

BUILDING CODE OF AUSTRALIA 2022 CAPABILITY STATEMENT

PROPOSED AGED CARE FACILITY AT 23-25 BASSETT STREET, MONA VALE

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REVISION HISTORY

Revision No.	Prepared by	Description	Date
R01	Manisha Kerai	BCA Statement for review and comment	22/4/24
R02	Manisha Kerai	Updated BCA Statement	6/5/24



Introduction

At the request of Thompson Health Care we offer comments and recommendations in respect to Building Code of Australia 2022 compliance for the proposed residential aged care facility located at 23-25 Bassett Street, Mona Vale NSW

The new facility will have 3 Levels and contain 118 rooms for residents with 37 car spaces in the basement car park.

Philip Chun has been appointed to report on compliance with respect to Parts C, D, E, F, G, and J of the Building Code of Australia 2022. **Any non-compliant items requiring attention are in bold italic text throughout the report.**

It is the responsibility of all designers and engineers to ensure that the design of all works complies with the requirements of the Building Code of Australia, the Australian Standards, the project brief and the applicable legislation. This fee proposal includes reporting on issues of compliance however any statement or report provided in the course of the scope of work is not to be construed as specialist advice as referenced in Clause 9(d) of the Design and Building Practitioners Regulation 2021 and as such is not to be referenced in any Compliance Declarations made under the Design and Building Practitioners Legislation.

The documentation assessed includes the following architectural drawings by Gartner Trovato Architects:

Discipline	Drawing No. (Rev)	Dated
Architectural	DA2-01(P-02), DA2-02(P-03), DA2-03(P-03), DA2-04(P-03), DA2-05(P-03), DA2-06(P-02), DA2-07(P-02), DA2-08(P-02), DA2-12(P-03)	Various

Building Code of Australia 2022 Comments

1. Building Assessment

Building Classification	Basement Level	Class 7a Carpark (1477m ²), Class 9c Aged Care Ancillary Use (626m ²)
	Ground Floor	Class 9c Aged Care (3769m ²)
	First Floor	Class 9c Aged Care (3793m ²)
Rise in Storeys	3 (in accordance with C2D3)	
Type of Construction	Type A Construction	
Effective Height (m)	Approximately 3.3m	
Total floor area	Class 9c - 4469m ² , Class 7a – 1545m ²	



Section C – Fire Resistance / Compartmentation / Separation

2. **Type of construction (C2D2)** – The building has a rise in storeys of 3 in which case is required to be of not less than Type A construction. *The building needs to comply with Specification 5 for Type A Construction (See Appendix A).* Structural engineer will need to confirm at CC stage the Fire Resistance Levels (FRL's) of the columns, slabs and load bearing walls meet Specification 5 -
 - Class 9c parts – 120 mins
 - Class 7a carpark – 120 mins
3. **Lightweight Construction (C2D9)** – Lightweight construction must comply with C2D9 and Specification 6 if it is used in a wall system described under this clause, and if it is used for the fire-resisting covering of a steel column or the like. *Compliance readily achievable- details to be provided at CC stage.*
4. **Non-combustible Building Elements (C2D10)** – External walls and common walls, non-loadbearing internal walls where they are required to be fire-resisting must not be constructed of combustible materials, including all components incorporated within them. Flooring and floor framing of lift pits, and non-loadbearing shafts is not for the discharge of hot products of combustion must also be of non-combustible building elements. *To comply - details to be provided at CC stage.*
5. **Fire Hazard Properties (C2D11)** – All new surface finishes, assemblies and linings are to comply with BCA Clause C2D11 and Specification 7 with regard to Fire Hazard Properties. Paint or fire-retardant coatings must not be used to make a material comply with fire a required fire hazard property unless referred to in NSW C2D11. *Compliance readily achievable – details to be provided at CC stage.*
6. **Ancillary Elements (C2D14)** – Ancillary elements must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is non-combustible or an item listed under this Clause in the BCA. *Architect to note – details to be provided at CC stage.*
7. **General Floor Area and Volume Limitations (C3D3)** – The size of fire compartment or atrium of the Class 9c part must not exceed a maximum floor area of 8000m² and a maximum volume of 48,000m³; and the Class 7 part must not exceed a maximum floor area of 5000 m² and maximum volume of 30,000 m³ for Type A construction. *Compliance readily achievable – details to be provided at CC stage.*
8. **Class 9a and 9c Buildings (C3D6)** – Class 9c building must be divided into areas not more than 500m² by smoke-proof walls complying with Specification 11. ***Does not comply as follows:***

Ground Level – 555m² smoke compartment size is proposed. Architect to amend plans and / or fire engineer to address at CC stage.

We note intention for the void in the lobby to be smoke separated to ensure it does not connect smoke compartments on the first floor. Details are to be provided at CC stage.

Ancillary use areas containing equipment or materials that are a high potential fire hazard such as a kitchen and related food preparation areas having a combined floor area of more than 30m², or laundry, or storage rooms greater than 10m² mainly used for storage of administration records; must be separated from sole-occupancy units by smoke-proof walls in accordance with Specification 11. *Complies – as the high hazard uses are at basement level (no SOU's on this level)*
9. **Separation of Classifications in the same Storey (C3D9)** – The building that has parts of different classifications located adjacent one another in the same storey must have building elements with the higher FRL prescribed in Specification 5 for that element for the classification concerned; or the parts must be separated in that storey by a fire wall having the higher FRL prescribed in Specification 5. *Compliance readily achievable – details to be provided at CC stage.*
10. **Separation of Classifications in Different Storeys (C3D10)** – If parts of different classifications are located one above the other in adjoining storeys; the floors separating the different parts must have an FRL of not less than that prescribed in Specification 5 for the classification of the lower storey. *Compliance readily achievable - details to be provided at CC stage.*



11. **Separation of Lift Shafts (C3D11)** – A lift connecting more than 2 storeys, or more than 3 storeys in sprinklered building, including emergency lifts required by E3D5, must be separated from the remainder of the building by enclosure in a shaft with an FRL not less than 120/120/120. *Compliance readily achievable- details to be provided at CC stage.*
12. **Stairways and Lifts in One Shaft (C3D12)** – A stairway and lift must not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft. *Complies.*
13. **Separation of Equipment (C3D13)** – Equipment comprising of lift motors, lift control panels, emergency generators, central smoke control plant, boilers or a battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours must be constructed with an FRL in accordance with Specification 5 but not less than 120/120/120 and any doorway protected with a self-closing fire door having an FRL of not less than -/60/30 or when separating a lift shaft and lift motor room, an FRL of not less than 120/-/-. *Services engineer to provide further details.*

Separation of on-site fire pumps must comply with the requirements of AS 2419.1-2021.
Pump room shown on plans.

Equipment need not be separated if comprises of smoke control exhaust fans constructed in accordance with Specification 21, or stair pressurising equipment installed in accordance with AS/NZS 1668.1, or a lift installation without a machine-room, or equipment otherwise adequately separated from the remainder of the building. *Note.*

14. **Electricity Supply System (C3D14)** –

- i. An electricity substation located within a building must:
 - (a) Be separated from other parts of the building by construction having an FRL of not less than 120/120/120, and
 - (b) Doorways in that construction to be self-closing fire doors with an FRL of not less than -/120/30.
- ii. The main switchboard located within the building that sustains emergency equipment operating in the emergency mode must:
 - (a) Be separated from other parts of the building by construction having an FRL of not less than 120/120/120, and
 - (b) Doorways in that construction to be self-closing fire doors with an FRL of not less than -/120/30.
- iii. Electrical conductors located within a building that supply:
 - (a) A substation located within the building which supplies a main switchboard covered by (ii), or
 - (b) A main switchboard covered by (ii) must
 - (c) Have a classification in accordance with AS/NZS 3013 of not less than WS53W or WS52W, or
 - (d) Be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120.

Where emergency equipment is required in a building, all switchboards in the electrical distribution system, which sustain the electricity supply to the emergency equipment, must provide full segregation by way of enclosed metal partitions designed to prevent the spread of any fault from non-emergency equipment switchgear to the emergency equipment switchgear. *Services engineer to provide further details.*

15. **Protection of Openings in External Walls (C4D3)** – Where there are any openings in an external wall required to have an FRL that are located less than 3m from a side boundary – they must be protected in accordance with C4D5 and if used, wall-wetting sprinklers are to be externally fitted to fixed shut windows. *Not required.*
16. **Doorways in Fire Walls (C4D6)** – Fire doors in fire walls to comply with requirements of C4D6 and must be self-closing or automatic closing. *Compliance readily achievable – details to be provided at CC stage.*



17. **Protection of Doorways in Horizontal Exits (C4D8)** – Doorways that form part of a horizontal exit must be protected and either self-closing or automatic closing in accordance with requirements under C4D8. *Compliance readily achievable – details to be provided at CC stage.*
18. **Openings in Fire Isolated Exits (C4D9)** – Any doors opening to fire-isolated stairways, and are not doorways opening to a road or open space, must be a fire door with an FRL of not less than -/60/30 that are self-closing or an automatic closing door activated by smoke detector or other detector suitable in accordance with AS 1670.1. *Compliance readily achievable – details to be provided at CC stage.*
19. **Service Penetrations in Fire-isolated Exits (C4D10)** – Fire-isolated exits must not be penetrated by any services other than those permitted under C4D10. *Compliance readily achievable – services consultants to provide details at CC stage.*
20. **Openings in Fire Isolated Lift Shafts (C4D11)** – Entrance doorways in lift shafts must be constructed to comply with AS 1735.11-1986 with an FRL of not less than -/60/- and remain close when not in use. Lift call, indicator or other panels in the wall of a fire-isolated lift shaft that is greater than 35,000 mm² in area, must be backed by construction having an FRL of not less than -/60/60. *Compliance readily achievable – details of lift required.*
21. **Openings in Floors and Ceilings for Services (C4D13)** – Services passing through a floor that requires an FRL with respect to integrity and insulation or ceiling required to have a resistance to the incipient spread of fire, must be protected by a shaft complying with Specification 5. *Compliance readily achievable – details to be provided at CC stage.*
22. **Openings in Shafts C4D14** – An opening in a wall providing access to a ventilating, pipe, garbage or other service shaft must be protected by a door or panel which, together with its frame, is non-combustible or has an FRL of not less than -/30/30 if it is located in a sanitary compartment. In other locations it must have a self-closing -/60/30 fire door or hopper, or an access panel having an FRL not less than -/60/30. *Compliance readily achievable – details to be provided at CC stage.*
23. **Openings for Service Installations (C4D15)** – Electrical, electronic, plumbing, mechanical ventilation, air-conditioning, or other services that penetrate a building element (excluding the external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire – must be installed in accordance with C4D15 and Specification 13. *Compliance readily achievable – details to be provided at CC stage.*



Section D – Access and Egress

24. Access and Egress

- i. All building must have at least one exit from each storey with basements requiring a minimum of 2 exits (D2D3). Class 9 buildings in addition to any horizontal exit must have a minimum of 2 exits from the following:
 - Any storey that contains sleeping areas in a Class 9c aged care building.
 - Any storey or mezzanine that accommodates more than 50 persons, calculated under D2D18.

A Class 9c aged care building must have at least one exit from every part of a storey which has been divided into fire compartments in accordance with C3D3 or C3D6. Access to exits must not pass through another sole-occupancy unit. *Complies.*

- ii. Every stairway or ramp serving as a required exit must be fire-isolated. (D2D4). *Compliance readily achievable.*
- iii. No point on a floor must be more than 20m from an exit, or from which travel in different directions to 2 exits is available in which case the maximum distance to one of those exits must not exceed 40m (D2D5). *Complies.*

Exits that are required as alternative means of egress must be located so that alternative paths of travel do not converge such that they become less than 6m apart or more than 60m apart (D2D6).

Does not comply on:

Level 1 where up to 65m is proposed in lieu of 60m. Architect to amend plans or fire engineer to address at CC stage.

- iv. Unobstructed height of required exits or paths of travel to exits must be not less than 2m throughout, 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; or in a public corridor in a Class 9c building, 1.5 m and 1.8 m for the full width of the doorway, providing access into a sole-occupancy unit or communal bathroom. The unobstructed width of a doorway must be not less than in a Class 9c building 1070 mm where it opens from a public corridor to a sole-occupancy unit; or 870 mm in other resident use areas; or 800 mm in non-resident use areas. Storeys or mezzanines that accommodate more than 100 persons must comply with minimum aggregate unobstructed widths (D2D7, D2D8). *Fire stair details required to determine 1m minimum clearance of all obstructions.*
- v. A doorway must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from a public corridor, public lobby or the like, a sole occupancy unit occupying the entire storey or a sanitary compartment or air lock. *Complies.*
- vi. Each fire-isolated stairway must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway to a road or open space. Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have— for a distance of 3m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser:
 - An FRL of not less than 60/60/60; and
 - Any openings protected internally in accordance with C4D5

for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser.
Openings within 6m of the path of travel will require internal drencher protection – details to be provided at CC stage. Applies to openings on ground level on the west as the path of travel from stair 4 is within 6m of the external wall and the openings within.
The fire stair on Basement Level discharges to external Stair B4 and is not considered open space. Fire Engineer to address or architect to amend plans as fire stair does not discharge to open space, contrary to the requirements of D2D12.



A ramp must be provided at any change in level less than 600mm in a fire-isolated passageway in a Class 9 building (D2D12). *Architect to note.*

- vii. An external stairway or ramp may serve as a required exit in lieu of a fire-isolated exit serving a storey below an effective height of 25 m, if the stairway or ramp is—
non-combustible throughout; and protected in accordance with below if it is within 6 m of, and exposed to, any part of the external wall of the building it serves.

The protection referred to above must adequately protect occupants using the exit from exposure to a fire within the building, in accordance with one of the following methods:

- a) The part of the external wall of the building to which the exit is exposed must have—
- i. an FRL of not less than 60/60/60; and
 - ii. no openings less than 3 m from the exit (except a doorway serving the exit protected by a –/60/30 fire door in accordance with C4D9(1)); and
 - iii. any opening 3 m or more but less than 6 m from the exit, protected in accordance with C4D5 and if wall wetting sprinklers are used, they are located internally.
- b) The exit must be protected by construction of a wall, roof, floor or other shielding element as appropriate in accordance with (4) from—
- i. any part of the external wall of the building having an FRL of less than 60/60/60; and
 - ii. any openings in the external wall.

*This applies to Stair B4 from the basement floor. Stair B4 from the basement is required to be fire isolated up to Ground Level as Stair 2 serving Class 9c residents discharges into the basement fire isolated passageway and occupants will use Stair B4 to egress out. Stair B4 is assessed as an external stair in lieu of fire-isolated stair. **Compliance with (a)(ii) above is needed which doesn't permit any openings (other than fire doors) within 3m of the external stair. Fire engineer to address. The front entrance doors are within 6m of the exit and will need to be protected in accordance with BCA C4D5.***

- viii. Exits must not be blocked at the point of discharge and where necessary, suitable barriers provided to prevent vehicles from blocking the exit. 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 the minimum width of the required exit; or 1m, whichever is the greater. *Compliance readily achievable – construction drawings to show detail.*

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 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
- except if the exit is from a Class 9a building, a stairway complying with the Deemed-to-Satisfy Provisions of the BCA.

The discharge point of alternative exits must be located as far apart as practical (D2D15).

- ix. An escalator, moving walkway or non-required non fire-isolated stairway or pedestrian ramp must not be used between storeys in a resident use area in a Class 9c building (D2D17). *None noted.*
- x. Access to lift pits to comply with D2D22. *Compliance readily achievable – construction drawings to show detail.*
- xi. A stairway that is required to be within a fire-resisting shaft must be constructed of non-combustible materials and not cause structural damage to or impair the fire-resistance of the shaft if there is local failure (D3D3). *Compliance readily achievable – construction drawings to show detail.*
- xii. Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the Deemed-to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway, fire-isolated passageway. Services or equipment in accordance with D3D8, may be installed in any corridor, hallway, lobby or the like leading to a required exit if the services or equipment are enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure. *Architect to*



confirm doors to EDB's and Comms cupboards have non-combustible construction and fitted with smoke seals included in the Specification.

- xiii. The space below a required fire-isolated stairway must not be enclosed to form a cupboard (D3D9). *Complies.*
- xiv. Goings and risers to comply with D3D14. *Compliance readily achievable – details required at CC stage.*
- xv. Threshold of a doorway must not incorporate a step or ramp closer than the width of the doorway. The discharge thresholds permitted for a Class 9c in doorways opening to open space must be 1 in 8 ramps for a 25mm drop over the threshold (D3D16). *To comply.*
- xvi. A continuous barrier with a minimum height of 865mm required for stairways. Landing and balconies require a minimum 1m high barrier. A 125mm sphere must not be able to pass through any opening (D3D17 & D3D18). *Compliance readily achievable at CC stage – construction drawings to show detail.*
- xvii. Handrails to be located along the full length on at least one side of the flight of stairs with the top surface to be a minimum height of 865mm measured vertically above the nosings of the stair treads (D3D22). *Compliance readily achievable – construction drawings to show detail.*
- xviii. A swinging door in a required exit or forming part of a required exit must swing in the direction of egress and must not otherwise impede the path or direction of egress (D3D25). *Generally complies however to pump room is to swing into the fire stair, in the direction of travel.*
- xix. Door latches to comply with requirements under D3D26. *Compliance readily achievable – construction drawings to show detail.*
- xx. Doors of a fire-isolated exit must not be locked from the inside in a Class 9c building (D3D27). *Applies - Client to confirm compliance at CC stage.*

25. Access for People with a Disability (Part D4)

- i. All areas normally used by the occupants of the building must be accessible, also:
 - Class 7a – to a level containing accessible carparking spaces. *Complies.*
 - Class 9c – Common areas:
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. 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. *Complies.*

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, located on the levels served by the lift or ramp. *Complies.*

Sole-occupancy units:

Where more than 2 accessible sole-occupancy units are required, they must be representative of the range of rooms available.

Where there is between 101 and 200 units there must be a minimum of 5 sole-occupancy units plus 1 additional sole-occupancy unit for every 25 units or part thereof in excess of 100. *Complies - 6 Accessible SOUs noted on plans. Circulation space details to be provided at CC stage.*



- ii. An accessway must be provided to a building required to be accessible from the main points of a pedestrian entry at the allotment boundary and from another accessible building connected by a pedestrian link and from any required accessible carparking space on the allotment. *Complies.*
- iii. Ramps must comply with Clause 10 of AS1428.1 and stairways except in fire-isolated stairways must comply with Clause 11 of AS1428.1. Fire-isolated stairways must comply with Clause 11.1(f) and (g) of AS1428.1. *Compliance readily achievable – details required at CC stage.*
- iv. Accessways must have passing spaces and turning spaces complying with AS1428.1-2009 in accordance with D4D4. *Complies. The door circulation spaces must comply with Clause 13.3 of AS1428.1-2009.*
- v. One accessible carparking space complying with AS/NZS 2890.6 to be provided for each 100 car spaces. *Complies – 2 accessible spaced noted on plans.*
- vi. Signage complying with Specification 15 must be installed in accordance with D4D7. *Compliance readily achievable – details required at CC stage.*
- vii. Tactile indicators must be installed throughout an accessible building in accordance with D4D9. *Compliance readily achievable – there are concession for Class 9c, with details required at CC stage.*
- viii. Vision bands are required on all full height glazing located on an accessway in accordance with AS1428.1. *Compliance readily achievable – details required at CC stage.*

Section E – Services and Equipment

26. **Fire Hydrants (E1D2)** – The building must be served with fire hydrants complying with the requirements of BCA Clause E1D2 and AS 2419.1-2021. *Compliance readily achievable. Fire services contractor to provide details.*
27. **Fire Hose-reels (E1D3)** – Must be provided to serve the Class 7a part. The fire hose reel system must be installed to AS 2441-2005 and serve only the storey at which they are located and not pass through doorways fitted with fire or smoke doors. Hose-reels are to be located within 4m of an exit or an internal fire hydrant. *Compliance readily achievable to basement level only - fire services contractor to provide details.*
28. **Sprinklers (E1D5)** – Must be provided in accordance with Specification 17 throughout the 9c building and any fire compartment containing a Class 9c part.

In addition to the provisions of AS 2118.4, a sprinkler system in a Class 9c building, must be provided with a monitored main stop valve in accordance with AS 2118.1; and be permanently connected with a direct data link or other approved monitoring system to a fire station or fire station dispatch centre.

NSW has requirements for fire sprinkler systems in certain residential aged care facilities. See Department of Planning and Environment website www.planning.nsw.gov.au. *As such a sprinkler system is required in a Class 7a carpark even in cases where there is less than 40 spaces provided. Compliance readily achievable – fire services contractor to provide details at CC stage.*

If a AS2118.4 system is proposed, further fire separation between fire compartments will be needed at CC stage as the Ground Floor and First Floor levels combined (7562m²) exceeds 5000m² contrary to the maximum area served by a AS2118.4 sprinkler system, unless the central void is fire separated.

29. **Portable Fire Extinguishers (E1D14)** – Must be provided to cover Class F fire risks in kitchens; Class B fire risks where 50L or more of flammable liquids are stored; and AE or E fire risks associated with emergency services switchboards. In class 9c buildings specifically extinguishers are required to cover



Class A and E fire risks. Class E fire extinguishers need only be located at each nurses', supervisors' station or the like. *Compliance readily achievable – fire consultant to confirm locations.*

30. Smoke Hazard Management (Part E2) –

- i. A building must comply with E2D4 as applicable to Class 2-9 buildings such that each separate part complies with the relevant provisions for the classification.
- ii. Air-handling systems that do not form part of a smoke hazard management system in accordance with E2D4 and recycle air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another must:
 - Be designed and installed to operate as a smoke control system in accordance with AS1668.1-2015, or
 - Incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments and be arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1-2018. *Compliance readily achievable – details not shown. Mechanical engineer to provide details at CC stage.*
- iii. Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1-2015 serving more than one fire compartment (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard. *Compliance readily achievable – details not shown. Mechanical engineer to provide details at CC stage.*
- iv. Smoke detection system must be installed in accordance with Specification 20 to operate AS 1668.1-2015 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated exits. *Compliance readily achievable – details not shown. Mechanical engineer to provide details at CC stage.*
- v. E2D4 General Provisions – ***Fire-isolated stairways and associated passageways serving a Class 9c building with a rise in storeys of more than 2 must be provided with an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1-2015 and applies to the entire exit.*** Class 7a and 9c building must be provided throughout with an automatic smoke detection and alarm system complying with Specification 20. *Compliance readily achievable – Mechanical / Fire Services consultant to provide details for the building.*

31. Lift Installation (E3D2) – An electric passenger lift must comply with Specification 24. *Compliance readily achievable – Further information is available in Appendix C.*

32. Stretcher Facility in Lifts (E3D3) and Emergency lifts (E3D5) – *Not required as effective height does not exceed 12m. However refer to E3D10 below.*

33. Warning Against Use of Lifts in Fire (E3D4) – Warning sign must be displayed near every call button and comply with Figure E3D4. *Compliance readily achievable – details of lift required.*

34. Landings (E3D6) – Access and egress to and from lift well landings must comply with the Deemed-to-satisfy provisions of Section D of the BCA. *Compliance readily achievable – details of lift required.*

35. Passenger Lifts (E3D7) – The passenger lift must have accessible features in accordance with E3D8 and not rely on constant pressure device for its operation. *Compliance readily achievable – details of lift required.*

36. Residential care buildings (E3D10) – Where residents in a Class 9c aged care building are on levels which do not have direct access to a road or open space, the building must be provided with at least one lift to accommodate a stretcher in accordance with E3D3 and the lift or ramp must discharge at a level providing direct access to a road or open space. *Compliance readily achievable – details of lifts required.*

37. Emergency Lights and Exit / Directional Signs (E4D2, E4D5, E4D6) –

- i. Emergency lighting complying with AS 2293.1-2018 is required:



- In every fire-isolated stairways, fire-isolated passageways, and required non-fire-isolated stairway.
- In every storey that has as a floor area greater than 300m²:
 - Every passageway, corridor, hallway that is the path of travel to an exit, and
 - In any room with a floor area greater than 100m² that does not open to a corridor or space that has emergency lighting, or to a road, or open space, and
 - Any room with a floor area greater than 300m², and
 - In every Class 9c building excluding within sole-occupancy units.*Compliance readily achievable – details not shown. Electrical engineer to provide details at CC stage.*
- ii. Exit signs complying with AS 2293.1-2018 are required to be installed above or adjacent to each:
 - Door providing direct egress from a storey to:
 - An enclosed stairway or passageway serving as a required exit, and
 - External stairway or passageway serving as a required exit, and
 - External access balcony leading to a required exit.
 - Door from an enclosed stairway or passageway at every level of discharge to road or open space, and
 - Horizontal exits, and doors serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4D2. *Compliance readily achievable – details not shown. Electrical engineer to provide details at CC stage.*
- iii. If an exit is not readily apparent then exit signs must be installed in appropriate positions in areas such as corridors, hallways and lobbies, indicating the direction to a required exit. *Compliance readily achievable – details not shown. Electrical engineer to provide details at CC stage.*

Section F – Health and Amenity

38. Surface Water Management, Rising Damp and External Waterproofing (Part F1) – Stormwater drainage is to comply with F1D3 and AS/NZS 3500.3. Waterproofing membranes for external above ground use must comply with F1D5, AS 4654.1 and AS 4654.2. Roof coverings must comply with F3D2. Sarking for weatherproofing of roofs and walls must comply with F3D3 and AS/NZS 4200 Parts 1 and 2. Sanitary compartments must be water resistant or waterproof in accordance with Specification 26 and comply with AS 3740. Damp-proofing of the flooring is to comply with F1D6 and F1D7. Glazed assemblies in an external wall must comply with F3D4 and AS 2047. *Architect to note and provide details at CC stage.*

39. Facilities in Residential Buildings (F4D2) – Facilities for residents in a Class 9c building require:

- i. Closet pan and wash basin per 6 residents, and
- ii. Shower per 7 residents, and
- iii. Bath – fixed or mobile.

Complies - Each SOU is provided with a private ensuite & bath is shown on the first floor.

Other facilities, provide:

- i. One kitchen or other adequate facility for the preparation and cooking or reheating of food including a kitchen sink and washbasin. *Complies – Kitchen provided on Basement level and servery's showing kitchen sinks provided on each floor above.*
- ii. Laundry facilities for the cleansing and drying of linen and clothing or adequate facilities for holding and dispatch or treatment of soiled linen and clothing and the like and the receipt and storage of clean linen. *Complies.*
- iii. One clinical hand washing basin for each 16 residents or part thereof. *Complies – 8 required based on 118 beds provided.*



40. Sanitary facilities for employees must be provided on the basis of equal numbers of males and females. A unisex facility required for people with a disability may be counted once for each sex and must contain one closet pan, one washbasin and means for the disposal of sanitary towels (F4D3). Separate sanitary facilities for males and females must be provided unless permitted by F4D6 and F4D7, and adequate means of disposal of sanitary towels must be provided in sanitary facilities for use by females (F4D4). Not less than one washbasin must be provided where closet pans or urinals are provided. *Staff numbers to be confirmed. The staff facilities on Basement Level can currently cater to 80 staff total.*
41. Accessible sanitary facilities in accordance with 1428.1-2009 must be provided in each accessible SOU and a minimum of one accessible unisex sanitary compartment is required at each bank of sanitary compartments containing male and female sanitary compartments. 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, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females (F4D5). *One accessible sanitary facility is provided on each level. Accessible SOUs are to be identified and details provided of compliance with 1428.1 requirements.*
42. One slop-hopper or other device other than a water closet pan or urinal for the safe handling and disposal of liquid and solid wastes with a flushing apparatus, tap and grating; and an appliance for the disinfection of pans or an adequate means to dispose of receptacles is required for every 60 beds on each storey containing resident use areas (F4D11). *Compliance readily achievable – details to be provided.*
43. **Height of Rooms and Other Spaces (F5D2)** – In a Class 7a part the minimum height is 2.1m, including kitchens. In a Class 9c building, the minimum ceiling height in a kitchen, laundry, or the like is 2.1 m; and a habitable room, corridor, passageway or the like is to be 2.4 m. *Compliance readily achievable – details to be provided.*
44. **Provision of Natural Light (F6D2)** – Natural light in accordance with F6D3 and F6D4 must be provided to all rooms used for sleeping purposes. *All window sills in residential rooms cannot exceed 1m high. To comply.*
45. **Artificial Lighting (F6D5)** – Artificial lighting complying with AS/NZS 1680.0-1998 to be provided to:
- i. Required stairways and passageways, and
 - ii. If natural light cannot be achieved in accordance with F6D3 – In Class 7a and 9c parts - All rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress.
- Compliance readily achievable – Electrical consultant to provide details.*
46. **Ventilation of Rooms (NSW F6D6)** – Mechanical ventilation complying with AS 1668.2 must be provided where natural ventilation cannot be provided. *Compliance readily achievable – Mechanical services consultant to provide details. Each room needs minimum 5% of the floor area of the room to be ventilated.*
47. **Restriction on Location of Sanitary Compartments (F6D9)** – Sanitary compartments must not open directly into a kitchen, pantry, public dining room, or room used for public assembly. *Complies.*
48. **Carparks (F6D11)** – The carpark must have a system of mechanical ventilation complying with AS 1668.2 or a system of natural ventilation complying with Section 4 of AS 1668.4. *Compliance readily achievable – Mechanical services consultant to note.*
49. **Kitchen Local Exhaust Ventilation (F6D12)** – Commercial kitchens must be provided with an exhaust hood complying with AS 1668.1-2015 and AS 1668.2-2012 where any cooking apparatus maximum power inputs are exceeded in accordance with F6D12. *Compliance readily achievable – provide details of cooking appliances power input.*



50. **Sound Transmission and Insulation (Part F7)** – Applies to Class 9c parts only. Floors and walls and internal services to be sound insulated in accordance with Part F7. Pumps to be isolated in accordance with F7D8. *Compliance readily achievable – Acoustics consultant to provide details.*

51. **Part F8 Condensation management** – does not apply to Class 9c.

Section G – Ancillary Provisions

52. **Refrigerated chambers, strong-rooms and vaults (G1D3)** – A refrigerated or cooling chamber that is large enough for a person to enter must be constructed in accordance with G1D3. *Cool rooms and walk-in freezer to comply – details to be provided.*

53. **Provision for Cleaning Windows (NSW G1D5)** –

- i. A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level.
- ii. A building satisfies the above where—
 - the windows can be cleaned wholly from within the building; or
 - provision is made for the cleaning of the windows by a method complying with the Work Health and Safety Act 2011 and regulations made under that Act.

54. **Bushfire Zone (NSW G5)** – special fire protection purpose apply to Class 9c buildings, however the land in this case is not in a bushfire prone area.



NSW Section J – Energy Efficiency

55. **Energy Efficiency (Part J)** - Section J of NCC 2022 Volume One applies. NSW Section J Clause J2D2 specifies the particular clauses that can be complied with in lieu of National Section J.

The building is within Climate Zone 5 – Class 9c, and 7a parts must comply with Part J. *Architectural, mechanical services and electrical services consultants' confirmation will be required at CC stage. A Section J compliance report will be required by Section J consultant at CC stage.*

Conclusion

We have assessed the drawings by Gartner Trovato Architects with respect to the Building Code of Australia 2022 for the new aged care facility. At present the design is capable of meeting a combination of the DtS and performance requirements of the Building Code of Australia.



Appendix A

TYPE A CONSTRUCTION: FRL OF BUILDING ELEMENTS

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