

SEPP Seniors Living Development (4 Apartments)

701-703 Barrenjoey Road,

Avalon

BCA SPECIFICATION

for

Development Application



For ALLADIN (AUST) Pty Ltd

By GARTNER *TROVATO* architects

47/90 Mona Vale Road, Mona Vale, NSW, 2103

October 2017

1 GENERAL

1.1 DESCRIPTION AND LOCATION.

Generally

This specification references the documents of the development application for the project being Architectural Drawings A-00 to A-10, project number 1715 by Gartner Trovato Architects dated October 2017. The project consists of the following:

- The construction of a SEPP Seniors Living development with 4 apartments over 2 storeys
- A below ground of basement car parking containing 8 spaces plus storage,
- Located at 701-703 Barrenjoey Road, Avalon Beach

This report provides an assessment of the ability of the current design to provide compliance with the Deemed-to-Satisfy Provisions of the BCA 2016, and outline where compliance is not achieved where areas may require performance solutions by a Fire Safety Engineered Solution.

This report is not a BCA compliance certificate, which will be provided following any successful Consent.

1.2 STANDARDS

This report is based on the Deemed to Satisfy Provisions of the National Construction Code Volume 1 BCA Class 2 to Class 9 Buildings.

This report does not specify all compliances required with all Australian Standards and refers to BCA Specification tables where required for the building to provide compliance.

1.3 BCA DESCRIPTION

Building Classification

The building has been classified as follows:

Class	Level	Description
2	Ground and First Floor	Residential Sole Occupancy Units
7a	Basement Carpark	Carpark and storage

Rise in Storeys

The building has a rise in storeys of two (2)

Although the basement carpark projects above the ground, it is not considered a storey as prescribed under Clause C1.2 of the BCA.

Effective Height

The building has an effective height of less than 12 metres.

Fire Compartments

The building has two fire compartments as follows:

1. The basement carpark
2. The ground and First Floor areas

Exits

The building has the following exist points providing exit to a road or open space

1. The door adjacent the vehicular entry door to the Basement
2. The open foyer providing access to entrance doorways to all 4 units
3. Eastern balconies to ground floor units 1 & 2

Fire Source Features

The site is triangular in shape with Fire Source Features being the site boundaries as follows:

- North – The allotment boundary, setback a minimum 1.5m to the building
- East – No fire source feature, boundary to Barrenjoey Road, State road
- South East - No fire source feature, boundary to Kevin Avenue local road

Essential Services

The building will require Fire Safety Measures to be installed. A Schedule of Essential Services will be provided as part of the Construction Certificate documentation.

The initial assessment of this report reveals that the design is capable of incorporating the general required measures subject to further detailed construction specification of building materials, fixtures and fittings

2 BCA SCHEDULE OF COMPLIANCE

The building is required to provide specific compliance with the BCA, the following clauses are those relevant to this proposal, and compliance is achieved by the methods described.

BCA Clause	Requirement	Description
C 1.1		Construction Type C A performance solution to the provision of Clause C1.5 may be utilised to reduce the construction from Type B to Type C
C 1.5	Two Storey Class 2, 3, 9c	The standard provisions of the BCA would require a Class 2 building of 2 storeys to be Type B construction. This clause allows Type C construction where each sole occupancy unit has its own direct access to a road or open space. As the exist stair and lobby to all 4 units is not enclosed, these spaces comply with the clause. If the lobby and exit stair are to be enclosed, an Alternative Solution or a performance based fire engineered solution to the provision of Clause C1.5 may be required to reduce the construction from Type B to Type C

C 1.8	Lightweight Construction	Lightweight construction if used in a fire-rated application is to comply with Specification C1.8
C 1.10	Fire Hazard Properties	Must comply with Specification C1.10
C 2.2	General Floor Areas & Volume Limitations	The size of fire compartment must not exceed <ul style="list-style-type: none"> • Class 7a – Maximum Floor area 2,000m², vol. 12,000m³ • Class 2 – not subject to limitation numerically The basement carpark complies
C 2.6	Vertical separation of openings	As the building is Type C construction the provisions of this clause do not apply
C 2.8	Separation of Classifications -same storey	No differing classifications in the same storey
C 2.9	Separation of Classifications in different storeys	Minimum requirement from the basement to ground floor would be FRL 30/30/30, however the concrete slab will provide an FRL 120/120/120
C 3.2	Protection of openings in external walls	The building is Type C construction and is setback no less than 1.5m to any boundary. There are no openings in the Class 7a part of the building, and the Class 2 part of the building has no FRL, therefore no openings require protection.
C 3.11	Bounding Construction	The doorways between sole occupancy units and public corridors are to be self closing, tight fitting 35mm thick with FRL -/60/30
C 3.13	Openings in Shafts	Openings in shafts to be protected by <ol style="list-style-type: none"> In a sanitary compartment – a panel/door & frame non-combustible, FRL -/30/30, or Self closing -/60/30 fire door, or Access panel FRL -/60/30, or
D 1.2	Number of Exits required	All parts of the building have access to a sufficient number of required exits.
D 1.3	Fire isolated stairways	Not required
D 1.4	Exit travel distance	All doorways are within 6m of the required exit, or within 20m of the exit at the ground floor. The basement is served by a single exit with the furthest point in the basement less than 20m from the exit.
D 1.6	Dimensions of Exits and path of travel	All exits comply
D 1.9	Travel via non Fire-Isolated Exits or ramps	All exits comply
D 1.10	Discharge of Exits	All exits comply
D 2	Construction of Exits	The construction of exits is not detailed in the DA drawings. The plans indicate that compliance is achievable. All details to be provided with Construction Certificate documentation

	Part D3	Access for People with a Disability
D 3.1	General Building Access Requirements	<p>The main entry to the building is a pathway from Kevin Avenue to the foyer serving all 4 units.</p> <p>A compliant access walkway at gradient less than 5% provides access from the footpath to the lift lobby and common area serving units 1 & 2 on the ground floor. Compliant 1540x2070mm wheel chair turning bays are provided.</p>
D 3.2	Access to Buildings	As noted above, compliant access is provided to all parts of the building from Kevin Avenue
D 3.3	Parts of the building to be accessible	As the development is a SEPP seniors living building, all parts of the building are to be accessible. This access is compliant.
D 3.5	Accessible Car Parking	Four accessible car spaces are provided (one per unit) in the basement with an accessible path of travel to the lift connecting the basement to all floors.
E 1.3	Fire Hydrants	The total floor area of the building is greater than 500m ² and therefore contains a fire hydrant system, complying with this clause. Locations for Fire Hose Reels and Fire Hydrants are proposed on plans, TBC by Hydraulic Engineers at Construction Certificate stage.
E 1.4	Fire Hose Reels	No Fire hose reels required
E 1.5	Sprinklers	The building is less than 25m effective height accommodates less than 40 vehicles, and does not require sprinklers
E 1.6	Portable Fire Extinguishers	To be provided to comply with clause E1.6 & Table E1.6 and applicable sections of AS 2444-2001. Details to be provided at Construction Certificate stage.
E 2.2	Smoke Hazard Management-general	The building must provide an automatic smoke detection and alarm system complying with Specification E2.2a. Details to be provided at Construction Certificate stage.
Spec. E2.2a	Automatic smoke detection and alarm system	The building is designed to cater for a smoke detection system complying with AS 1670.1. Details to be provided at Construction Certificate stage.
E 3.1	Lift Installations	To comply with Specification E3.1, noting that the size of the lift shaft indicated provides compliance with the minimum standard. Details to be provided at Construction Certificate stage.
E 4.2	Emergency Lighting Requirements	<p>The design allows for an emergency lighting system to be installed in:</p> <ul style="list-style-type: none"> • All levels of the basement car park • Car park exit stairs • Main entry lobby at ground level <p>Details to be provided at Construction Certificate stage.</p>
E 4.5	Exit Signs	<p>The design allows for Exit signs are provided at:</p> <ul style="list-style-type: none"> • Lift lobby on every floor • Basement car park • Main entry lobby at ground level

F 4.1	Natural Light	All habitable rooms are provided with a minimum 10% light area of floor area.
F 4.4	Artificial Lighting	To comply with AS 1680.0
F 4.5	Ventilation of Rooms	If not compliant and requiring natural ventilation, then to comply with AS 1668.2-2012. Details to be provided at Construction Certificate stage.
F 4.6	Natural Ventilation	Natural ventilation is provided to all habitable rooms complying with the BCA
F 4.11	Carparks	If not compliant and requiring natural ventilation, then to comply with AS 1668.2-2012. Details to be provided at Construction Certificate stage.
F 5.4	Sound Rating of Floors	<p>Requirement:</p> <ul style="list-style-type: none"> • $R_w + C_{tr}$ (airborne) not less than 50 • $L_{n,w} + C_i$ (impact) not more than 62 <p>Construction will use the acceptable forms in BCA under Specification 5.2, Table 3</p> <ul style="list-style-type: none"> • 150mm concrete (200min) with furring channels and isolation mounts at 600mm centres, and 65mm polyester insulation 8kg/m³, and 13mm plasterboard. CSR#959
F 5.5	Sound Rating of Walls	<p>Requirement:</p> <ul style="list-style-type: none"> • $R_w + C_{tr}$ (airborne) not less than 50, for all sole occupancy unit separation • R_w (airborne) not less than 50 separating sole occupancy to public corridors, stairs, lifts <p>Construction will use the acceptable forms in BCA under Specification 5.2, Table 2</p> <ul style="list-style-type: none"> • 2 x 13mm fire rated plasterboard (or 1 x 13mm fire rated plasterboard + 1 x 6mm fibre cement) to 64mm sttel studs with 75 Glasswool partition batts(11kg/m³)r gap, then same system again. CSR 275. • Stair & Lifts, 200mm off form concrete with battens to 10mm plasterboard
F 5.6	Sound Rating of Services	Located in a ceiling within the cavity passing through another sole occupancy unit, $R_w + C_{tr}$ (airborne) not less than 40
	Section J	<p>Energy Efficiency</p> <p>This part applies to the carpark only. Applicable sections are:</p> <ul style="list-style-type: none"> • 5.4 – mechanical ventilation if required for exhaust • 6.2 – artificial lighting <p>Details to be provided at Construction Certificate stage.</p>

BCA Specification Type C Construction

Building Element	Class 2 FRL	Class 7a FRL	Construction specification
External Walls			
▪ Less than 1.5m	90/90/90	90/90/90	All Class 2 walls greater than 1.5m
▪ 1.5 – 3m	-/-/-	60/60/60	Class 7a walls 190mm concrete re-inforced blockwork
Common Walls	90/90/90	90/90/90	CSR#275, to comply with BCA Specification 5.2, Table 2
Lift Walls	90/90/90	90/90/90	200mm off form concrete
Internal walls to sole-occupancy units, hall, corridor	60/60/60	-/-/-	CSR#275, to comply with BCA Specification 5.2, Table 2
Internal walls, carpark	120/120/120	120/120/120	190mm concrete re-inforced blockwork
Columns, Car park	120/-/-	120/-/-	300mm min thick concrete
Floors, Apartments	90/90/90	90/90/90	200mm min thick concrete
Floors, Car park	120/120/120	120/120/120	250mm min thick concrete
Roof	-/-/-	-/-/-	Spec C1.1, 3.5(c) Concession. Building is class 2.

3 BCA SPECIFICATION & DETAIL

This report provides a summary of the requirements in the BCA relevant to the proposal, and an assessment that the proposal is capable or complies with those relevant clauses.

The report does not detail the specifications required to meet the construction at Development Application stage. It is assumed that a full and detailed BCA report is required to accompany any documentation at Construction Certificate stage.

4 CERTIFICATION

This report has been prepared by Sean Gartner of Gartner Trovato Architects, as an experienced and registered architect, and is endorsed as follows:

*I, Sean Gartner am a **qualified architect** being a registered Architect by the Board of Architects in NSW (Registration No. 6072) and do hereby verify the that I have reviewed the design proposal in terms of compliance with the current Building Code of Australia 2016*

Signed