BCA CAPABILITY REPORT

for

Seniors Living Development.

58 Forest Way,

Frenchs Forest. NSW.

Prepared for: Walsh Architects

Prepared by: Rodger Dowsett.

Graduate Dip. Building Surveying and Assessment UTS.

Masters Deg. Applied Science-Fire Safety Design UWS.

Masters Deg. Building Surveying UWS.

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Contents

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1.0 Executive Summary.

This report has been prepared to identify, at an early stage the extent of compliance achieved by architectural documentation against the provisions of the Building Code of Australia (BCA 2019), the Australian Standards adopted by the BCA together with the requirements of the state's building legalisation.

The development is for consent from the local authority (Northern Beaches Council) to use land located in the Sydney suburb of Frenchs Forest for a low-rise senior living development.

The report analyses the development to assist in the design process and that of the consent authority in its assessment of a development application. Therefore, prior to the issue of a construction certificate the certifying authority is to be satisfied that the development complies not only with the terms of any consent granted but also the relevant provisions of the BCA together with the contents of this report and the regulations.

2.0 Report Summary.

2.1 Location and Use

The development site is located at 58 Forest Way, Frenchs Forest, being Lot 38 in DP 20461(The allotment)

The area of allotment proposed for the construction work of the development stands above the adjoining public place by a distance of approx. 1.5m, the terrain gradient is then assessed to have slope of approx. 1:20. The land of the allotment to be occupied by building structure is to be subject to earthworks in the form of excavation, the extent or line of which is delineated at RL 150.520.

The allotment in plan view is of irregular configuration having a frontage to Forest Way of 21.46m. The depth of the land varies (51.32m/59.86m) yielding a site area of 1012m².

2.2 Report limitations.

The limitations that apply to the report are as follows: -

i. Site Classification nor its geotechnical condition.
ii. Occupational Health and Safety Act or Regulations are outside the scope of this report.
iii. Workcover requirements have not been considered.
iv. Compliance with the Local Government Act.
v. The assessment of BCA Section J.
vi. Access for persons with a disability.
vii. The issue of a construction certificate for building work that complies with the relevant provisions of the Environmental Planning and Assessment Regulation 2000, the Building Code of Australia in force at application for a construction certificate remains the responsibility of the certifying authority.

2.3 Description of the development.

The development involves: -

- The construction of a two (2) storey residential building together with a single basement level. The building is proposed to be set back 8.2m rising to 10.99m from the road alignment of Forest Way; 2.28m from the southern side boundary line and 2.0m from the northern side boundary line. The buildings side boundary setbacks as stated, are the least dimension in each case.
- The building, designated as a place for seniors living will contain when complete, four (4) apartments which in code terms are referred to as Sole Occupancy Units (SOU)

The report is to form part of a development application submission to the local authority for consent to use the allotment in the manner proposed.

The report serves to indicate the building together with its end residential use, are capable of complying with code requirements through the application of the specified aspects of the Building Code of Australia, 2019 Edition, Amendment 1. Further, the level of compliance with the BCA is of a kind that is not likely to render the development as being inconsistent with any consent given to the extent, that the certifying authority (The Council or a Registered Certifier) is able to comply with clause 145(1)(a) of the Environmental Planning and Assessment Regulation, 2000, for “new” building work should the development proceed with design consistency to a compliance certificate issue.

2.4 Basis of the Report and Material relied upon.

This report has relied on the following material:

1. Architectural plans prepared by Walsh Architects as detailed under Annexure A to this report;
2. The National Construction Code Series (NCC) i.e., the 2019 Edition of the Building Code of Australia, Volume 1, Amd 1 including NSW State variations (BCA);
3. The National Construction Code Series (NCC) i.e., the 2019 Edition of the Building Code of Australia, Volume 2, Amd 1 including NSW State variations/additions;
4. The Environmental Planning and Assessment Act, 1979;
5. The Environmental Planning and Assessment Regulation, 2000; and
6. Access Report prepared by BCA Logic, Ref: 11259-Accerss-r3.

2.5 Building Description.

The following sub-sections outline the basic information as to the buildings classification and related information that assists in determining the buildings compliance with the BCA to an extent that is necessary to satisfy the criterion of the regulations.

The two-level building proposed to be erected on the subject allotment is to comprise external construction elements as follows-

- Ground floor—Brickwork;
- First floor -Brickwork and masonry with applied attachments and cladding forms;
- Roof construction-timber elements;
- Roof covering--profiled, pre finished metal deck sheeting laid in mono-sloping configurations;
- Floor construction is reinforced concrete including the basement floor which is in direct contact with the ground surface of the allotment; and
- Stairway and ramp construction-reinforced concrete.

The building's façade attachments do not involve the use of aluminium composite panels (ACP's) either in the form of an attachment to the external walls or an integral part of the buildings external wall system.

The buildings design however, does propose cladding systems which are now required to be non-combustible.

Notations upon the architect plans (External Finishes Schedule) indicate the following cladding systems are proposed-

- Decowood™ timber 'look' cladding which in effect is aluminium siding. The Product Data Sheet indicates the cladding is non-combustible as determined by tests in accordance with AS 1530.1;

and

- Axon™ cladding which has CodeMark Certification that it is in compliance with C1.9 (e)(iv), i.e., the cladding is deemed non-combustible. CodeMark reference is CM40222.

2.6 Principles of the Buildings Mixed Use Classification.

The building contains two identifiable parts; its residential part and the associated basement parking level which although for use by the ordinary residents of the building is required to be separately classified.

The buildings current design, form and materials of construction collectively lend themselves to a compartmented building of Type B construction.

Type C construction is not applicable to the development.

2.7 BCA Analysis.

The following table analyses the aspects of the BCA 2019 that determines the relevant provisions applicable to proposed building i.e. the buildings, number of storeys as well as its classifiable parts.

Table 1.

BCA Determination	BCA Part/Clause	Comment
Classification- • Residential use. • Carpark use	Part A6.0	• Class 2 • Class 7a.
Buildings Rise in Storeys (RIS)	Clause C1.2 and Table C1.1	The buildings RIS is calculated at two (2) storeys.

Effective Height (EH)	Schedule 3	The building's EH is less than 12m.
Fire-Source Features (FSF)	Schedule 3	The buildings FSF's are as follows: - • North FSF-side boundary line of the allotment (FSF -01) • South FSF-side boundary line of the allotment (FSF-02) • West FSF-rear boundary line of the allotment (FSF-03); and • East FSF-far boundary line of the road reserve of Forest Way (FSF-04).
Type of Construction (BCA)	Clause C1.1 and Table C1.1	Type B Construction required. -Refer to Annexure B for details
Floor area /volume limitations	Clause C2.2 and Table C2.2	Floor area and volume limitations have application only to the building's basement parking level i.e., the class 7a part. Calculations indicate that floor area and volumetric limitations as specified under Table C2.2 for a building required to be of Type B construction as applied to a class 7a part are well within the maximum compartmental size which is stated as follows- • maximum floor area is 3500m^2 and • maximum volume is 21000m^3. The building complies in respect of general floor area and volume limitations.

3.0 Building Code of Australia Assessment.

The below assessment takes in consideration the more relevant aspects of the BCA are applicable to the proposed building.

- NA—Not applicable.
- FRL Denotes—Fire resistance level as defined under Schedule 3.
- Schedule 3 is the Definition Section of the BCA.
- Compliance Certificate-Includes the plans and specifications of the Construction Certificate that have been prepared in accordance with Part 3, Schedule 1 of the Environmental Planning and Assessment Regulation, 2000;
- The buildings exposure to the relevant Fire Source Feature's (FSF) as outlined under Table1 above are as follows: -
    - FSF -01 <3.0m;
    - FSF-02 <3.0m;
    - FSF-03 >6.0m;
    - FSF-04 >6.0m.

3.1 Building Structure.

Table 2.

Item/Element	BCA Section/clause	Comment
The buildings structure	Section B---Structural Elements.	The elements of the building's construction require the input and design of a professional engineer- 1. Concrete elements including slab on construction; 2. The parking levels' perimeter retaining wall construction; 3. Shaft wall construction; and 4. The buildings timber frame and roof construction given its mono sloping design and support of photo-voltaic cells. Design standards are- AS 1170.0-2002 Structure Design As 1170.1-2002 Structure Design AS 1170.2-2011 Structure Design

		AS 1170.4-2007 Structure Design AS 1562.1-2018 Metal Roofing AS 1720.1-2010 Timber Structure AS 3600-2018 Concrete Design AS 3700-2018 Masonry Design AS 2870-2011 only in so far as the provision of an inserted vapour barrier to the basement floor construction. AS 1288-2006 Glazing The building structural elements are capable of compliance with the above stated standards provided the design is undertaken by a professional engineer. Professional engineer is defined under Schedule 3.
	Section B---Termite Management	The buildings primary elements of construction (timber members) are susceptible to attack by subterranean termites unless the timber elements employed in the construction process have been subjected to preservative treatment in accordance with Appendix D of AS 3660.1-2014. Otherwise, the compliance standard for termite management is AS 3660.1-2014.

3.2 Fire Resistance and Stability.

Table 3.

Item	BCA Clause—Section C	Comment
		The building as designed together with its position in relation to the allotment boundaries and its exposure to the

Fire Resistance	Table 4 of Specification C1.1	FSF's as outlined under Table 1 is capable of complying with the FRL requirements for a building required to be of Type B Construction.
Non-combustible building element's	Clause C1.9	The building's façade coverings and or attachments to its external walls are required to be non-combustible. Proposed cladding systems are- ▪ Decowood™ aluminium sliding deemed non-combustible; and ▪ Axon™ cladding has CodeMark Certification (CM40222) as being in compliance with C1.9(e)(iv)
Fire hazard properties	Clause C1.10	The below materials may constitute a hazard in the event of fire- • Wall and floor linings; • Insulation and sarking materials; • Air handling ductwork; • Lift car---- --are to comply the specific fire hazard requirements of Specification C1.10. **Note:** 1. Proprietary, remain in place wall systems are if, of combustible facings also required to comply with Specification C1.10
Ancillary element's	Clause C1.14	Ancillary elements which in general relate to, pergolas, window shutters, flyscreens or screening required for child safety and the like. Pergolas over the balconies of level 1 are to be fabricated from non-combustible materials. The buildings design does not specify any other ancillary element's although it is conceivable window screening for child security, notwithstanding the developments is for 'seniors living' may become an option as the building design transitions from the simplistic

		technical documentation required for consent to the detailed design required for a compliance certificate.
Vertical Separation	Clause C2.6	NA-- Vertical /horizontal separation requirements in relation to openings within the buildings external walls do not apply to a building required to be of Type B construction.
Separation of classification	Clause C2.9	Floors in buildings of Type B construction generally do not require any form of fire resistance. However, the subject development contains a residential part above a part for the accommodation of motor vehicles. Separation of the different classifiable parts of the development occurs at the interface of the parking level with the buildings ground floor residential level i.e., the slab construction at RL 153.620. The ground floor slab construction is required to achieve an FRL of 60/60/60. Similarly, the level 1 slab construction (RL 156.720) requires an FRL criterion of 60 minutes The comments under C2.10 below mandatorily increase the FRL of the floor construction to 90/90/90 The building is capable of compliance.
Separation of lift shafts	Clause C2.10	As the lifts connects more than 2 storeys- basement level and the two consecutive residential levels, the lift is required to be contained within a fire resisting shaft, the FRL of which will depend upon whether the shaft is load bearing or otherwise. The architects' plans indicate that the shaft walls are load-bearing requiring their compliance with Table 4 of Specication C1.1. The required FRL is 90/90/90. This FRL also applies to the roof of the lift shaft.

		Note: The determination of the FRL with a 90-minute criterion then impacts on the buildings floor construction in that where one part of a building supports another part, the higher FRL criterion prevails.
Separation of equipment	Clause C2.13	The basement floor plans do not at this stage detail room(s) for building services. e.g., Electrical meters etc which are usually detailed in the plans for the compliance certificate.
Public corridors in class 2 buildings	Clause C2.14	NA—corridors are less than 40.0m in length
Protection of Openings-Windows	Clause C3.2	There are limited number of openings within the buildings external wall construction that are exposed to FSF -01 and FSF -02. These openings require 'protection' which is a matter for resolution at the compliance certificate stage either thought deemed to satisfy approach or that of a performance-based assessment. The building is capable of compliance and, in so far as a class 2 building is concerned 'protection' arising from a performance-based assessment usually translates to window screening which allows the windows to admit light and provide ventilation to the room or space served.
Openings in fire isolated exits	Clause C3.8	NA- The buildings exit systems do not require them to be fire isolated.
Openings in fire isolated lift shafts	Clause C3.10	As indicated under C2.10 above, the lift is required to be contained within a fire isolated shaft. The lift landing doors there are required obtain and FRL of -/60/- and to comply with AS 1735.11-1986.

		The building is capable of compliance. **Note:** The lift landing doors constitute a statutory fire safety measure and, are therefore listed in the buildings Fire Safety Schedule under Section 5.0
Bounding construction: Class 2 buildings	Clause C3.11 and NSW variation C3.11(d)(ii)	The entry doorways to each of the four (4) apartments are required to be fitted with- *Self-closing, tight fitting, solid core doors of not less than 35mm in thickness*. The building is capable of compliance. **Note:** The solid core doors constitute a statutory fire safety measure and, are therefore listed in the buildings Fire Safety Schedule under Section 5.0
Openings for service installations	Clause C3.15	The provisions of this clause relate in the main to the building services i.e. electrical, telecommunications, plumbing and drainage which are detailed in the plans of the compliance certificate. The building is capable of compliance. **Note:** The fire seals that occur where building services pass through construction required to have an FRL constitute a statutory fire safety measure and, are therefore listed in the buildings Fire Safety Schedule under Section 5.0
Type B Construction	Clause 4 of Specification C1.1	An important matter with Type B construction is its application to class 2 buildings and the required fire resistance of the separating walls between adjoining apartments and, apartments and public areas of the building i.e., the lift/ stair lobby's.

		The building design details the extent of separation which is not extensive and capable of being dealt with at the compliance certificate stage by fire resistant wall construction that has a 60-minute FRL criterion and in the case of the ground floor- ▪ Extends to the underside of the 1St floor; and ▪ In relation to the first floor the separating wall extends to underside of the roof covering. Type B Construction requirements are under Annexure B.

3.3 Access & Egress.

Table 4.

Item	BCA Clause— Section D	Comment
Number of exits required	Clause D1.2	▪ **Class 7a part-Parking level.** The parking level requires two (2) exits. Building complies. ▪ **Class 2 part-Residential level.** The residential levels require one (1) exit. Building complies.
When fire-isolated exits are required	Clause D1.3	The building does not require the exits to be fire isolated.
Exit travel distances	Clause D1.4	▪ **Class 7a part-Parking level** Travel distances to the available exits from the basement level both to a point of choice (<20.0m) and overall travel distance (<40.0m), comply. ▪ **Class 2 part-Residential level.** **Ground floor level-**Distance to the single exit is <20.0m. Building complies.

		First floor level-Distance of travel to the single exits is less than 6.0m. Building complies.
Distance between alternative exits	Clause D1.5	▪ **Class 7a part-Parking level** The distance between the building's alterative exits (basement level) is in compliance i.e. >9m; <60m.
Dimensions of exits	D1.6	Exit widths are to be not less than 1.m. The stairway widths must take into account that the building is required to be accessible and handrails on both sides of the stair flights are be separated by an unobstructed horizontal distance of not less than 1m.
Exit discharge	D1.10	The exits from the buildings ground floor level are not likely to be obstructed by vehicles.
Construction of exits	D2.3	NA
Electrical distribution boards	D2.7	The location of the buildings electrical meter/distribution board is for determination at the compliance certificate stage.
Enclosure of space under stairs	D2.8	The enclosure under stair flight to level 1 contains an enclosed space. The space is required to be of fire rated construction as follows- • The enclosing walls are to have an FRL of 60/60/60; & • The access doorway to the enclosed space is required to be that of a- *self-closing fire doors of FRL -/60/30.* **Note:** 1. The fire door to the enclosed space constitutes a statutory fire safety measure and, is therefore listed in the buildings Fire Safety Schedule under Section; and

		2 The stairway is of concrete construction.
Stairway—Goings and Risers	D2.13	Stairway geometry is to be in accordance with Table D2.13. Stair treads and or nosings are required to achieve a slip resistance classification not less than that specified in Table D2.14.
Balustrades/Barriers	D2.16	Barrier/balustrade construction to a height of 1.0m is required where the surface beneath is 1.0m or more as follows- ▪ Balconies; ▪ Stairway/lift lobby's ▪ Stairway landings.
Handrails	D2.17	As the building is required to be accessible, handrail construction is to comply with AS 1428.1-2009. Further handrail construction is to- • Comply with clause 11 of AS 1428.1-2009 and • Be without vertical sections. The latter may require the stairway designs to comply with the riser configuration as depicted in figure 28 of AS 1428.1-2009.
Egress Doors---Direction of swing	D2.20	In general, the building complies.
Operation of egress door latching	D2.21	The general latching requirements of D2.21 are to be complied with a s stated below- Door latching requirements for the accessible parts of the building are; - • Such that a person who cannot grip will not slip from the handle during the operation of the latch, and • Have a clearance between the handle and the back plate or door face of not less than 35mm and not more than 45mm,

		• Comprise a single hand pushing action on a single device located between 900mm and 1.2m from the floor surface. **Note:** the above does not apply to the inner parts of the four apartments
Signage	D2.23	NA
Protection of openable windows	D2.24	Window opening in bedrooms are to be fitted limiters/screens if the floor below the window is more than 2.0m above the surface beneath; and similarly, where the lowest level of the window is less than 1.7m above for level, limiters/screens are required. Other openings must have barriers to a height of not less than 865mm above floor level. The building is capable of compliance.
Access for people with a disability	Part D3	**Refer to the Access Report.**

3.4 Services and Equipment.

Table 5.

Item	BCA Clause-Section E	Comment
Hydrant System (FH)	Clause E1.3	The buildings total floor area exceed 500m²--Fire hydrants are required. Compliance standard is AS 2419.1-2005 Amd 1. The building is capable of compliance. **Note:** 1. Fire hydrants constitute a statutory fire safety measure and, are therefore listed in the buildings Fire Safety Schedule under Section 5.0.

Hose Reel System (FHR)	Clause E1.4	Subject to the design of the fire hydrant system, FHRs are not required as the basement floor area is less than 500m². Similarly, FHRs are required to be installed in the buildings residential part.
Portable Fire Extinguishers	Clause E1.6	Portable fire extinguishers are required. To be complied with at the first compliance certificate (CC). Compliance standard is AS 2444-2001. **Note:** 1 Portable fire extinguishers constitute a statutory fire safety measure and, are listed in the buildings Fire Safety Schedule under Section 5.0.
Sprinklers	Clause E1.5	NA.
Smoke Hazard Management	Clause E2.2	The building requires an automatic fire detection and alarm system in compliance with Specification E2.2a and requirements for the basement as it is required to be ventilated in accordance with AS 1668.2 The building is capable of compliance. **Note:** 1. The fire alarm system and mechanical ventilation system are both considered to be statutory fire safety measures and are listed in the buildings Fire Safety Schedule under Section 5.0
Warning against the use of lifts in fire	Clause E3.3	Warning sign(s) required and listed in the buildings fire safety schedule under Section 5.0 To be complied with at the first compliance certificate (CC).
Lifts	Clause E3.6	Lift manufacture to be advised-

		• The lift's vertical travel distance is less than 12m; • The lift is required to be accessible by persons with a disability, and • Lift car subject to the fire hazard requirements of C1.10
Emergency Lighting	Clause E4.2	The building requires emergency lighting. To be complied with at the first compliance certificate (CC). Compliance standard is AS 2293.1-2018. Emergency lighting is a statutory fire safety measure and is listed in the buildings fire safety schedule under Section 5.0
Exit Signs	Clause E4.5	The building required illuminated (maintained) exit signs. To be complied with at the first compliance certificate (CC). Compliance standard is AS 2293.1-2018 Exit signs is a statutory fire safety measure and is listed in the buildings fire safety schedule under Section 5.0

3.5 Health and Amenity

Table 6.

Item	BCA Clause-Section F	Comment
Damp & Weatherproofing	Clause F1.1	Stormwater arising from the building's roofed area is disposed as required by the Consent Authority and in accordance with AS 3500.3-2018 To be complied with at the first compliance certificate (CC).

Roof Covering	Clause F1.5	Metal roof sheeting to comply with AS 1562.1-2018. To be complied with at the first compliance certificate (CC).
Waterproofing of wet areas in buildings	Clause F1.7 and Table F1.7	Wet areas to be waterproofed in accordance with- • AS 3740- 2010 and • In accordance with Table F1.7 To be complied with at the first compliance certificate (CC).
Damp-proofing of floors in direct contact with the ground surface. Concrete slab on ground construction.	Clause F1.10	Vapour barrier required in accordance with AS 2870-2011. To be complied with at the first compliance certificate (CC).
Facilities in class 2 buildings	Clause F2.1	The apartment floor plans indicate they contain all required fitments- ▪ Kitchen sink/cooking facilities; ▪ Bathroom with WC and washbasin; and ▪ Laundry with space for WM and clothes dryer.
Glazed assemblies	Clause F1.13	Glazed assemblies in the buildings external wall including roof lights in the vertical plane to comply with AS 2047-2014. To be complied with at the first compliance certificate (CC).
Construction of sanitary compartments	Clause F2.5	All sanitary compartments that have inward swing doors are required to be 1.2m from the pan as determined by the arc of the door swing or lift-off hinges are installed.
Ceiling Heights	Clause F3.1	The ceiling heights comply.
Provision of natural light	Clause F4.1	All habitable have access to natural light.

Natural ventilation	clause F4.5	Ventilation requirements for the building can either be- • Natural ventilation that complies with F4.6; or • Mechanical ventilation that complies with AS 1668.2-2012. • Bathrooms without natural ventilation must be provided with mechanical exhaust ventilation. To be complied with at the first compliance certificate (CC).
Carparks	Clause F4.11	The carpark is to be provided with mechanical ventilation that complies with AS 1668.2-2012. To be complied with at the first compliance certificate (CC).
Sound transmission and insulation	Part F5	▪ Floors between apartments and the carpark; and ▪ Internal walls between apartments and, apartments and the public areas of the building are required to meet specific sound transmissions requirements. To be complied with at the first compliance certificate (CC).
Condensation management- Pliable building membranes	Clause F6.2	Applicable only where to be installed in the external walls. The building is capable of compliance.
Condensation management- Flow rates of exhaust systems	Clause F6.3	Exhaust systems for: - • Kitchens---40L/s flow rates and discharge directly to a shaft tor duct to outside air; • Laundries---40L/s; • Bathrooms and sanitary compartments are to have flow rates-----25L/s; Exhaust systems to be ducted to the outside air.

		To be complied with at the first compliance certificate (CC).
Energy efficiency	Section J----NSW	Refer to separate report. If not required as part of the development application documentation then a Section J report will be required at the Compliance Certificate stage.

3.6 Other Related Matters.

There is also proposed to be located at the allotment entry and behind the building line, a single storey open-sided structure for waste reception and, the handling of waste /recycling that will arise from building occupancy.

This structure draws a class 10a classification requiring the consideration of Part 3.7.2.5 (b) of Volume 2 of the National Construction Code.

The provision is stated as follows as it has relevance to the class 2 development-

A class 10a building must not significantly increase the risk of spread of fire between Class 2 to 9 buildings.

The following comments are therefore made based on the structure being of standardised construction: -

- The waste reception structure (the structure) is constructed from materials that are non-combustible;
- The structure is open for its entire perimeter;
- The structure is separated from the external wall of Class 2 building by a horizontal distance of at least 900mm;
- The Class 2 buildings required construction type, is construction Type B;
- The external wall of the Class 2 building adjoining the structure is required to have a FRL of 90/30/30;
- The section of wall of the class 2 is without openings;
- The risk of fire spread from the FSF-02 to the class 10a building is not considered significant given is construction material and openness;
- The risk of fire spread from the structure to the class 2 building is also not considered significant.

Under these circumstances the requirement of Part 3.7.2.5(b) BCA Volume 2-Amd 1 which is re-stated as follows-

"(b) A Class 10a building must not significantly increase the risk of spread of fire between class 2-9 building" ….

……is satisfied by reason of-

1. The class 10a buildings' materials of construction and use;
2. The structure is an 'open' structure; and
3. The construction of the external wall of the Class 2 building at its interface with the waste reception structure.

4.0 Statutory obligations prior to the issue of a compliance certificate.

The relevant legalisation governing the design of buildings is the Environmental Planning and Assessment Act 1979 and its regulation.

The development proposed is that new building for which the provisions of clause 145(1) of the Environmental Planning and Assessment Regulation 2000 requires the certifier to ensure-

- The buildings design and construction are consistent with the development consent, and
- The building complies with the Building Code of Australia in force at the time application is made for the construction certificate.

The regulation also requires that an application for a construction certificate be done so in accordance with Part 3 of Schedule 1 which in essence requires that the application be accompanied by appropriate work plans and specifications.

The building is capable of complying with the Building Code of Australia (BCA2019 Amd 1) that is currently in force, the below matters serve to assure the Council in this regard, particularly in so far as the Construction Certificate will in accordance with the regulation determine the technical aspects of code compliance with reliance on the services of professionals and engineering consultants.

1. The buildings structural elements are to be designed by a professional engineer in compliance with the standards specified under Section 3.0 together with achieving specified fire resistance levels.
2. The buildings hydraulic services-fire are to be designed by a professional engineer or other appropriately qualified person and in compliance with the standards specified under Section 3.0.
3. The buildings stormwater management is to be designed by a professional engineer or other appropriately qualified person and in compliance with the standards specified under Section 3.0.

4. The buildings electrical services-safe evacuation/lighting is to be designed by a professional engineer or other appropriately qualified person and in compliance with the standards specified under Section 3.0.
5. The buildings mechanical ventilation/exhaust system to be designed by a professional engineer or other appropriately qualified person and in compliance with the standards specified under Section 3.0.
6. The building specification to be written in a manner that documents quality of materials and workmanship together with describing items that cannot be shown of the plans of the construction certificate including termite management systems, wet area waterproofing, glazing for safety etc.
7. The architectural plans of the construction certificate will need to have regard to the following: -
    a) The buildings construction type---Type B (Annexure B).
    b) Lightweight construction used to achieve a required fire resistance is to comply with C1.8;
    c) The requirements for safe movement (external and internal) including stair flight geometry, slip considerations, handrail and balustrade heights and construction.
    d) Materials e.g., floor and wall lining/coverings, insulation, sarking, ductwork and lift car comply with the fire hazard requirements of Specification C1.10;
    e) The FRL requirements for internal' separating' walls and their extent within the building;
    f) The sound transmission requirements of Part F5.0 for floor and wall construction of the buildings Class 2 part.
8. The fire safety measures to be implemented upon the building premises have been determined and are listed under Section 5.0 together with their required Standards of Performance.
9. The assessment under Section 3.0 did give rise to the possible need for a performance based 'alternative' solution to be undertaken in respect of 'opening' protection, the procedure of which is specified under A2.2(4).

5.0 Fire Safety and Other Measures.

5.1 Proposed Fire Safety Measures.

The certifying authority on issue of a compliance certificate (construction certificate) is obligated under the provisions of clause 168 of the EP&A Act Regulation, 2000, to attach to the certificate, a schedule of fire safety measures that are required to be implemented in the building premises.

A fire safety schedule of a kind that can be expected is drafted below.

FIRE SAFETY SCHEDULE V1.0

Table 7.

Fire Safety Measure	Standard of Performance
Access panels and doors/hoppers top fire resisting shafts (if applicable)	C3.13
Automatic fire detection and alarm systems	NCC Specification E2.2a
Building occupant warning system (BOWS)	NCC clause 7 of Specification E2.2a and clause 3.22 of AS 1670.1-2018
Emergency lighting	NCC Clauses E4.2 and E4.4 and AS 2293.1-2018.
Exit signs	NCC Clause E4.5, E4.8 and AS 2293.1-2018.
Fire doors	NCC Clause D2.8(b)(ii) and AS 1905.1-2015
Fire hydrant systems	NCC Clause E1.3 and AS 2419.1-2005.
Fire seals protecting openings in fire-resting components off the building	NCC Clause C3.15, Specification C3.15 and AS 4072
Lift landing doors	NCC Clause C3.10 and AS 1735.11-1986
Lightweight construction	NCC Clause C1.8 and Spec C1.8.
Mechanical air handling systems	NCC Specification E2.2a and AS 1668.1-2015
Portable fire extinguishers	NCC Clause E1.6 and AS 2444-2001
Smoke and heat alarms	NCC Specification E2.2a and AS 3786-2014
Smoke and heat detectors	NCC Specification E2.2a and AS 1670.1-2018
Solid core doors	NCC clause (NSW variation) C3.11(d)(ii)
Warning and operational signs	NCC Clauses E3.3 and E3.6(a)(ii)
Alternative solutions	TBA

6.0 Conclusion.

The building detailed in the architectural drawings at Annexure A of this report is capable of compliance with the Deemed to Satisfy provisions of the Building Code of Australia, Volume 1, 2019 Edition, Amendment 1.

The level of compliance is to an extent that it is anticipated the design, as proposed will not require undue modification to the building or alter its external appearance.

As indicated under Section 4.0, the matters relevant to compliance with the Environmental Planning and Assessment Act Regulation and the Building Code of Australia are essentially technical in nature and, therefore appropriate for determination at the issue of the first compliance certificate i.e., the construction certificate.

Further and more importantly the certifying authority must prior to the issue of the construction certificate comply with the prerequisite provisions of the Environmental Planning and Assessment Act, Regulation, 2000 relevant to, new development.

7.0 Recommendation.

The design matters raised in the report are by and large of a technical nature which as is established practice better dealt with that the construction certificate stage. Unless the development process requires significant design modification the recommendation made and one for the Councils consideration is that it, impose the prescribed condition viz clause 98 of the Environmental Planning and Assessment Regulation, 2000 in that;

“As the development involves building work, that work must be carried out in accordance with the requirements of the Building Code of Australia”.

Rodger Dowsett MAIB.
Registered Building Surveyor-Unrestricted (BDC04541)
BCA Consultant
PH – 0456 007 095
rodger@nationalbca.com.au

8.0 Annexures.

Annexure A.

Drawing Schedule

Drawing No:	Issue date	Revision	Description
DA 030	13/09/21	A	Demolition Plan
DA 040	13/09/21	A	Proposed Site Plan
DA 100	13/09/21	A	Basement Plan
DA 101	13/09/21	A	Ground Floor Plan
DA 102	13/09/21	A	Level 1 Plan
DA 200	13/09/21	A	Sections
DA 201	13/09/21	A	Sections
DA 300	13/09/21	A	Elevations
DA 301	13/09/21	A	External Finishes
DA 400	13/09/21	A	Area Calculations

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ANEXURE B- TYPE B Construction

Deemed-to-Satisfy Provisions

Table 4 Type B 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 within it) or other external building element, where the distance from any *fire-source feature* to which it is exposed is—				
For *loadbearing* parts—				
less than 1.5 m	90/ 90/ 90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/ 60/ 30	120/ 90/ 60	180/120/ 90	240/180/120
3 to less than 9 m	90/ 30/ 30	120/ 30/ 30	180/ 90/ 60	240/ 90/ 60
9 to less than 18 m	90/ 30/–	120/ 30/–	180/ 60/–	240/ 60/–
18 m or more	–/–/–	–/–/–	–/–/–	–/–/–
For non-*loadbearing* parts—				
less than 1.5 m	–/ 90/ 90	–/120/120	–/180/180	–/240/240
1.5 to less than 3 m	–/ 60/ 30	–/ 90/ 60	–/120/ 90	–/180/120
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN not incorporated in an *external wall*, where the distance from any *fire-source feature* to which it is exposed is—				
For *loadbearing* columns—				
less than 18 m	90/–/–	120/–/–	180/–/–	240/–/–
18 m or more	–/–/–	–/–/–	–/–/–	–/–/–
For non-*loadbearing* columns—				
For non-*loadbearing* columns—	–/–/–	–/–/–	–/–/–	–/–/–
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
Fire-resisting stair *shafts*—				
Non-*loadbearing*	–/ 90/ 90	–/120/120	–/120/120	–/120/120
Bounding *public corridors*, public lobbies and the like—				
Loadbearing	60/ 60/ 60	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Between or bounding *sole-occupancy units*—				
Loadbearing	60/ 60/ 60	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
OTHER LOADBEARING INTERNAL WALLS and COLUMNS—	60/–/–	120/–/–	180/–/–	240/–/–
ROOFS	–/–/–	–/–/–	–/–/–	–/–/–