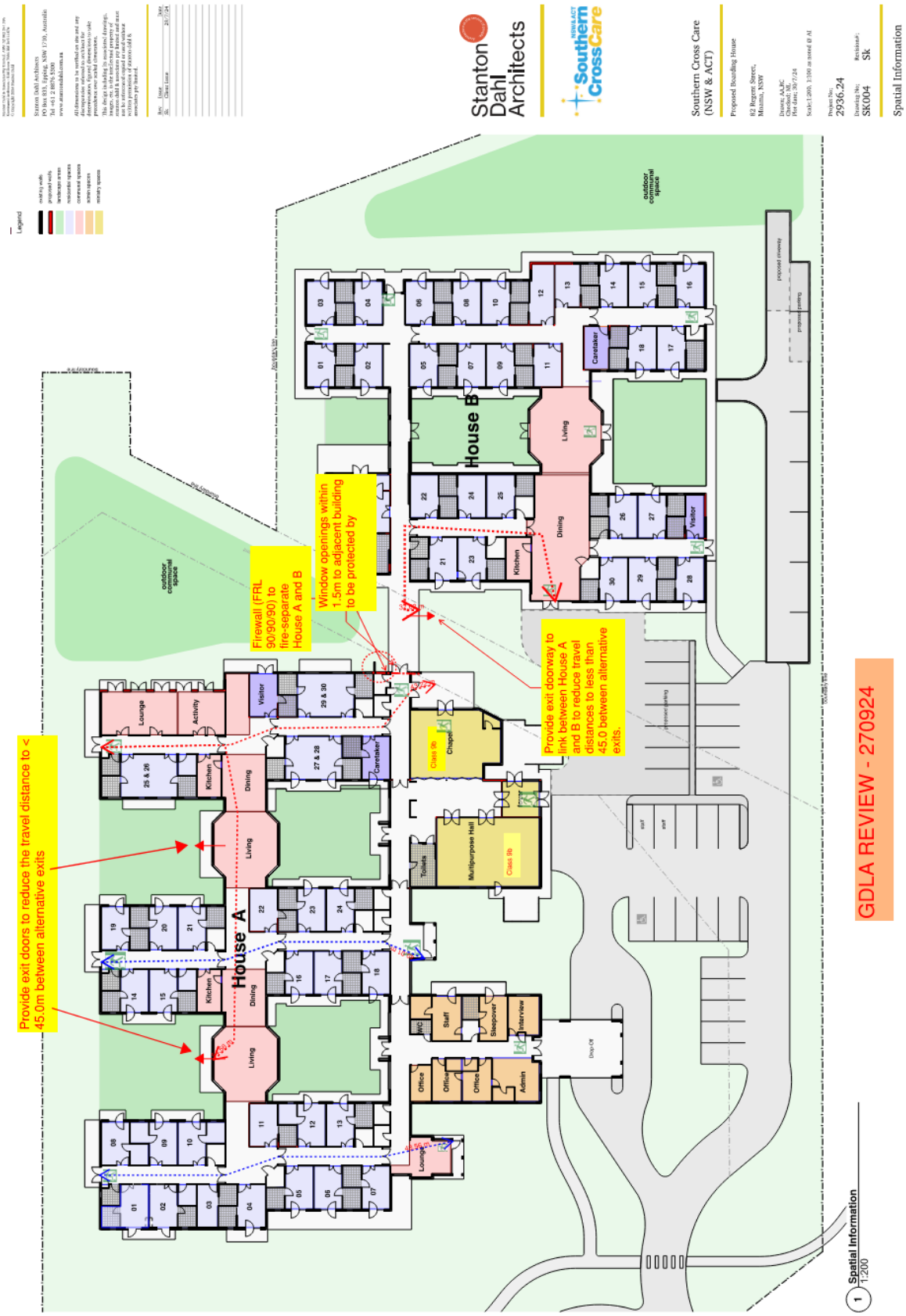
Part F7 – Sound transmission and insulation		
Clause	**Reference**	**Comment**
Deemed-to-satisfy Provisions		
F7D2	**Application of Part**	
Noted	The *Deemed-to-Satisfy Provisions* of this Part only apply to Class 2 and 3 buildings and Class 9c buildings.	Any new works to the bounding construction of SOU being designed to comply with Part F7.

Section J – Energy Efficiency		
Clause	**Reference**	**Comment**
Part J2 – Energy Efficiency		
J2D1	**Deemed-to-Satisfy Provisions**	
J2D2	**Application of Section J**	
?	*Performance Requirement* J1P1 is satisfied by complying with— (a) for reducing the heating or cooling loads— (i) of *sole-occupancy units* of a Class 2 building or a Class 4 part of a building, J2D3 to J2D6; and (ii) of a Class 2 to 9 building, other than the *sole-occupancy units* of a Class 2 building or a Class 4 part of a building, Parts J3 and J4; and (b) for *air-conditioning* and ventilation, Part J5; and (c) for artificial lighting and power, Part J6; and (d) for heated water supply and *swimming pool* and spa pool plant, Part J7; and (e) for facilities for monitoring, Part J8	Proposed new works being designed to comply with Section J requirements.

DESIGN DOCUMENTATION – BCA MARKUPS




Stanton Dahl Architects
Southern Cross Care (NSW & ACT)
Proposed Boarding House
82 Regent Street, Murrurundi, NSW
Project No: 2936.24
Drawing No: SK002
Existing Floor Plan
Legend
House A
House B
EX. Building 2
EX. Building 4
EX. Building 6
EX. Building 7
Courtyard
Dining Room
Lounge/ Activities
Servery Kitchen
Chapel
Activities
Kitchen
Corridor
Staff Room
Sleep over
Interview
Hairdresser
Office 2
Office 1
Reception
Entry
Lounge
Tea room
existing parking
01 Existing Floor Plan
1:200


Stanton Dahl Architects
Southern CrossCare
Southern Cross Care (NSW & ACT)
Proposed Boarding House
Spatial Information
Project No: 29936.24
Drawing No: SK004
Revision: Sk
Legend
outdoor communal space
House A
House B
Lounge
Activity
Visitor
Kitchen
Dining
Living
Caretaker
Chapel
Class 9b
Multipurpose Hall
Toilets
Class 9b
Staff
Sleepover
Interview
AWC
Office
Admin
Drop Off
Firewall (FRL 90/90/90) to fire-separate House A and B
Window openings within 1.5m to adjacent building to be protected by
Provide exit doorway to link between House A and B to reduce travel distances to less than 45.0 between alternative exits.
Provide exit doors to reduce the travel distance to < 45.0m between alternative exits
GDLA REVIEW - 270924
1 Spatial Information
1:200

CONCLUSIONS:

A review of the preliminary architectural drawings in relation to the conversion of existing Aged Care Building to Boarding House Accommodation has identified the following items that will require further assessment by appropriate qualified consultants.

1. Change of use from a Class 9c to Class 3 building will trigger the assessment of **Category 1 fire safety provisions** which may require fire safety upgrade of the existing building.
2. Sole-occupancy units (SOU) and rooms not within SOU within a Class 3 (Boarding House) must comply with the following provisions:
   a. Loadbearing internal walls required to achieve an FRL 90/90/90 with the non-loadbearing walls -/60/60.
   b. These Fire-rated walls are to extend to the underside of a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; **or**
   c. to the underside of the roof covering if it is non-combustible, and except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements;

   This is the main difference between Class 3 and 9c (residential care buildings) which are separated into larger fire and smoke compartments and provided with an automatic sprinkler system.

Item (2) above, will need to be discussed further with a Fire Safety Engineer to establish if a performance solution is feasible to keep the existing room configurations rather than upgrade the bounding walls of all rooms as described above. Such a solution would need to be based upon the existing fire and smoke compartmentation applicable for class 9c being retained, together with the existing sprinkler protection of the building as further justification to support a performance solution for Class 3 boarding house use.

We trust this initial BCA Assessment will assist with the project feasibility assessment. Should you require further assistance or clarification please do not hesitate to contact Mike Gooley from our office or the undersigned at your convenience.

Yours sincerely

Brett Clabburn
Director
NSW Fair Trading BDC0064