

BUILDING CODE OF AUSTRALIA COMPLIANCE AND DEVELOPMENT ASSESSMENT REPORT

BUILDING ALTERATIONS TO UNIT 5 - SEQUOIA

15 DIGGINGS TERRACE, THREDBO, NSW 2625 (SEQUOIA APARTMENTS).

DATE ► 15/06/2022

REPORT NO. ► 12125

PREPARED FOR ► Lesday Pty Ltd

PREPARED BY ► AE&D



AEDGROUP

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1.0 EXECUTIVE SUMMARY AND RECOMMENDATIONS

1.1 Introduction and Background

This report provides a Building Code of Australia (BCA) 2019 Amendment 1 assessment of building alterations to Unit 5 at 15 Diggings Terrace, Thredbo, NSW 2625 (Sequoia Apartments).

The primary purpose of this report is to provide assessment of the existing and proposed works undertaken within Unit 5 against the current Deemed-to-Satisfy (DtS) Provisions of the BCA and to provide where appropriate compliance recommendations.

This report is intended to form part of both an application on behalf of the owner for a Development Application (DA) for remaining proposed works and a Building Information Certificate (BIC) application for works already completed.

The intention of the report is to address the request for information issued by the NSW Department of Planning to support the Building Information Certificate (BIC) application for works already completed and for any proposed Development Application. Reference is made to the Departments letter dated 11th May 2022 and email from Mark Willoughby of the Department of Planning and Environment, dated 20th May 2022.

1.2 Works Carried Out

The works carried out to date comprise internal alterations within an existing apartment (unit 5). The works are non-structural and are generally refurbishment and replacement of existing internal linings. The proposed DA includes some external works, such as window works. The architect for the project has summarised the works as follows:

This application relates to Apartment 5 on Level 3 only.

The proposed works concern the interior of Apartment 5 only.

The proposed works entail a substantial refurbishment of the apartment to replace worn and dated finishes, fixtures and fittings and improve its general amenity. The scope to the proposed works and include:

- *Minor reconfiguration of existing, non-structural, framed and plasterboard lined internal walls to:*
 - *Reconfigure the Kitchen to improve its relationship with the living area and avoid a dangerously low section of ceiling in the north eastern corner of the existing kitchen*
 - *Redefine the Store area adjacent to the Kitchen to the east. The Store area is designed to better utilise space that has a dangerously low head height which is not effectively incorporated into the Kitchen. Provision is also made to integrate a joinery unit facing the Lounge.*
 - *Allow for the installation of sideboards in the Corridor for storage whilst increasing the perceived width of the Corridor*
 - *Relocating the door to Bed 4 so that it does not open directly into the Kitchen.*
 - *Reconfiguration of the northwest wall of Bed 4 to integrate a robe to Bed 4 and sideboard to the Living area.*
- *New kitchen fitout including new joinery and appliances*
- *A new kitchen exhaust designed to discharge immediately through the existing roof. The roof cowl to which will colourbond finished to match the existing roof decking and incorporate dampers for bushfire protection and to avoid drafts when the rangehood is not in use.*
- *New bathroom fitout incorporating new floor and wall finishes, new joinery, and new fittings and fixtures.*
- *New floor finishes throughout.*
- *Patch, repair and new paint finish to existing plaster walls and ceilings.*
- *New timber (internal) wall cladding to selected walls in the Kitchen, Lounge and Living areas.*
- *New lighting and electrical fittings throughout.*
- *New robe and cupboard joinery.*
- *New internal doors and hardware.*
- *New balustrade to the entry stair. The new balustrade will replace the existing balustrade. The existing balustrade is non compliant in several respects including, being too low, of non structural construction and it is scalable. The proposed balustrade will rectify these compliance issues and is comprised of a toughened glass balustrade, securely fixed directly to the existing reinforced concrete floor slab. Construction details for the balustrade have been prepared in accordance with a Structural Engineer's advice and a Structural Engineer's certification is provided.*
- *Reinstatement of existing fire services and compliance testing.*
- *Note that in the applicant's opinion, including the opinions of the applicant's specialist consultants:*

- The proposed works are not of a structural nature, do not alter any structural members and do not in the load-bearing capacity of the building being exceeded. Refer to the Structural Engineer's report ion regard to these matters.
- The proposed works (with the exception of the Kitchen range hood discharge are to be undertaken entirely within the strata of the existing apartment. The proposed works are designed to utilise existing services connections, ducts, risers and penetrations. To that end the proposed works do not required any new services penetrations nor modification to any existing penetrations, ducts and/or risers.
- Save for the minor modifications noted above the proposed works do not alter the layout of the existing apartment. Living, Kitchen, Bedroom and Bathrooms all remain in the same location and of the same size. Bedroom 4 is in the location of an area of the apartment which has effectively been utilised for this purpose previously.

The proposal will not alter the building footprint, building envelope and will result in no change to the Gross Floor Area of the Building.

From a compliance perspective, the works carried out include:

- Replacement of internal floor and wall linings.
- Internal linings compliant to Spec C1.10. The floor linings are tiles throughout, wall linings are plasterboard and spotted gum timber, both of which are compliant with BCA Specification C1.10.
- Waterproofing to be finished to comply with AS 3740, with installation of water stop angles to be installed
- Fire door existing unchanged, however this report recommends enhancement of the fire door tags.
- Fire rated columns, to remain unchanged, other than being lined over with materials compliant with BCA Spec C1.10.
- Fire rated bounding walls comprising hebel unchanged.
- No structural works – refer to Attachment 1 of this report.
- Painting and general internal linings refurbishment.

NB: We note that the fire services contractor has confirmed that no works have been undertaken to the existing smoke detection system. The smoke detectors remain as existing. It is proposed to upgrade the detectors in the same locations under the procedures permissible under the annual Fire Safety Statement Regime, in accordance with **Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021**

1.3 Legislation Applicable to Exempt Works

Notwithstanding that the Department of Planning has determined the works not to fall within the category of exempt development and this position is accepted, the table below provides a brief summary of the State Environmental Planning Policy (SEPP) – Precincts – Regional) 2021. Chapter 4 of the policy relates to **Kosciuszko National Park and alpine resorts, in which Sequoia Apartments are located**.

Comments are provided against each relevant criteria applicable to the works undertaken and proposed at Unit 5, with exception of the external works proposed to be considered under a Development Application, comprising the window works.

Environmental Planning Policy (Precincts—Regional) 2021	Comments
4.17 Exempt development	
Note—	
<i>Under section 4.1 of the Act, exempt development may be carried out without the need for development consent under Part 4 of the Act or for assessment under Part 5 of the Act.</i>	
<i>The section states that exempt development—</i>	
<i>(a) must be of minimal environmental impact, and</i>	
<i>(b) cannot be carried out in critical habitat of an endangered species, population or ecological community (identified under the <u>Threatened</u></i>	

Environmental Planning Policy (Precincts—Regional) 2021	Comments
<u>Species Conservation Act 1995</u> or the <u>Fisheries Management Act 1994</u> , and	
(c) cannot be carried out in a wilderness area (identified under the <u>Wilderness Act 1987</u>).	
Specifying a type of development as exempt development does not authorise the contravention of any condition of development consent, or any lease or licence under the <u>National Parks and Wildlife Act 1974</u> , applying to the land on which the exempt development is carried out. Nor does it authorise the contravention of any other law that may apply, including the prohibitions set out in Part 8A (Threatened species, populations and ecological communities, and their habitats, and critical habitat) of the <u>National Parks and Wildlife Act 1974</u> .	
(1) The objective of this section is to identify development of minimal environmental impact as exempt development.	
(2) Development specified in Schedule 2 that meets the requirements for the development contained in that Schedule, and that complies with the requirements of this section, is exempt development.	
(3) To be exempt development, the development—	
(a) must meet the relevant deemed-to-satisfy provisions of the Building Code of Australia, and	The works carried out within Unit 5, will comply with the BCA and comprise primarily replacement of existing internal; linings, such as flooring, wall linings and bathroom fitout. Removal of minor non-loadbearing internal walls has occurred, to the existing kitchen area
(b) must not, if it relates to an existing building, cause the building to contravene the Building Code of Australia, and	No work proposed to be carried out will contravene the BCA.
(c) must not be designated development, and	
(d) must not be carried out on land that comprises, or on which there is, a heritage item that is listed on the State Heritage Register under the <u>Heritage Act 1977</u> or that is subject to an interim heritage order under the <u>Heritage Act 1977</u> , and	N/A
(e) must not be carried out on land that is an Aboriginal place within the meaning of the <u>National Parks and Wildlife Act 1974</u> or that is shown coloured pink or blue in figure 6.1 of <i>Perisher Range Resorts Environmental Study</i> (October 2002), prepared by Connell Wagner Pty Ltd for the National Parks and Wildlife Service.	N/A
(4) Development that relates to an existing building that is classified under the Building Code of Australia as class 1b or class 2–9 is not exempt development unless—	The Building is Class 2 and 7a
(a) the building has a current fire safety certificate or fire safety statement, or	Complies – AFSS is current for the building, refer to attachment 5 of this report.
(b) no fire safety measures are currently implemented, required or proposed for the building.	The existing fire safety measures remain unaltered by the works, except that it is proposed to install new smoke detectors in the same locations as existing. The new detectors are proposed to be installed to provide enhanced fire safety. This work could be carried out under typically annual fire safety statement processes in accordance with the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.
(5) Development is not exempt development if the development involves damage to any plant that is part of any of the following plant communities on land identified as containing such a plant community in any Figure (other	

Environmental Planning Policy (Precincts—Regional) 2021	Comments
than Figures 1 and 11) in the Kosciuszko Resorts Vegetation Assessment—	
(a) fieldmark,	N/A
(b) short alpine herbfield,	N/A
(c) snowpatch.	N/A
(6) In this section—	
damage , in relation to a plant, means the ringbarking, cutting down, topping, lopping, slashing, trimming, removing, poisoning, injury or wilful destruction of the plant.	
Schedule 2	
5 Internal building alterations	
Internal building alterations that do not involve the following—	
(a) any increase in the gross floor area of the building,	The floor area of Unit 5 Sequoia will not be increased, however some internal non-loadbearing walls have been altered.
(b) any alteration to a load-bearing member of a building or any alteration that results in the load-bearing capacity of the building being exceeded,	The loadbearing elements of the building are not being altered or proposed to be altered. Refer to Attachment 1 of this report. Attachment 1 includes a structural assessment and statement confirming no structural works have occurred or are proposed to occur. In addition the statement concludes that no additional loads are impaired by any works proposed or undertaken.
(c) any modification of any form of construction that is, or is proposed to be, implemented in a building to ensure the safety of persons using the building in the event of fire,	No such form of construction has been modified. The works undertaken to date are internal non-loadbearing and have not altered any form of construction relating to the fire safety of persons using the building in the event of fire. The works carried out to date involve internal refurbishment not involving fire safety elements. It proposed to install new smoke detectors in the same locations as existing. The new detectors are proposed to be installed to provide enhanced fire safety. This work could be carried out under typically annual fire safety statement processes in accordance with the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021. Any proposed future works to the external façade will be the subject of a Development Application. Any form of construction that may be modified would be subject to construction certification and BCA assessment, which is also covered in this BCA Report.
(d) any modification of any of the following—	N/A
(i) any kitchen used for commercial purposes,	N/A
(ii) any area, within premises, that is used for skin penetration procedures within the meaning of section 51 of the <u>Public Health Act 1991</u> ,	N/A
(iii) any hairdressing premises,	N/A
(iv) any swimming or spa pool within the building,	N/A

<i>Environmental Planning Policy (Precincts—Regional) 2021</i>	<i>Comments</i>
<i>(e) any alteration to a building comprising tourist accommodation that results in an increase in the size of a bedroom or an increase in the number of bedrooms in the tourist accommodation.</i>	<i>No increase in bedrooms proposed</i>

1.4 Considerations for Upgrade Works Required

The outcome of this assessment it is my view that the nature of existing and proposed building works is to Unit 5 consisting of primarily internal alterations and one external façade change to enlarge an existing window opening does not increase fire risk. Accordingly, these works **are not considered to warrant upgrade** to the entire existing building to bring it into full compliance with BCA 2019 Amendment 1, specifically in respect to sprinkler system installation and upgraded automatic fire detection & alarm system under this clause or Section 64 upgrade provisions under *Environmental Planning and Assessment Regulation 2021*, which states:

64 Consent authority may require upgrade of buildings

- (1) *This section applies to the determination of a development application that involves the rebuilding or alteration of an existing building if—*
 - (a) *the proposed building work and previous building work together represent more than half of the total volume of the building, or*
 - (b) *the measures contained in the building are inadequate—*
 - (i) *to protect persons using the building, if there is a fire, or*
 - (ii) *to facilitate the safe egress of persons using the building from the building, if there is a fire, or*
 - (iii) *to restrict the spread of fire from the building to other buildings nearby.*
- (2) *The consent authority must consider whether it is appropriate to require the existing building to be brought into total or partial conformity with the Building Code of Australia.*
- (3) *In this section—*

previous building work means building work completed or authorised within the previous 3 years.

total volume of a building means the volume of the building before the previous building work commenced and measured over the building's roof and external walls.

This is on the basis the building works to Unit 5 do not represent more than half of the total volume of the building and the essential fire safety measures contained & maintained in the existing building are deemed adequate in protecting persons using the building in a fire to facilitate safe egress of persons and restrict the spread of fire from the building to other buildings nearby.

Part 4 of this report provides a clause-by-clause assessment of the building works against current requirements of BCA 2019 Amendment 1. Subject to the resolutions summarised below it is my opinion the works completed and proposed meet the minimum BCA Performance Requirements.

It is our opinion that it is unreasonable and impractical to require the entire building to be upgraded to current BCA, based on generally minor internal refurbishment works of one unit (ie Unit 5) representing approximately 15-20% of the total building floor area. The key points to note are that:

1. The building is not undergoing works representing more 50% of the volume of the building (the works comprise ~15-20% at most).
2. The building does not have significant fire safety issues in that:
 - a. *the measures contained in the building are **not** inadequate—*
 - (i) *to protect persons using the building, if there is a fire, or*
 - (ii) *to facilitate the safe egress of persons using the building from the building, if there is a fire, or*
 - (iii) *to restrict the spread of fire from the building to other buildings nearby.*

The building has a current fire safety schedule and fire safety statement, as attached at Attachment 5 of this report. The measures contained in the fire safety schedule remain unaltered by the works undertaken or

proposed. The measures contained within the fire safety schedule are consistent with the original approval issued in 1994 and in generally remain relevant as the building has not undergone major redevelopment or works that would trigger total upgrade of the building under Section 64 of the Environmental Planning and Assessment Regulation 2021.

On the basis of the recommendations of this report, we consider the internal works could be permitted to be finalised, as the fire safety of the building has not been altered by the works and the structural capacity of the building has not been altered, as outlined in the attached structural report. In addition, the works recommended by this report at Section 1.5, be permitted to be undertaken under routine maintenance or if necessary, under the Order issued by the Department of Planning and Environment.

1.5 Recommendations

Provide a list of recommendations for upgrade of the building for fire and life safety improvement on the basis of the scale of building works, being less than 25% and only involving internal works to one unit only. The recommendations below are not a requirement of Section 64 Upgrade, however our recommendations for upgrade of matters that should be undertaken by the owners of Unit 5 and the entire complex, to improve fire safety.

BCA Clause	Deemed-to-Satisfy Provision to be addressed
C2.6 Vertical Separation of openings in external walls	<p>This is applicable only where the external windows are altered and only applicable to Unit 5. Therefore, only required where the DA is proposed for the window alterations.</p> <p>In this building not protected by a sprinkler system of Type A construction, any part of a window or other opening in an external wall is above another opening in the storey next below and its vertical projection falls no further than 450mm outside the lower opening (measured horizontally), the openings must be separated by –</p> <ul style="list-style-type: none"> (i) A spandrel which – <ul style="list-style-type: none"> (A) Is not less than 900mm in height; and (B) Extends not less than 600mm above the upper surface of the intervening floor; and (C) Is of non- combustible material having an FRL on not less 60/60/60; or (iv) A slab or other horizontal construction that – <ul style="list-style-type: none"> (A) Projects outwards from the external face of the wall not less than 1100mm; and (B) Extends along the wall not less than 450mm beyond the openings concerned; and (C) Is non-combustible and has an FRL of not less than 60/60/60. <p>Existing internal alterations viewed at the time of inspection have not altered existing spandrel protection to openings in the external wall. AED has been advised the existing vertical spandrel walls system to levels L1 to L4 consists of hebel wall construction which will achieve a minimum FRL -/60/60 as specified by DtS provisions.</p> <p>The existing building also relies on existing concrete balconies to provide horizontal protection assumed to achieve a minimum FRL 60/60/60 as approved under the base building design.</p> <p>The proposed building works that are yet to be completed subject to the DA & CC involves a proposed enlargement of the window opening in the northern façade which will not a minimum 450mm offset either side of the horizontal spandrel and will need to be addressed as part of a fire engineering solution to be approved by an accredited certifier at CC stage.</p>

BCA Clause	Deemed-to-Satisfy Provision to be addressed
C3.11 Bounding Construction	<p>The doorways in this Class 2 building must be protected between the public corridor and unit entry door by a self-closing fire door achieving a minimum FRL -/60/30.</p> <p>During the inspection it was observed that entry door frame to Unit 5 was tagged as a fire door however the door leaf was not tagged as required under AS 1905.1-2018.</p> <p>A check of the top edge of the door leaf revealed a heat vent hole was installed which is consistent with a fire door leaf. It is recommended the door be checked by a fire door specialist and verified as a fire door. On verification a tag is to be installed to satisfy AS 1905.1-2018 requirements.</p>
D2.16 Balustrades and other Barriers Note NSW D2.16	<p>The upgraded glazed balustrade to the internal stairway in Unit 5 is capable of complying with the DtS requirements of this clause.</p> <p>The external balcony balustrades to Unit 5 are proposed to be retained as existing as approved under the base building design. The renovation will involve upgrade to BCA 2019 Amendment 1 compliance by enclosing gaps more than 125mm in isolated locations between the end of the barrier and external wall and any climbable elements in the original design located between 150mm and 760mm above floor surface to be suitable screened to render non-climbable.</p>
D2.21 Operation of Latch	<p>Existing doorways in Unit 5 comply with the requirements of this clause.</p> <p>In common areas a number of doorways on the GL to carpark and storage room were the old style knob handles that are recommended to be upgraded to level type to satisfy the DtS provisions of this clause.</p>
D2.24 Protection of openable windows	<p>Bedroom windows in Unit 5 are required to be protected by a device or screen which must not permit a 125 mm sphere to pass through the window opening or screen and resist an outward horizontal action of 250 N against the window restrained by a device, or screen protecting the opening and have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.</p>
G4.3 External doorways	<p>The existing main entry/egress door to the residential building opens inward in compliance with DtS provisions of this clause.</p> <p>The door is not currently provided with signage marked "OPEN INWARDS" on the inside face of the door in letters not less than 75mm high in a colour contrasting with that of the background.</p> <p>Signage is recommended to be provided which is to be maintained by the owners corporation to be certified annually as part of the AFSS inspection and certifications.</p>
G4.8 Fire-fighting services and equipment	<p>The mounting position of the manual call point (MCP) adjacent to the main entry/egress was measured to be located 1.7m above floor level, in lieu of between 750mm and 1200mm as specified in Clause 3.14 of AS 1670.1-2018.</p> <p>It is recommended the MCP be lowered to comply with AS 1670.1-2018 and maintained by the owners corporation to be certified annually as part of the AFSS inspection and certifications.</p>
G4.8 Fire-fighting services and equipment	<p>Where necessary and considered appropriate, the existing smoke detectors be permitted to be changed for current smoke detectors. This recommendation relates to the smoke detection heads only and not the entire system. The existing smoke detectors date back to 1994, and current smoke detectors provide enhanced smoke detection capabilities.</p>

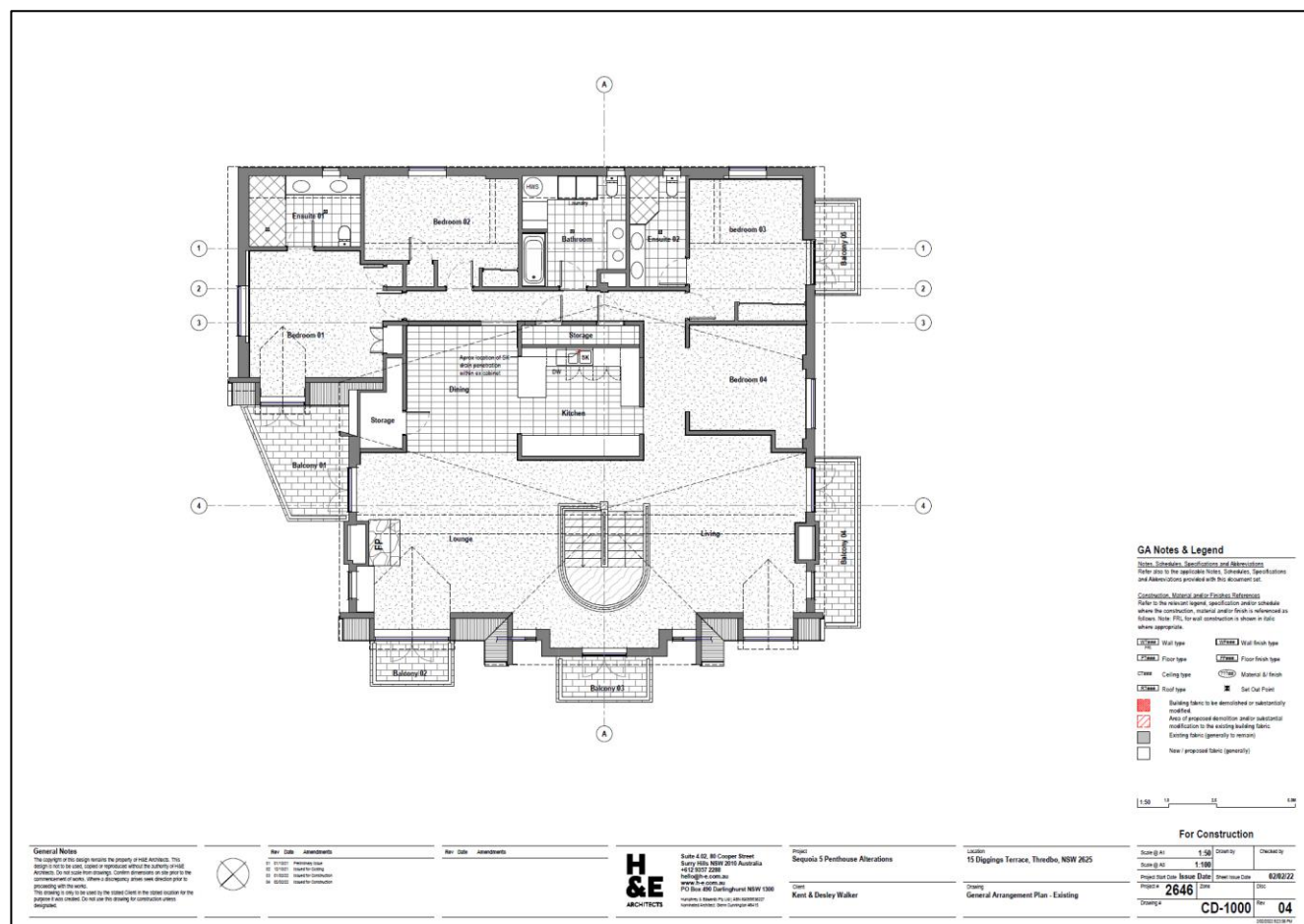
This report provides a Building Code of Australia (BCA) 2019 Amendment 1 assessment of alterations and refurbishment of Unit 5, located at 15 Diggings Terrace, Thredbo, NSW 2625 (Sequoia Apartments).

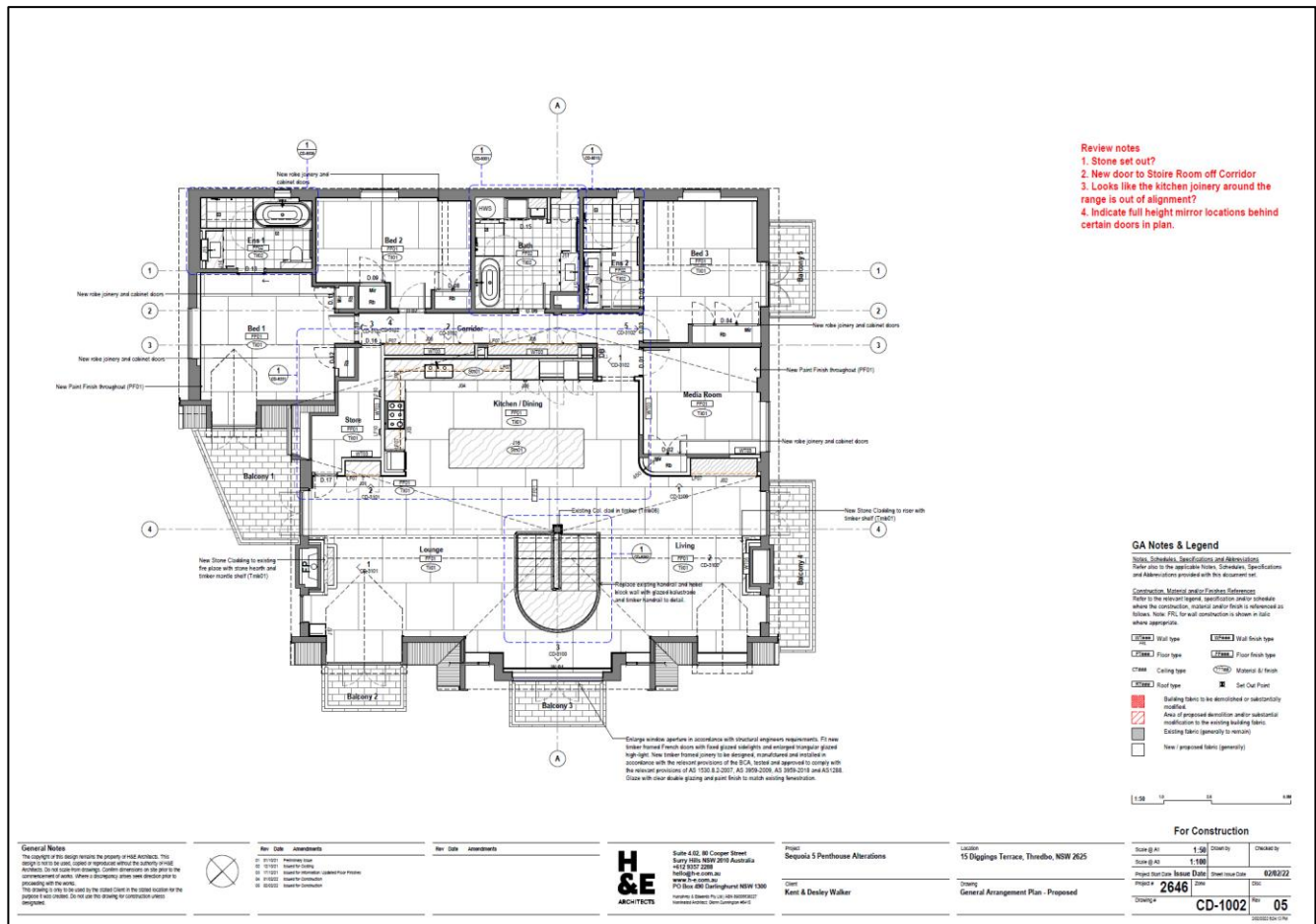
The existing development was constructed circa 1994 consists of a four (4) storey residential flat building containing 5 sole occupancy units with associated carpark on ground level. The building structure consists of concrete floors supporting on concrete columns throughout with hebel external wall and internal bounding walls. The façade consists of a combination of rendered cement over hebel external walls and a timber cladding attachment.

All building works carried out and proposed are wholly within Unit 5 which is located in part of L3 and the whole of L4 top storey.

A trigger for this assessment report is that internal building works have commenced onsite without prior approval of which the regulatory authority Department of Planning & Environment have advised.

Detailed below are the existing and proposed floor plans illustrating the scope of works subject of this assessment which consists primarily of minor reconfiguration of internal non-loadbearing walls and general refurbishment to existing bathroom areas, floors & walls linings.





This report provides a BCA assessment table in Section 3.0 that summarises the any identified non-compliance matters and offers specific recommendations.

2.1 Basis of Report

The key basis of this report is to address compliance with the Building Code of Australia (BCA) 2019 Amendment 1. The scope of services is limited to Sections C – “Fire Resistance”, Section D – “Access & Egress”, Section E – “Services & Equipment”, Section F “Health and Amenity”, Section G “Energy Efficiency” and Section J “Energy Efficiency”

This report is based on a site inspection on 3 June 2022 and a desktop assessment of the proposed plans, with specific reference to the following:

- Architectural plans prepared by H & E Architects, Job No.2646 as detailed on below Drawing Schedule –

Drawing Schedule			
Sheet Number	Revision	Revision Date	Sheet Name
CD-0001	04	02/02/22	Title page & Drawing Schedule
CD-0100	04	02/02/22	General Notes - Standard Abbreviations, Common requirements
CD-0101	04	02/02/22	General Notes - Construction
CD-0102	04	02/02/22	General Notes - Demolition Notes, RCP and Lighting Notes
CD-0103	02	02/02/22	Doors, Windows and Glazing specification
CD-0200	05	02/02/22	Materials & Finishes Schedule
CD-0202	04	02/02/22	Schedules
CD-1000	04	02/02/22	General Arrangement Plan - Existing
CD-1001	04	02/02/22	General Arrangement Plan - Demolition
CD-1002	05	02/02/22	General Arrangement Plan - Proposed
CD-1701	02	12/10/21	Furniture Plan - Proposed
CD-2100	04	02/02/22	General Arrangement - Reflected ceiling plan - Demolition
CD-2101	04	02/02/22	General Arrangement - Reflected ceiling plan - Proposed
CD-2102	04	02/02/22	Elevations - External
CD-3100	04	02/02/22	Internal Elevations
CD-3101	04	02/02/22	Internal Elevations
CD-3102	04	02/02/22	Internal Elevations
CD-6001	04	02/02/22	Bathroom - Details
CD-6005	04	02/02/22	Ensuite 01 - Details
CD-6010	04	02/02/22	Ensuite 02 - Details
CD-6050	03	02/02/22	Stair Well & Handrail
CD-6201	04	02/02/22	Kitchen - Detail Plan
CD-6202	04	02/02/22	Kitchen - Detail Elevations
CD-7000	03	02/02/22	Door Schedule

- The Building Code of Australia 2019 Amendment 1 prepared by the Australian Building Codes Board.
- The Guide to the BCA 2019 Amendment 1, prepared by the Australian Building Codes Board.
- Certification and documentation shown in the attachments of this report.

2.2 Purpose of the Report

The purpose of this report is to assess the following:

- Assessment under the current Building Code of Australia 2019 Amendment 1 and list any departures from the BCA 2019 Amendment 1.
- Provide recommendations to address identified non-compliances, and/or identify potential performance solutions.

2.3 Limitations of the Report

This report does not assess the following:

- Access and facilities for people with disabilities is addressed however compliance with Disability Discrimination Act 1992 (DDA) is outside the scope of this report. It should be noted that BCA compliance does not necessarily meet the requirements of the Disability Discrimination Act (DDA).
- Reporting on hazardous materials, OH&S matters or site contamination
- Assessment of any structural elements or geotechnical matters relating to the building, including any structural or other assessment of the existing fire resistant levels of the building
- Consideration of any fire services operations (including hydraulic, electrical or other systems)
- Assessment of plumbing and drainage installations, including stormwater
- Assessment of mechanical plant operations, electrical systems or security systems
- Heritage significance
- Consideration of energy or water authority requirements

- Consideration of Council's local planning policies
- Environmental or planning issues
- Requirements of statutory authorities
- Pest inspection or assessment building damage caused by pests (general/visual pest invasion or damage will be reported, however invasive or intrusive inspections have not be carried out)
- Sections H are not considered.
- Provision of any construction approvals or certification under Part 4A or Part 5 of the Environmental Planning & Assessment Act 1979.
- This assessment excludes BCA clauses D3.0-3.12 (Inclusive), E3.6 and F2.4. Refer to separate access consultant's report.
- BCA 2019 Amendment 1 does not directly specify slip-resistance classification(s) for all *accessible paths of travel*; however, we highlight the need under AS 1428.1-2009 for all *accessible paths of travel* to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant.

3.0 BCA ASSESSMENT DATA

The following data is provided in respect to review of the building under the Building Code of Australia 2019 Amendment 1 in respect to the compliance assessment of the building work alterations to Unit 5, located at 15 Diggings Terrace, Thredbo, NSW 2625 (Sequoia Apartments).

BCA Building Classifications:	Class 2 – Residential Sole Occupancy Units L1 to L4 Class 7a – Carpark GF Class 7b – Storage <10% of storey GF
Building rise in storeys:	4 (determined in accordance with C1.2 of the BCA).
Type of Construction:	A (determined in accordance with C1.1 of the BCA)
Effective Height (m):	<12m
Climate Zone (Thermal Design)	8

Note: The building was approved by NSW National Parks and Wildlife Services as a Class 2 and 7a building comprising apartments and associated carparking, in 1994. The building classification remains unaltered and remains as originally classified under BCA1990.

Location of Fire Source features

The potential *fire source features* to be considered for this building are the external wall of another building on the allotment which is not a Class 10 building, the side or rear of the allotment boundary or the far side of the road.

In this instance the following setbacks are determined in respect to the fire source features applicable to the building

- North – Far side of Diggings Terrace (> 6m)
- South – Private allotment boundary (>3m)
- East – Private allotment boundary (>3m)
- West – Private allotment boundary (>3m)

3.1 Summary of Existing Fire Services

Summarised below are the existing fire services installed in the building at the time of approval under BCA 1990 and subsequent fire safety upgrades as detailed in the current fire safety schedule for the building.

- External fire hydrants in the street assumed to have been upgraded in accordance with BCA E1.3 and AS 2419.1.
- An existing fire hose reel system complying with BCA E1.4 and AS 2441-1988 is provided to serve all areas and each storey.
- Fire Orders in accordance with BCA G4.9 near the main entry and on each storey.
- Automatic fire detection and alarm system in accordance with BCA E2.2, Specification E2.2, Part G4 and AS 1670.1-2004.
- Building occupant warning system in accordance with BCA E2.2, Specification E2.2a (Clause 6) and AS 1670.1-2004.
- Exit signs in accordance with BCA E4.5, E4.6 & E4.8 and AS/NZS 2293.1-1998.
- Manually operated fire alarm system with call points in accordance with G4.8 complying with AS 1670-1995.



- An emergency lighting system installed throughout the building in accordance with BCA G4.4 and AS 2293.1-1998.
- Fire seals to services penetrating building elements required to achieve an FRL to BCA C3.14 & BCA C3.15.
- Fire doors to bounding construction in accordance with BCA C3.5 & C3.11 and AS 1905.1-1990.
- Signage on doors in accordance with BCA G4.3.

3.2 Building subject to Design and Building Practitioners Act

The building would be subject to the following where a Development Application is lodged.

The Design and Building Practitioners Act 2020 and Design and Building Practitioners Regulation 2021 (the DBP legislation) were established to raise the standards of building design and building work. This legislation applies to class 2 buildings or buildings with a class 2 part.

Design Practitioners (e.g. architects, engineers) have obligations in relation to preparing and declaring Regulated Designs under the DBP legislation. The obligations under the DBP legislation are in addition to design requirements under other legislation.

For more information please go to:

[Design-Practitioners-Handbook-3.pdf \(nsw.gov.au\)](#)

[Regulated Design Guidance Material.PDF \(nsw.gov.au\)](#)

[Class 2 building industry reforms | NSW Fair Trading](#)



4.0 BCA ASSESSMENT SUMMARY

The following table details the BCA compliance of the assessed design.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
SECTION B STRUCTURE					
Part B1: Structural Provisions	X				<ul style="list-style-type: none"> ❖ Structural engineer to provide structural drawings/details and accompanying structural design certificate to demonstrate that all building elements will comply with Section B of the BCA. ❖ Glazing must comply with AS1288-2006 and AS2047-2014. <p>All building works have been assessed by Grounded Structural Engineer and a structural statement provided on 7 May 2022 the current works do not alter any load bearing member of the building, nor do they result in the load bearing capacity of a member being exceeded (Attachment 1).</p> <p>The new proposed glazed internal balustrade design has been supported by Design Certificate confirming design loads comply with AS 1170.0 & AS 1170.1 which are the applicable design standards under BCA 2019 Amendment 1 – Section B (Attachment 2).</p>
SECTION C FIRE RESISTANCE					
Part C1 - Fire Resistance & Stability					
C1.1 Type of Construction Required	X				<p>The base building approved under BCA 1990 was required to be built to Type A construction under Specification C1.1. It is assumed the fire resistance levels (FRL's) complied at the time of construction. It is noted the minimum FRL's of building elements, such as internal columns and floor slabs are the same as the current BCA 2019 Amendment 1.</p> <p>As confirmed by structural engineer the works do not involve any structural changes to the base building or involve changes to existing bounding construction between units.</p> <p>During AED's inspection it was noted that internal wall bounding Unit 5 & Unit 4 comprised of non-loadbearing hebel construction that achieves a minimum FRL -/60/60 consistent with current BCA 2019 Amendment 1 requirements.</p>
C1.2 Calculation of Rise In Storeys			X		The building has a rise in storeys (RIS) of four (4).
C1.3 Buildings of Multiple Classifications			X		It has been assumed the base building has been built to Type A construction.
C1.4 Mixed Types of Construction			X		It has been assumed the whole of the base building has been built to Type A construction.
C1.5			X		Concession not applicable to this building as it has RIS of more than 2.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Two Storey Class 2, 3 or 9c buildings					
C1.6 Class 4 Parts			X		Not applicable – no Class 4 part.
C1.7 Open Spectator Stands			X		Not applicable to this building classification.
C1.8 Lightweight Construction			X		Not applicable on the basis the internal and external non-loadbearing walls required to achieve an FRL have been constructed with Hebel (aerated concrete) a minimum 75mm thick.
C1.9 Non - combustible building elements			X		<p>The façade of the existing building has existing timber cladding which at the time of construction would have complied with BCA 1990 as it is not located over exits as specified in BCA C1.1 & Specification C1.1.</p> <p>BCA 2019 Amendment 1 does not permit combustible cladding on a building of Type A construction. However, given the nature of works is primarily internal alterations only and does not increase fire risk or spread via the facade it is not considered this warrants upgrade to the existing cladding under this clause or Section 64 upgrades under <i>Environmental Planning and Assessment Regulation 2021</i>.</p> <p>This is on the basis the building works to Unit 5 do not represent more than half of the total volume of the building and the essential fire safety measures contained & maintained in the existing building are deemed adequate in protecting persons using the building in a fire to facilitate safe egress of persons and restrict the spread of fire from the building to other buildings nearby.</p>
C1.10 Fire Hazard Properties	X				<p>Existing floor linings are tile with plasterboard wall and ceiling linings.</p> <p>A new timber wall lining attached to existing plasterboard has been installed in areas of the new dwelling as part of the new works which has been confirmed as spotted gum which complies with Clause 4 of Specification C1.10 in that it is Group 3 and has an average extinction area of less than 250m²/kg.</p> <p>A copy of the Warrington Fire Report No. SFR 41117.2 is provided in this report (Attachment 3).</p>
C1.11 Performance of External Walls in Fire			X		Not applicable to this building as it does not comprise of concrete external wall panels.
C1.13 Fire protected timber: concession			X		Not applicable to this existing building that does not comprise of fire protected timber where an element is required to be non-combustible.
C1.14 Ancillary elements			X		The works have not changed any existing parts to the façade as discussed in BCA C1.9.
Part C2 - Compartmentation & Separation					
C2.2 General Floor Area & Volume Limitations	X				The size of any fire compartment of the existing Class 7a part does not exceed the relevant maximum floor area and maximum volume set out in Table C2.2 & C2.5 for Type A construction.
C2.3			X		Not applicable as building is not defined as large isolated.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Large Isolated Buildings					
C2.4 Requirements for Open Space			X		Not applicable as building is not defined as large isolated.
C2.5 Class 9a & 9c Buildings			X		Not applicable to this building that is not a Class 9a or 9c.
C2.6 Vertical Separation of openings in external walls				X	<p>In this building not protected by a sprinkler system of Type A construction, any part of a window or other opening in an external wall is above another opening in the storey next below and its vertical projection falls no further than 450mm outside the lower opening (measured horizontally), the openings must be separated by –</p> <ul style="list-style-type: none"> (i) A spandrel which – <ul style="list-style-type: none"> (A) Is not less than 900mm in height; and (B) Extends not less than 600mm above the upper surface of the intervening floor; and (C) Is of non- combustible material having an FRL on not less 60/60/60; or (iv) A slab or other horizontal construction that – <ul style="list-style-type: none"> (A) Projects outwards from the external face of the wall not less than 1100mm; and (B) Extends along the wall not less than 450mm beyond the openings concerned; and (C) Is non-combustible and has an FRL of not less than 60/60/60. <p>Existing internal alterations viewed at the time of inspection have not altered existing spandrel protection to openings in the external wall. AED has been advised the existing vertical spandrel walls system to levels L1 to L4 consists of hebel wall construction which will achieve a minimum FRL -/60/60 as specified by DtS provisions.</p> <p>The existing building also relies on existing concrete balconies to provide horizontal protection assumed to achieve a minimum FRL 60/60/60 as approved under the base building design.</p> <p>The proposed building works that are yet to be completed subject to the DA & CC involves a proposed enlargement of the window opening in the northern façade which will not a minimum 450mm offset either side of the horizontal spandrel and will need to be addressed as part of a fire engineering solution to be approved by an accredited certifier at CC stage.</p>
C2.7 Separation by Fire Walls			X		Not applicable to current building design that does not rely on fire walls to separate the building in separate fire compartments under this clause.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	Informational NA or	Compliance Required	COMMENTS
C2.8 Separation of Classifications in the same storey			X		<p>This building does not contain any storey with different classifications located alongside one other in the same storey.</p> <p>The Ground Level consists of a class 7a carpark & 7b storage area that represents less than 10% of the total floor area of the storey.</p> <p>It has been assumed that each building element including structural columns above achieve a minimum FRL 120/120/120 approved as part of the base building as required under support of another part provisions of Specification C1.1.</p>
C2.9 Separation of Classifications in different storeys			X		<p>The building works completed and proposed under the DA have not altered existing concrete slab separation between Ground Level and Level 1 separating Class 7a parts from the residential Class 2 units on Level 1.</p> <p>It has been assumed that soffit slab achieves a minimum FRL 120/120/120 approved as part of the base building as required under Specification C1.1.</p> <p>It is noted the current concession under Clause 3.10(b) in BCA 2019 Amendment 1 to reduce the FRL of the lower storey where consisting of only carpark/ancillary uses in a Class 2 building with RIS 4 did not form part of BCA 1990.</p>
C2.10 Separation of lifts shafts			X		Not applicable as no lift installed in this building.
C2.11 Stairways and lifts in one shaft			X		Not applicable as no lift installed in this building.
C2.12 Separation of Equipment			X		Not applicable to the building design and current services.
C2.13 Electrical Supply			X		Not applicable as building works involve no change to existing electrical supplies to the building.
C2.14 Public corridors in Class 2 & 3 Buildings			X		Not applicable as corridor lengths in the existing Class 2 building do not exceed 40m.
Part C3 - Protection of Openings					
C3.2 Protection of openings in external walls			X		The existing building is setback a minimum 3m from the private allotment boundaries and not exposed to any fire source features that requires protection of window or door openings under this clause.
C3.3 Separation of external walls and associated openings in different fire compartments			X		Not applicable to this building that does not have different fire compartments.
C3.4 Acceptable Methods of Protection			X		<p>Informational – current building works not subject to the requirements if the DtS clause -</p> <p>(a) Where protection is required to doorways and windows and other openings they must be protected as follows:</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(i) Doorways</p> <ul style="list-style-type: none"> ❖ Internal or external wall wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or ❖ -/60/30 fire doors that are self-closing or automatic closing <p>(ii) Windows</p> <ul style="list-style-type: none"> ❖ Internal or external wall wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position or; ❖ -/60- fire windows that are automatic closing or permanently fixed in the closed position or ❖ -/60- automatic closing fire shutters. <p>(iii) Other openings –</p> <ul style="list-style-type: none"> ❖ Excluding voids – internal or external wall wetting sprinklers as appropriate or ❖ Construction having a FRL not less than -/60/-. <p>(b) Fire doors, fire windows and fire shutters must comply with Specification C3.4.</p>
C3.5 Doorways in Fire Walls			X		Not applicable as the building does not rely on fire walls under D2.5 to separate the building in fire compartments.
C3.6 Sliding Fire Doors			X		Not applicable – no sliding fire doors.
C3.7 Protection of Doorways in horizontal exits			X		Not applicable – no horizontal exits.
C3.8 Openings in fire isolated exits			X		Not applicable – no fire isolated exits.
C3.9 Service Penetrations in fire-isolated exits			X		Not applicable – no fire isolated exits.
C3.10 Openings in Fire isolated lift shafts			X		Not applicable – no lift shafts.
C3.11 Bounding Construction				X	<p>The doorways in this Class 2 building must be protected between the public corridor and unit entry door by a self-closing fire door achieving a minimum FRL -/60/30.</p> <p>During the inspection it was observed that entry door frame to Unit 5 was tagged as a fire door however the door leaf was not tagged as required under AS 1905.1.</p> <p>A check of the top edge of the door leaf revealed a heat vent hole was installed which is consistent with a fire door leaf. It is recommended the door be checked by a fire door specialist and</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					verified as a fire door. On verification a tag is to be installed to satisfy AS 1905.1 requirements.
C3.12 Openings in floors and ceilings for services			X		The building works have not altered any existing floor openings approved under the base building assumed to comply at time of construction.
C3.13 Openings in Shafts			X		The building works have not altered any existing shafts that may have been approved and assumed to comply under the base building.
C3.15 Openings for Service Installations			X		The new and proposed building works did not involve any new penetrations through the existing floor slab required to achieve an minimum FRL of 90/90/90. It is assumed that fire collars were installed as part of the base building works and complied at the time of construction. This has been confirmed by O'Ryan Plumbing in their completed works statement dated 1 May 2022 (Attachment 4)
C3.16 Construction Joints			X		The existing and proposed works does not involve any changes to fire sealing of construction joints, spaces and the like in and between building elements required to be fire-resisting which is assumed to have complied at the time of construction.
C3.17 Columns protected in lightweight construction to achieve an FRL			X		The existing loadbearing steel columns in the lunge and roof space of Unit 5 were observed at the time of inspection to be encased in fire rated plasterboard construction. The existing and proposed works have not altered this encasement to the steel internal columns as part of base building construction and have been assumed to have complied at time of construction.

SECTION D ACCESS & EGRESS

Part D1 - Provision for Escape

D1.1 Application of Part			X		The DtS provisions of this Part do not apply to the internal parts of a sole occupancy unit in a Class 2 or 3 building or Class 4 part of a building.
D1.2 Number of Exits required	X				A minimum of one (1) exit is provided from each storey to satisfy DtS requirements.
D1.3 When Fire Isolated exits are required	X				The internal required exit stairway in this building approved under the base building is not required to be fire isolated as it does not connect, pass through or pass by more than 3 consecutive storeys.
D1.4 Exit Travel Distances	X				Exit travel distances from the unit entry doorways to the exit do not exceed 6m and comply with the DtS provisions of this clause. Exit travel distances from the carpark to exit do not appear to exceed 20m and are assumed to comply as approved under the base building design.
D1.5 Distance Between Alternative Exits			X		Not applicable as alternative exits not required in this building.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	Informational NA or	Compliance Required	COMMENTS
D1.6 Dimensions of Exits and paths of Travel to Exits	X				A minimum on 1m was observed to be provided through egress paths as approved under the base building.
D1.7 Travel via Fire Isolated Stairs			X		Not applicable – refer to D1.3
D1.8 External Stairways or ramps in lieu of Fire Isolated Stairs			X		Not applicable to this building design.
D1.9 Travel by non-fire-isolated stairs	X				The existing required non-fire isolated stairway exit serving L3 to GL provides a continuous means of travel to the level of discharge to the road in accordance with the DtS provisions of this clause
D1.10 Discharge from Exits	X				The discharge from the main egress door at GL to the road complies with the DtS provisions of this clause as approved under the base building design.
D1.11 Horizontal Exits			X		Not applicable – no horizontal exits in this design.
D1.12 Non-required stairways, ramps or escalators			X		Not applicable – no non required stairways in common areas in this building.
D1.13 Number of Persons Accommodated Note NSW Table D1.13 Area per person according to use			X		This building comprises of five (5) sole occupancy residential units and likely to have a maximum population of 30 person based on 2 persons per bedroom.
D1.14 Measurement of Distances			X		Informational only- The nearest part of an exit means in the case of— (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and (c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and (d) a doorway opening to a road or open space, the nearest part of the doorway; and (e) a horizontal exit, the nearest part of the doorway.
D1.15 Method of Measurement			X		Informational only - The following rules apply:

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(a) In the case of a room that is not a sole occupancy unit in a Class 2 or 3 building or Class 4 part of a building, the distance includes the straight-line measurement from any point of the floor of the room to the nearest part of the doorway leading from it, together with the distance from the part of the doorway to the single required exit or point from which travel in different directions to 2 required exits is available.</p> <p>(b) Subject to (d), the distance from the doorway of a sole occupancy unit in a Class 2 or 3 building is measured in a straight line to the nearest part of the required single exit or point from which travel in different directions to 2 required exits is available.</p> <p>(c) Subject to (d), the distance between exits is measured in a straight line between the nearest parts of those exits.</p> <p>(d) Only the shortest distance is taken along a corridor, hallway, external balcony or other path of travel that curves or changes direction.</p> <p>(e) If more than one corridor, hallway, or other internal path of travel connects required exits, for the purposes of D1.5(c) the measurement is along the path of travel through the point at which travel in different directions to those exits is available, as determined in accordance with D1.4.</p> <p>(f) If a wall (including a demountable internal wall) that does not bound –</p> <p>(i) A room; or</p> <p>(ii) A corridor, hallway or the like, causes a change in direction in proceeding to a required exit, the distance is measured along the path of travel past the wall.</p> <p>(iii) If permanent fixed seating is provided, the distance is measured along the path of travel between the rows of seats.</p> <p>(iv) In the case of a non-fire isolated stairway or non-fire isolated ramp, the distance is measured along a line connecting the nosings of the treads, along the slope of the ramp, together with the distance connecting those lines across any intermediate landing.</p>
D1.16 Plant Rooms and lift Motor Rooms: Concession			X		Not applicable – no plant areas.
D1.17 Access to lift pits			X		Not applicable - no lifts.
Part D2 - Construction of Exits					
D2.1 Application of Part			X		Except for D2.13, D2.14 (a), D2.16, D2.17(d), D2.17(e) and D2.18, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of the Class 2 sole-occupancy units.
D2.2			X		Not applicable – no fire isolated stairways or ramp.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Fire-Isolated stairways and ramps					
D2.3 Non-fire Isolated stairways and ramps	X				The required internal non-fire isolated exit constructed as part of base building is concrete and complies with the DtS provisions of this clause.
D2.4 Separation of Rising and Descending Stairs			X		Not applicable - no rising and descending stairways.
D2.5 Open Access ramps and balconies			X		Not applicable – no access ramps or balconies.
D2.6 Smoke Lobbies			X		Not applicable – no smoke lobby required under BCA D1.7.
D2.7 Installations in Exits and Paths of Travel	X				No change to base building as part of building works which is assumed to comply at time of construction.
D2.8 Enclosure of Space Under Stairs and ramps			X		Not applicable – no enclosures under required stairway exit approved as part of base building.
D2.9 Width of Stairs			X		Not applicable to this building design.
D2.10 Pedestrian Ramps			X		Not applicable to this building design.
D2.11 Fire-Isolated Passageways			X		Not applicable to this building design.
D2.12 Roof as Open Space			X		Not applicable to this building design.
D2.13 Goings & Risers	X				Existing stairway within Unit 5 and required exit stairway in common areas where found to compliant risers and goings consistent with Table D2.13a.
D2.14 Landings	X				No change to landings approved as part of base building assumed to comply at time of construction.
D2.15 Thresholds	X				Doorways thresholds within Unit 5 comply with the DtS provisions of this clause. Thresholds at doorways in common areas will be assessed under separate access report.
D2.16 Balustrades and other Barriers Note NSW D2.16				X	The proposed upgrade of the glazed balustrade to the internal stairway in Unit 5 is capable of complying with the DtS requirements of this clause.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					The external balcony balustrades to Unit 5 are proposed to be retained as existing as approved under the base building design. The renovation will involve enclosing gaps more than 125mm in isolated locations between the end of the barrier and external wall and any climbable elements in the original design located between 150mm and 760mm above floor surface to be suitable screened to render non-climbable.
D2.17 Handrails				X	<p>The proposed new handrail to the internal stairway in Unit 5 is to be located along at least one side of the flight and be located along the full length of the flight, except in the case where a handrail is associated with a barrier, the handrail may terminate where the barrier terminates.</p> <p>The top surface of the handrail must be installed not less than 865 mm vertically above the nosings of the stair treads and have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like.</p>
D2.18 Fixed Platforms, walkways and ladders			X		Not applicable to this building design.
D2.19 Doorways & Doors	X				Existing doorways in Unit 5 and commons areas comply with the requirements of this clause.
D2.20 Swinging Doors	X				Existing doorways in Unit 5 and commons areas comply with the requirements of this clause.
D2.21 Operation of Latch				X	<p>Existing doorways in Unit 5 comply with the requirements of this clause.</p> <p>In common areas a number of doorways on the GL to carpark and storage room were the old style knob handles that are recommended to be upgraded to level type to satisfy the DtS provisions of this clause.</p>
D2.22 Re-entry from Fire isolated exits			X		Not applicable – no fire isolated exits.
D2.23 Signs on Doors			X		Not applicable to this building design – refer to Part G4.
D2.24 Protection of openable windows				X	Bedroom windows in Unit 5 are required to be protected by a device or screen which must not permit a 125 mm sphere to pass through the window opening or screen and resist an outward horizontal action of 250 N against the window restrained by a device, or screen protecting the opening and have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.
D2.25 Timber stairways concession			X		Not applicable to this building design.

SECTION SERVICES & EQUIPMENT

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Part E1 - Fire Fighting Equipment					
E1.3 Fire Hydrants	X				The building has a floor area of more than 500m ² and is provided with adequate external fire hydrants in the street assumed to have been upgraded in accordance with BCA E1.3 and AS 2419.1-2005.
E1.4 Fire Hose Reels	X				The building is provided with a fire hose reel system installed to BCA E1.4 and AS 2441-1988. As detailed on the Annual Fire Safety Statement (Attachment 5) this essential fire safety measure is being maintained with the last date assessment on 13 April 2022.
E1.5 Sprinklers			X		BCA 2019 Amendment 1 would now require this building with a RIS 4 to be sprinkler protected throughout in accordance with Specification E1.5. However, given the nature of works to Unit 5 is primarily internal alterations and does not increase fire risk it is not considered this would trigger an upgrade to the entire existing building to install a sprinkler system under this clause or Section 64 upgrade under <i>Environmental Planning and Assessment Regulation 2021</i> . This is on the basis the building works to Unit 5 do not represent more than half of the total volume of the building and the essential fire safety measures contained & maintained in the existing building are deemed adequate in protecting persons using the building in a fire to facilitate safe egress of persons and restrict the spread of fire from the building to other buildings nearby.
E1.6 Portable Fire Extinguishers	X				The building is provided with portable fire extinguishers installed to BCA E1.4 and AS 2441-1995. As detailed on the Annual Fire Safety Statement (Attachment 5) this essential fire safety measure is being maintained with the last date assessment on 13 April 2022.
E1.8 Fire Control Centre			X		Not applicable to this sized building.
E1.9 Fire Precautions during construction	X				The existing building is provided to with PFE protection per BCA E1.6.
E1.10 Provision for Special Hazards			X		Not applicable – this building does not present any special hazards.
Part E2 Smoke Hazard Management					
E2.2 General Requirements (inclusive of Table E2.2a / Table E2.2b & NSW amendments)	X				As detailed on the latest AFSS dated 13 April 2022 this building is provided with automatic fire detection and alarm system and maintained in accordance with BCA E2.2, Specification E2.2 and AS 1670.1-2004 and building occupant warning system in accordance with BCA E2.2, Specification E2.2a (Clause 6) and AS 1670.1-2004 (Attachment 5).

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>It is proposed as part of the building works to Unit 5 to upgrade the existing smoke detectors only which is considered to be permitted under maintenance requirements of the existing system.</p> <p>Given the nature of works is to Unit 5 is primarily internal alterations and does not increase fire risk it is not considered this would trigger an upgrade to the entire existing building to install a sprinkler system under this clause or Section 64 upgrade under <i>Environmental Planning and Assessment Regulation 2021</i>.</p> <p>This is on the basis the building works to Unit 5 do not represent more than half of the total volume of the building and the essential fire safety measures contained & maintained in the existing building are deemed adequate in protecting persons using the building in a fire to facilitate safe egress of persons and restrict the spread of fire from the building to other buildings nearby.</p>
E2.3 Provision for Special Hazards			X		Not applicable – this building does not present any special hazards.
Part E3 - Lift Installations – not applicable to this building					
Part E4 - Visibility in an Emergency, Exit signs and Warning Systems					
E4.2 Emergency Lighting Requirements	X				<p>The building is provided with emergency lighting throughout installed to BCA E4.4 and AS/NZS 22931-1998.</p> <p>As detailed on the Annual Fire Safety Statement (Attachment 5) this essential fire safety measure is being maintained with the last date assessment on 13 April 2022.</p> <p>It is proposed as part of the building works to Unit 5 that the existing emergency lighting with the unit will be upgraded to new by a qualified electrical contractors which is considered to be permitted under maintenance requirements of the existing system.</p>
E4.4 Design and Operation of Emergency Lighting			X		The emergency lighting system for new works must comply with AS/NZS 2293.1-2018
E4.5 Exit Signs	X				<p>The building is provided with exit signs throughout installed to BCA E4.5, E4.6 & E4.8 and AS/NZS 22931-1998.</p> <p>As detailed on the Annual Fire Safety Statement (Attachment 5) this essential fire safety measure is being maintained with the last date assessment on 13 April 2022.</p>
E4.6 Direction Signs (inclusive of NSW E4.6)	X				<p>The building is provided with directional exit signs throughout installed to BCA E4.6 and AS/NZS 22931-1998.</p> <p>As detailed on the Annual Fire Safety Statement (Attachment 5) this essential fire safety measure is being maintained with the last date assessment on 13 April 2022.</p>
E4.7 Class 2 & 3 Buildings & Class 4 Parts: Exemption			X		Not applicable – this concession has not been implemented in this building noting exit signage per BCA E4.5.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
E4.8 Design & Operation of Exit Signs			X		The building works within Unit 5 does not propose any upgrade to existing exit signage. It is noted that any new exit signs must comply with (a) AS/NZS 2293.1-2018.
E4.9 Emergency Warning & Intercom Systems			X		Not applicable to this building size.
SECTION F					
HEALTH & AMENITY					
Part F1 - Damp & Weatherproofing					
F1.0 Deemed -to-Satisfy Provisions			X		Architectural details for any proposed change to façade around the enlarged window opening subject to future DA must demonstrate compliance with BCA Performance Requirement FP1.4.
F1.1 Stormwater Drainage			X		Not applicable – proposed building works in Unit 5 do not alter existing system constructed as part of base building and assumed to comply at time of construction.
F1.4 External above ground membranes			X		Not applicable – proposed building works in Unit 5 do not alter existing system constructed as part of base building and assumed to comply at time of construction.
F1.5 Roof coverings			X		Not applicable – proposed building works in Unit 5 do not alter existing system constructed as part of base building and assumed to comply at time of construction.
F1.6 Sarking			X		Not applicable – proposed building works in Unit 5 do not alter existing system constructed as part of base building and assumed to comply at time of construction.
F1.7 Waterproofing of wet area	X				Building works within Unit 5 involved the renovation of existing wet areas in bathrooms. The new works are subject to compliance with AS 3740-2010 and required to be completed by a licensed contractor. AED have reviewed photographic evidence of the application of waterproofing and verified that it appears the works have been completed by a licenced waterproofing specialist. An installation certificate dated 31 May 2022 has been provided by Aldex NSW Pty Ltd who undertook the waterproofing works contesting compliance with the BCA (Attachment 6).
F1.9 Damp-proofing			X		Not applicable – proposed building works in Unit 5 do not alter existing damp-proofing system constructed as part of base building and assumed to comply at time of construction.
F1.10 Damp-proofing of floors on the ground			X		Not applicable – proposed building works in Unit 5 do not alter existing damp-proofing constructed as part of base building and assumed to comply at time of construction.
F1.11 Provision of Floor Wastes			X		Not applicable – proposed building works in Unit 5 do not alter existing floor wastes constructed as part of base building and assumed to comply at time of construction.
F1.12 Sub Floor Ventilation			X		Not applicable to this building design.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	Informational NA or	Compliance Required	COMMENTS
F1.13 Glazed Assemblies				X	The new glazed windows proposed to be installed in the external wall subject to future DA & CC must comply with AS 2047-2014 for resistance to water penetration.
Part F2 - Sanitary & Other Facilities					
F2.1 Facilities in residential buildings	X				Building works in Unit 5 do not involve changes to any facilities required and satisfy DtS provisions of this clause.
F2.3 Facilities for Class 3 to 9 Buildings			X		Not applicable to this building classification.
F2.5 Construction of Sanitary Compartments	X				Not applicable – doors to existing enclosed sanitary compartments in Unit 5 are accessed by a sliding door or a swing door that provides a clear space of at least 1.2m between the closet pan within the compartment and the doorway.
F2.8 Waste Management			X		Not applicable to this building classification.
F2.9 Accessible adult change facilities			X		Not applicable to this building classification.
Part F3 Room Sizes					
F3.1 Height of Rooms and other spaces			X		<p>All existing ceiling heights have been maintained to comply with minimum DtS provisions with exception of the enlarged storeroom accessed from the hallway and lounge room.</p> <p>The storeroom has a sloping ceiling less than 2.4 m for less than two thirds of the floor area of the room or space.</p> <p>On the basis this is a non-habitable storage space within a private sole occupancy unit it considered that it has sufficient height that does not unduly interfere with its intended use and satisfies Performance Requirement FP3.1 of the BCA.</p>
Part F4 - Light & Ventilation					
F4.1 Provision of natural light	X				Natural light is maintained to all habitable rooms resulting from the new building works complying with DtS provisions of this clause.
F4.2 Methods and extent of natural lighting	X				Natural light is provided to all habitable room via windows above minimum DtS requirements of this clause.
F4.3 Natural light borrowed from adjoining room			X		Not applicable – Unit 5 does not rely on borrowed light to meet minimum DtS light provisions.
F4.4 Artificial lighting			X		Not applicable to the internal parts of Unit 5.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
F4.5 Ventilation of Rooms	X				Natural and mechanical ventilation has been maintained within Unit 5 in accordance with DtS requirements of this clause.
F4.6 Natural Ventilation	X				Natural ventilation has been maintained within Unit 5 in accordance with DtS requirements of this clause.
F4.7 Ventilation borrowed from adjoining room			X		Not applicable – borrowed ventilation is not relied on to achieve DtS compliance with Unit 5.
F4.8 Restriction of position of water closets and urinals	X				The location of existing sanitary compartments comply with the minimum DtS requirements of this clause.
F4.9 Airlocks			X		Not applicable to this design.
F4.11 Carparks			X		The existing carpark relies on natural ventilation approved as part of base building design assumed to comply at the time of construction.
F4.12 Kitchen local exhaust			X		Not applicable to this building use.
Part F5 - Sound Transmission					
F5.2 Determination of airborne sound insulation ratings			X		Building works within Unit 5 have not altered existing flooring construction which is assumed to comply with the impact sound insulation rating required at time of construction.
F5.3 Determination of impact sound insulation ratings			X		Building works within Unit 5 have not altered existing flooring construction which is assumed to comply with the impact sound insulation rating required at time of construction.
F5.4 Sound Insulation of floors between units			X		Building works within Unit 5 have not altered existing flooring construction which is assumed to comply with the impact sound insulation rating required at time of construction.
F5.5 Sound insulation of walls between units			X		Building works within Unit 5 have not altered existing wall construction which is assumed to comply with the impact sound insulation rating required at time of construction.
F5.6 Sound insulation rating of services			X		Building works within Unit 5 have not altered existing insulation to services which is assumed to comply with insulation rating where required at time of construction.
F5.7 Sound isolation of pumps			X		Building works within Unit 5 have not altered any existing insulation of pumps which if installed are assumed to comply at time of construction.
Part F6 – Condensation Management					
F6.1 Application of Part			X		The Deemed-to-Satisfy Provisions of this Part only apply to a sole-occupancy unit of a Class 2 building and a Class 4 part of a building.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
F6.2 Pliable building membrane			X		Not applicable - the existing and proposed works do not affect existing façade system.
F6.3 Flow rate and discharge of exhaust systems				X	<p>(a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of—</p> <p>(i) 25 L/s for a bathroom or sanitary compartment; and</p> <p>(ii) 40 L/s for a kitchen or laundry.</p> <p>(b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air.</p> <p>(c) Exhaust from a bathroom, sanitary compartment, or laundry must be discharged—</p> <p>(i) directly or via a shaft or duct to outdoor air; or</p> <p>(ii) to a roof space that is ventilated in accordance with F6.4.</p> <p>Any new mechanical ventilation provided in bathrooms and kitchen are required to comply with the DtS requirements of this clause.</p> <p>This should be verified by principal building contractor.</p>
F6.4 Ventilation of roof spaces				X	<p>(a) Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings.</p> <p>(b) Openings required by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is greater than 22°, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22°.</p> <p>(c) 30% of the total unobstructed area required by (b) must be located not more than 900 mm below the ridge or highest point of the roof space, measured vertically, with the remaining required area provided by eave vents.</p> <p>Any new mechanical ventilation provided in bathrooms and kitchen are required to comply with the DtS requirements of this clause.</p> <p>This should be verified by principal building contractor.</p>

SECTION G ANCILLIARY PROVISIONS

Part G4 - Construction in Alpine Areas

G4.3 External doorways		X			<p>The existing main entry/egress door to the residential building opens inward in compliance with DtS provisions of this clause.</p> <p>The door is not currently provided with signage marked "OPEN INWARDS" on the inside face of the door in letters not less than 75mm high in a colour contrasting with that of the background.</p> <p>Signage is recommended to be provided which is to be maintained by the owners corporation to be certified annually as part of the AFSS inspection and certifications.</p>
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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
G4.4 Emergency lighting	X				The building is provided with emergency lighting throughout installed to BCA Part E4 and AS/NZS 22931-1998. As detailed on the Annual Fire Safety Statement (Attachment 5) this essential fire safety measure is being maintained with the last date assessment on 13 April 2022.
G4.5 External trafficable Structures			X		The building access/egress remains unchanged as approved under the base building.
G4.6 Clear space around buildings			X		Building setbacks remain unchanged as approved under the base building.
G4.8 Fire-fighting services and equipment		X			The building is provided with a manually operated fire alarm system with call points, a street fire hydrant system and fire hose reel system. As detailed on the Annual Fire Safety Statement (Attachment 5) these essential fire safety measure are being maintained with the last date assessment on 13 April 2022. The mounting position of the manual call point (MCP) adjacent to the main entry/egress was measured to be located 1.7m above floor level, in lieu of between 750mm and 1200mm as specified in Clause 3.14 of AS 1670.1-2018. It is recommended the MCP be lowered to comply with AS 1670.1-2018 and maintained by the owners corporation to be certified annually as part of the AFSS inspection and certifications.
G4.9 Fire orders	X				The building is provided "FIRE ORDER" Notices as detailed on the Annual Fire Safety Statement (Attachment 5) this essential fire safety measure is being maintained with the last date assessment on 13 April 2022.
Part G5 - Construction in Bushfire Prone Areas					
G5.1 Application of Part			X		The DtS provisions of this part apply to a Class 2 or 3 building located in a designated bushfire prone area.
G5.2 Protection				X	The future DA works for proposed enlargement of the external window opening must comply with AS 3959-2018 if the property is assessed and determined to be within a designated bushfire prone area.
SECTION J ENERGY EFFICIENCY					
NSW SECTION J - ENERGY EFFICIENCY					
NSW SUBSECTION J(A) ENERGY EFFICIENCY - CLASS 2 BUILDINGS AND CLASS 4 PARTS				X	A BASIX assessment of the existing and proposed works has been undertaken in Certificate A462036 (Attachment 7). Architectural plans to reflect the minimum requirements on this energy assessment.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					At completion the principal building contractor should provide overall installation compliance confirming all commitments have been satisfied.



5.0 CONCLUSION

This report provides a Building Code of Australia 2019 Amendment 1 (BCA) assessment of the building works & alterations to Unit 5 of No.15 Diggings Terrace, Thredbo (Sequoia Apartments).



The intention of the report is to address the request for information issued by the NSW Department of Planning to support the Building Information Certificate (BIC) application for works already completed and for any proposed Development Application. Reference is made to the Departments letter dated 11th May 2022 and email from Mark Willoughby of the Department of Planning and Environment, dated 20th May 2022.

It is our opinion that it is unreasonable and impractical to require the entire building to be upgraded to current BCA, based on generally minor internal refurbishment works of one unit (ie Unit 5) representing approximately 15-20% of the total building floor area. The key points to note are that:

3. The building is not undergoing works representing more 50% of the volume of the building (the works comprise ~15-20% at most).
4. The building does not have significant fire safety issues in that:
 - a. *the measures contained in the building are **not** inadequate—*
 - (i) *to protect persons using the building, if there is a fire, or*
 - (ii) *to facilitate the safe egress of persons using the building from the building, if there is a fire, or*
 - (iii) *to restrict the spread of fire from the building to other buildings nearby.*

The building has a current fire safety schedule and fire safety statement, as attached at Attachment 5 of this report. The measures contained in the fire safety schedule remain unaltered by the works undertaken or proposed. The measures contained within the fire safety schedule are consistent with the original approval issued in 1994 and in generally remain relevant as the building has not undergone major redevelopment or works that would trigger total upgrade of the building under Section 64 of the Environmental Planning and Assessment Regulation 2021.

On the basis of the recommendations of this report, we consider the internal works could be permitted to be finalised, as the fire safety of the building has not been altered by the works and the structural capacity of the building has not been altered, as outlined in the attached structural report. In addition, the works recommended by this report at Section 1.5, be permitted to be undertaken under routine maintenance or if necessary, under the Order issued by the Department of Planning and Environment.

<p>Prepared by:</p>  <p>Daniel Keato Senior Associate/NCC BCA/Access Consultant. Accredited Certifier (Building) Grad.Dip.Bld. Surv. (WSU) for AE&D</p>	<p>Prepared, Reviewed & Approved by:</p>  <p>Nathan Halstead Managing Director – for AED</p> <p>M Build Surv (UWS), Grad Dip Fire Eng (VU) Registered Building Surveyor - Unrestricted (NSW Fair Trading Registration No.BDC0161) Registered Certifier – Fire Safety (NSW Fair Trading Registration No.BDC0161) Accredited Practitioner - Fire Safety Assessment (Fire Protection Accreditation Scheme No.F016563A) Accredited Member of the Australian Institute of Building Surveyors (AMAIBS) No.2900 Justice of the Peace General Advising Member for NCAT for AE&D</p>
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6.0 Attachment 1 – Structural Statement



7 May 2022

STRUCTURAL STATEMENT

LOCATION: Sequoia - Apartment 5.
15 Diggins Terrace, Thredbo Village.

DESCRIPTION OF WORK: Development Control Order – Ref EF 22/5385

REFERENCED DRAWINGS: Structural drawings not available.

Paul Larkin of Grounded Structural & Drafting Services attended Sequoia Apartment 5 on Friday April 29 and undertook a structural inspection of the building. A subsequent inspection was made on Tuesday 17 May prior to attendance at a meeting on site with the owners, builders, and Department of Planning representatives.

The scope of the inspections was to determine if the current building works involved any work on the structural members, or altered the loads placed on any structural members of the existing building in response to Development Control Order – Ref EF 22/5385. Reference is drawn to;

Reason for issuing the Order

6) On 4 April 2022 Departmental Officers Mr Mark Willoughby and Ms Sandra Butler undertook a site inspection of the Premises during which they observed that internal building works had been carried out including:

- alterations to the structural capacity of the building.
- and;

9) The Works are not exempt development under the provisions of clause 4.17 and schedule 2, item 5 of State Environmental Planning Policy (Precincts—Regional) 2021:

iii) The works include alteration to a load-bearing member of a building.

Observations;

The works currently being undertaken at Sequoia Apartment 5, are not of a structural nature.

The roof structure of the apartment consists of a structural steel frame, bearing on columns within the external walls, and at four locations internally.

All ceilings in the building are suspended under the steel roof frame and are not intended to offer any bracing effect.

Internal walls intersecting external walls, are not engaged with the structural roof frame, and are intended to offer minimal (if any) bracing effect. Current works undertaken on any internal walls which intersect external walls has not diminished any bracing effect they were intended to achieve.

Grounded Structural Engineering & Drafting services
PO Box 220 Jindabyne. Phone: 0429 071 387. Email: paul@groundedeng.com



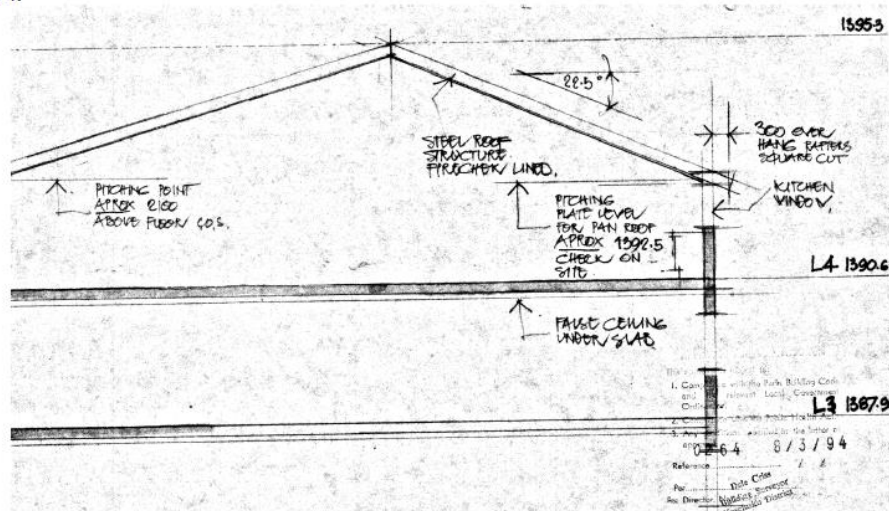
Internal walls removed in the kitchen area offered no structural function. Proposed new kitchen ceiling 'beams' also serve no structural function; they are for aesthetic purposes only. Fixing of these beams has been inspected and found to be adequate to support their own mass. The additional 'self-weight' loads imparted by these elements are insignificant and do not affect the load bearing capacity of any structural members.



The upper floor is constructed of a concrete slab bearing on level 3 masonry walls.

Slab thickness, determined by visual inspection at service penetrations is 200mm.

Although engineering details are not recorded, the architectural intent for the upper floor slab is shown below; and in the plans attached, which are taken from a DA submitted in 1994.



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It is assumed that in 1994, a proposed floor design, which was approved by the Kosciuszko Building Surveyor, was designed to carry loads in accordance with AS1170.1 Table 3.1 A1;

TABLE 3.1
REFERENCE VALUES OF IMPOSED FLOOR ACTIONS

Type of activity/occupancy for part of the building or structure	Specific uses	Uniformly distributed actions kPa	Concentrated actions kN
A Domestic and residential activities (also see Category C)			
A1 Self-contained dwellings	General areas, private kitchens and laundries in self-contained dwellings	1.5	1.8 ⁽¹⁾

Concerns have been raised by Dept Planning representatives, about loads imparted by the addition of timber wall linings to internal walls; and, about the installation of new baths in the bathrooms.

The wall lining selected is 12mm thick hardwood which has a mass of 11.8kg/m². Even the worst-case wall, the media room wall has 8.1m² of cladding, generating a distributed load of 0.32 KPa, one fifth of the required design capacity for imposed loads.

The baths selected also generate minimal loads, which do not exceed the design loads used for design of suspended slabs in general areas.

The larger bath has a water capacity of 158 litres. Allowing for framing, linings and tiles, the constructed bath generates a distributed load of 1.25 KPa, safely within the required design loads. It should also be noted that the 1994 renovation also specified baths.

Regarding floor coverings, historical construction records for the building do not indicate the intended floor coverings.

The floor tile proposed in the current renovation works is a lightweight 6mm porcelain tile, mass 13.01kg/m², generating a distributed load of 0.128 KPa.

Ceramic tiles weigh between 25 – 30 kg/m²

19mm timber flooring weighs 25 kg/m²

Heavy pile wool carpet and underlay weighs approximately 7kg/m².

A safe engineering assumption would see either tile or timber flooring in the kitchen area of a ski resort apartment during the original design. For the dining and living spaces of the same open plan room it would be safe to assume design for carpeted floors.

Given these assumptions, there is a minor permanent floor load increase from 7kg/m² (carpet) to 13.01kg/m² (new porcelain tiles); this equates to 0.058kPa additional loading, which is structurally insignificant. It is also worth noting that more significant permanent loads have been removed from the same areas via the removal of internal non-load bearing walls and their linings and furnishings.

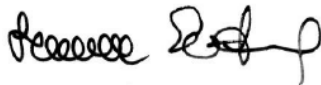
Finally, the new glazed balustrade around the stair penetration in the living space has been designed in accordance with the required standards, a design certificate has been provided to this effect. The imposed loads generated by the new balustrade are equal to or less than the solid balustrade design previously in place, therefore we are satisfied that this element does not alter any load bearing member or result in the capacity of a member being exceeded.

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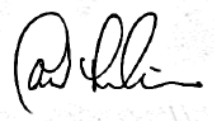
In conclusion, in accordance with Item 5(b) of Schedule 2 of the Precinct Regional SEPP, the current works proposed do not alter any load bearing member of the building, nor do they result in the load bearing capacity of a member being exceeded.

I certify that I am a practicing Chartered Professional Engineer as defined in the current Building Code of Australia.



Tarek

Civ (Honors)
Consulting Structural Engineer



El-Ansary, BE(Civil)
MEngSc(Civil)
Paul Larkin BEng

BSc. AdvDipEng (Structural Design, Eng. Management)
Director



Grounded Structural Engineering & Drafting services
PO Box 220 Jindabyne. Phone: 0429 071 387. Email: paul@groundedeng.com

7.0 Attachment 2 – Structural Glass Balustrade



DESIGN CERTIFICATE

Date: 7/06/2022



Design Engineer:

Paul Larkin
BCivEng(Hons)
AdvDip Engineering Design
(Management, Structural Design)

Project: Residential dwelling - Apartment
Address: Sequoia Apartment 5. 15 Diggins Tce
Thredbo, NSW 2625
Client: Belvedere

State: NSW
Contact: Stephen O'Ryan

Design Loads for the internal glass balustrade members, taken in accordance with:
AS1170.0 - General Principles
AS1170.1 - Design Actions Table 3.3

Site Parameters:

Wind Class: N3 $V_u = 50$ m/s
Soil Class: NA
Altitude: 1397 m (AHD)
Ground Snow Load, s_g : 2.21 kPa
Roof Snow Load, s : N/A kPa
Snow overhang, s_e : N/A kN/m

Earthquake Design Category, EDC: N/A

Design Checked and Certified by:
ANSARY CONSULTING ENGINEERS

TAREK EL-ANSARY
BE(Civil) MEngSc(Civil) MIEAust CPE

Tarek El-Ansary




Internal Balustrade Members Designed in accordance with:

AS4100 - Steel Members
AS1720 - Timber Members
AS1288 - Glass in buildings T 7.3- 7.5
BCA D2.16 & Sections 2.1, 3.6, 3.9.2

NOTE : STRUCTURAL DESIGN OF THE INTERNAL STAIR BALUSTRADE HAS BEEN UNDERTAKEN IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE STANDARDS LISTED HEREIN. CERTIFICATION OF BALUSTRADE CONSTRUCTION IN ACCORDANCE WITH THESE STANDARDS SHALL BE PROVIDED UPON FINAL INSPECTION.

8.0 Attachment 3 - Specification C1.10 Lining Report

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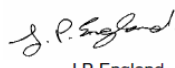


**Warrington
FIRE
research**
CONSULTANCY • TESTING


Sponsor

Timber Development Association
Level 2, 60 York Street
Sydney 2010

Assessment of Timber Floor, Wall and Ceiling Linings to Specification C1.10a	
Objective	
<p>This short form report is to confirm that the timber species listed have been assessed by Warrington Fire Research (Aust) Pty Ltd as achieving the stated performance. This report is not intended to be a comprehensive assessment of all commercially available timbers, moreover is presents the results of tested timber species available at the time of print. Should further testing be undertaken, this report could be updated to reflect these results.</p>	
Products	Timber wall, floor and ceiling materials
Assessment Report Reference	Period of Validity*
WFRA 41117.1	30-05-2005 to 31-05-2010
Test Methods	Supplementary Standards
AS/NZS 3837:1998 & AS ISO 9239.1 - 2003	None
Supporting Data	WFRA 499163, WFRA 499182, WFRA 499140 WFRA 499166, WFRA 499183, WFRA 499141
Description of Wall and Ceiling Linings Tested	
<p>Test Specimen</p> <p>The specimens were either solid sections or incorporated a tongue and groove or square edge an were of smooth milled finish and nominally 19mm in thickness (except Blackbutt WA which was nominally 12mm thick).</p>	

REGISTERED TESTING AUTHORITY	Warrington Fire Research (Aust) Pty Ltd
Address	PO Box 4282 DANDENONG SOUTH VIC 3164 Unit 2, 409-411 Hammond Road DANDENONG VIC 3175
Phone / Fax	61 (0)3 9767 1066 / 61 (0)3 9767 1001
ABN	81 050 241 524
Email / Home Page	testing@wfra.com.au / www.wfra.com.au
Authorisation	Prepared By:  K.G. Nicholls
	Reviewed By:  J.P. England

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13/07/05



Short Form Report No.

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Description of Wall and Ceiling Linings Tested (cont)


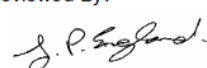
Table 1 – Timber Species Tested as Wall and Ceiling Linings

Ash, Alpine - <i>Eucalyptus delegatensis</i>	Gum, Spotted - <i>Corymbia maculata</i>
Ash, Mountain – <i>Eucalyptus regnans</i>	Gum, Sugar - <i>Eucalyptus Cladocalyx</i>
Ash, Silvertop - <i>Eucalyptus sieberi</i>	Gum, Yellow - <i>Eucalyptus leucoxylon</i>
Beech Myrtle - <i>Northofagus cunnighamii</i>	Ironbark, Grey – <i>Eucalyptus drepanophylla</i>
Blackbutt - <i>Eucalyptus pilularis</i>	Ironbark, Red - <i>Eucalyptus sideroxylon</i>
Blackbutt, New England - <i>Eucalyptus andrewsii</i>	Jarrah - <i>Eucalyptus marginata</i>
Blackbutt, WA - <i>Eucalyptus pantens</i>	Karri - <i>Eucalyptus diversicolor</i>
Blackwood - <i>Acacia melanoxylon</i>	Mahogany, Red - <i>Eucalyptus resinifera</i>
Bloodwood Red - <i>Corymbia gummifera</i>	Marri - <i>Eucalyptus callophylla</i>
Box, Brush - <i>Lophostoma confertus</i>	Merbau - <i>Instia bijuga</i>
Box, Grey – <i>Eucalyptus microcarpa</i>	Messmate - <i>Eucalyptus oblique</i>
Box, Grey, Coast – <i>Eucalyptus bosistoana</i>	Pine, Baltic - <i>Picea abies</i>
Brownbarrel - <i>Eucalyptus fastigata</i>	Pine, Radiata – <i>Pinus Radiata</i>
Gum, Blue, Sydney - <i>Eucalyptus saligna</i>	Pine, White Cypress - <i>Callitris glaucophylla</i>
Gum, Blue, Southern (TAS) - <i>Eucalyptus globulus</i>	Sheoak, WA - <i>Allocosuarina fraseriana</i>
Gum, Blue, Southern (VIC) - <i>Eucalyptus globulus</i>	Stringy Bark, Yellow - <i>Eucalyptus muellerana</i>
Gum, Manna - <i>Eucalyptus viminalis</i>	Tallowwood - <i>Eucalyptus microcorys</i>
Gum, Red, River - <i>Eucalyptus camaldulensis</i>	Turpentine – <i>Syncarpa glomulifera</i>
Gum, Rose – <i>Eucalyptus grandis</i>	Wattle, Silver – <i>Acacia dealbata</i>
Gum, Shining – <i>Eucalyptus nitens</i>	

Test Results for Wall and Ceiling Linings

The timber species listed in Table 1 have been tested and achieve the following performance when tested in accordance AS/NZS 3837:1998 and using the Method of Kokkala, Thomas and Karlsson to calculate Material group number.

Material Group Number	3
Average Extinction area	Less than 250m ² /kg

REGISTERED TESTING AUTHORITY	Warrington Fire Research (Aust) Pty Ltd
Address	PO Box 4282 DANDENONG SOUTH VIC 3164 Unit 2, 409-411 Hammond Road DANDENONG VIC 3175
Phone / Fax	61 (0)3 9767 1066 / 61 (0)3 9767 1001
ABN	81 050 241 524
Email / Home Page	testing@wfra.com.au / www.wfra.com.au
Authorisation	Prepared By:  Reviewed By: 
	K.G Nicholls J.P England

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Description of Floor Coverings Tested

Test Specimens

Each specimen incorporated a tongue and groove joint, was of smooth milled finish and nominally 19mm in thickness.

Table 2 – Timber Species Tested as Floor Coverings

Ash, Alpine <i>Eucalyptus delegatensis</i>	Gum, Rose – <i>Eucalyptus grandis</i>
Ash, Mountain – <i>Eucalyptus regnans</i>	Gum, Shining – <i>Eucalyptus nitens</i>
Ash, Silvertop – <i>Eucalyptus sieberi</i>	Messmate – <i>Eucalyptus oblique</i>
Blackbutt – <i>Eucalyptus pilularis</i>	Pine, Celerytop – <i>Phyllocladus asplenifolius</i>
Brownbarrel – <i>Eucalyptus fastigata</i>	Pine, Radiata – <i>Pinus Radiata</i>
Gum, Blue, Sydney – <i>Eucalyptus saligna</i>	Stringy Bark, Yellow – <i>Eucalyptus muellerana</i>
Gum, Manna – <i>Eucalyptus viminalis</i>	

Table 3 – Timber Species Tested as Floor Coverings

Beech Myrtle <i>Northofagus cunninghamii</i>	Gum, Yellow – <i>Eucalyptus leucoxylon</i>
Blackbutt, New England – <i>Eucalyptus andrewsii</i>	Ironbark, Grey – <i>Eucalyptus drepanophylla</i>
Blackwood <i>Acacia melanoxylon</i>	Ironbark, Red – <i>Eucalyptus sideroxylon</i>
Bloodwood Red <i>Eucalyptus gummiifera</i>	Jarraah – <i>Eucalyptus marginata</i>
Box, Brush – <i>Lophostosomatium confertus</i>	Karri – <i>Eucalyptus diversicolor</i>
Box, Grey – <i>Eucalyptus microcarpa</i>	Mahogany, Red – <i>Eucalyptus resinifera</i>
Gum, Blue, Southern (TAS) – <i>Eucalyptus globulus</i>	Merbau – <i>Intsia bijuga</i>
Gum, Blue, Southern (VIC) – <i>Eucalyptus globulus</i>	Pine, White Cypress – <i>Callitris glaucophylla</i>
Gum, Red, River – <i>Eucalyptus camaldulensis</i>	Tallowood – <i>Eucalyptus microcorys</i>
Gum, Spotted – <i>Corymbia maculata</i>	Turpentine – <i>Syncarpa glomulifera</i>
Gum, Sugar – <i>Eucalyptus Cladocalyx</i>	Wattle, Silver – <i>Acacia dealbata</i>

Test Results for Floor Coverings

The timber species listed in Table 4 have been tested and achieve the following performance when tested in accordance AS ISO 9239.1 – 2003.

Table 4 – Test Results for Floor Coverings

Performance Parameter	Applicable Species	Result
Critical Radiant Heat Flux	Table 2	More than 2.2 (kW/m ²) and less than 4.5 (kW/m ²)
	Table 3	4.5 (kW/m ²) or greater
Smoke Development Rate	Table 2 & 3	Less than 750 (%-min)

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Conditions/Validity

- This short form assessment report is based test Reports, as referenced above, prepared by Warrington Fire Research (Aust) Pty Ltd. These in turn were based on fire hazard tests conducted in accordance with AS/NZS 3837:1998 and AS ISO 9239.1 – 2003. Full details of the tests are given in the referenced test reports.
- This short form assessment report does not provide an endorsement by Warrington Fire Research (Aust) Pty Ltd of the performance of the timber species tested.
- This short form assessment report has been compiled by Warrington Fire Research (Aust) Pty Ltd for Timber Development Association. It is intended to provide a brief outline of the above referenced test reports and not to replace them.
- The conclusions of this assessment may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.
- This report may only be reproduced in full without modifications by the report sponsor. Copies, extracts or abridgments of this report in any form shall not be published by other organisations without permission of Warrington Fire Research.

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Authorisation	Prepared By:  K.G. Nicholls Reviewed By:  J.P. England

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9.0 Attachment 4 – Plumbing Statement

O’Ryan Plumbing
424 Bulgundara Road, Berridale NSW 2628
Lic No: 242477C
ABN: 13226247220

1/5/2022

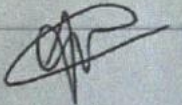
RE: U5/15 Sequoia Apartments, Diggings Terrace Thredbo

To Whom It May Concern,

We have undertaken the plumbing and drainage works for the renovation at U5 Sequoia Apartments in accordance with AS3500.

There have been no penetrations through existing floors or alterations to existing stackwork during the course of the works.

Regards,



Anthony O’Ryan
O’Ryan Plumbing

10.0 Attachment 5 – Annual fire safety statement (AFSS)

Fire Safety Statement

Part 9 of the Environmental Planning and Assessment Regulation 2000



Please note:

Information to assist building owners to complete each section of the statement is provided on pages 3, 4 and 5.

Section 1: Type of statement

This is (mark applicable box): ☒ an annual fire safety statement (complete the declaration at Section 8 of this form)
☐ a supplementary fire safety statement (complete the declaration at Section 9 of this form)

Section 2: Description of the building or part of the building

This statement applies to: ☒ the whole building ☐ part of the building

Address

15 DIGGINGS TERRACE THREDBO NSW 2625

Lot No. (if known)

742

DP/SP (if known)

Building name (if applicable)

SEQUOIA APARTMENTS

Provide a brief description of the building or part (building use, number of storeys, construction type etc)
TOURIST ACCOMMODATION, FOUR STOREY BUILDING, MASONRY CONSTRUCTION

Section 3: Name and address of the owner(s) of the building or part of the building

Name

SEQUOIA APARTMENT OWNERS

Address

15 DIGGINGS TERRACE THREDBO NSW 2625

Section 4: Fire safety measures

Fire safety measure	Minimum standard of performance	Date(s) assessed	APFS *
Automatic FIRE DETECTION & ALARM System	BCA Spec. E2.2a & AS 1670.1 – 2004 AS 1670.4 – 2004	13/04/2022	AM
BUILDING occupant warning system	AS1670.1 & BCA Spec E2.2a Clause 6	13/04/2022	AM
EMERGENCY LIGHTING	BCA Clause E4.4 & AS/NZS 2293.1 – 1998	13/04/2022	AM
EXIT Signs	BCA Clauses E4.5, E4.6 & E4.8 & AS/NZS 2293.1 – 1998	13/04/2022	AM
PORTABLE FIRE EXTINGUISHERS	BCA Clause E1.6 & AS 2444 - 1995	13/04/2022	AM
FIRE BLANKETS	AS 3504 – 1995 & AS 2444 – 1995	13/04/2022	AM
FIRE HOSE REELS	AS2441,1851:2 & BCA clause E1.4	13/04/2022	AM
SIGNS on doors opening inwards	BCA G4.3	13/04/2022	AM
Manual call Points	BCA Clause G4.8 & AS 1670 -1995	13/04/2022	AM
Self-closing solid core doors	BCA C3.11, D2.20, D2.21, G4.3	13/04/2022	AM
Signs on doors open inwards	BCA G4.3	13/04/2022	AM

* See notes on page 4 about how to correctly identify an accredited practitioner (fire safety) (APFS).

Section 5: Inspection of fire exits and paths of travel to fire exits (Part 9 Division 7)

Part of the building inspected

ALL APARTMENTS-PATHS OF TRAVEL TO FIRE RELATED EXITS

Date(s) inspected

13/04/2022

APFS *

AM

15 DIGGINGS TERRACE THREDBO NSW 2625

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Fire Safety Statement

Part 9 of the Environmental Planning and Assessment Regulation 2000



* See notes on page 4 about how to correctly identify an accredited practitioner (fire safety) (APFS).

Section 6: Name and contact details of each accredited practitioner (fire safety) (APFS)

Full name	Phone	Email	Accreditation No.*	Signature
ALEX MACHIN	02 64353165	ADMIN@ALPINEFIRE.COM.AU	F015285A	

* Where applicable – see notes on page 4 for further information.

Section 7: Name and contact details of the person issuing this statement

Full name JANE PEDERSEN	
Organisation (if applicable) SEQUOIA APARTMENTS	Title/Position (if applicable) STRATA MANAGER
Phone 02 6457 6349	Email ALPINESTRATA@BIGPOND.COM

* The person issuing the statement must not be an APFS listed in section 6 or their employer/employee or direct associate.

Section 8: Annual fire safety statement declaration

I, JANE PEDERSEN (insert full name) being the: ☐ owner ☒ owner's agent
declare that:

- each essential fire safety measure specified in this statement has been assessed by an accredited practitioner (fire safety) and was found, when it was assessed, to be capable of performing:
 - in the case of an essential fire safety measure applicable by virtue of a fire safety schedule, to a standard no less than that specified in the schedule, or
 - in the case of an essential fire safety measure applicable otherwise than by virtue of a fire safety schedule, to a standard no less than that to which the measure was originally designed and implemented, and
- the building has been inspected by an accredited practitioner (fire safety) and was found, when it was inspected, to be in a condition that did not disclose any grounds for a prosecution under Division 7 of Part 9 of the Regulation.

Owner/Agent Signature 	Date issued 22/04/2022
---------------------------	---------------------------

Section 9: Supplementary fire safety statement declaration

I, N/A (insert full name) being the: ☐ owner ☐ owner's agent

declare that each critical fire safety measure specified in the statement has been assessed by an accredited practitioner (fire safety) and was found, when it was assessed, to be capable of performing to at least the standard required by the current fire safety schedule for the building for which this statement is issued.

Owner/Agent Signature N/A	Date issued N/A
------------------------------	--------------------

Note:

A current fire safety schedule for the building must be attached to the statement in accordance with the Regulation.

15 DIGGINGS TERRACE THREDBO NSW 2625

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11.0 Attachment 6 – Waterproof Installation Certificate



ALDEX NSW PTY LTD
ABN: 34 159 275 537
The Waterproofing Specialists
Contract Licence No. 251258C

P.O. BOX 520,
Bowral. NSW. 2576.
Ph: (02) 48611350
Mobile: 0411 300 501 - Graeme
0415 752 890 - Anthony
Email: admin@aldex.com.au
www.aldexwaterproofing.com.au

BUILDING CERTIFICATE

31st May, 2022.

To:
Bellevarde Constructions
Email: steve.oryan@bellevarde.com.au

SEQUOIA PENTHOUSE, THREDBO

- 3 x bathrooms

We hereby certify that the waterproofing carried out by us to the internal wet areas mentioned above was in accordance with the Building Code of Australia – F1.7 BCA/NCC 2019 Volume 2 Part 3.8.1, and Australian Building Standards AS 3740 – 2010, and Australian Building Standards AS 4654.

All products used were applied as per manufacturers' specifications in accordance with Australian Building Standards AS 3740 - 2010, and Australian Building Standards AS 4654. They are an accredited product in accordance with Part A2.2 of the Building Code of Australia.

Any alterations to the waterproofing membrane will void warranty.

Yours faithfully,

pp. N. Aldridge

Graeme Aldridge

PLEASE NOTE: Any building movement including shrinkage cracks, cold joints, and damage to unprotected membrane (not protected by, for example, Protection Board, Geotech Fabric and Drainage Cell) as well as traffic damage and any alterations to the waterproofing membrane will void warranty.

If any repair or replacement work to the waterproofing membrane involves having to expose the membrane, such exposure, eg. removal and replacement of any concrete, paving, backfill or overburden, shall be carried out at the Customer's expense.

12.0 Attachment 7 - BASIX Certificate

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Building Sustainability Index www.basix.nsw.gov.au

Alterations and Additions

Certificate number: A462036

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Alterations and Additions Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary
Date of issue: Friday, 03, June 2022
To be valid, this certificate must be lodged within 3 months of the date of issue.



Planning,
Industry &
Environment

Description of project

Project address	
Project name	Sequoia 5
Street address	15 Diggings Terrace Thredbo 2625
Local Government Area	Snowy Monaro Regional Council
Plan type and number	Deposited Plan 1119757
Lot number	742
Section number	
Project type	
Dwelling type	Unit
Type of alteration and addition	My renovation work is valued at \$50,000 or more.

Certificate Prepared by (please complete before submitting to Council or PCA)	
Name / Company Name:	Humphrey & Edwards
ABN (if applicable):	89056638227

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BASIX Certificate number: A462036

Fixtures and systems	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Lighting			
The applicant must ensure a minimum of 40% of new or altered light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Fixtures			
The applicant must ensure new or altered showerheads have a flow rate no greater than 9 litres per minute or a 3 star water rating.		✓	✓
The applicant must ensure new or altered toilets have a flow rate no greater than 4 litres per average flush or a minimum 3 star water rating.		✓	✓
The applicant must ensure new or altered taps have a flow rate no greater than 9 litres per minute or minimum 3 star water rating.		✓	✓

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BASIX Certificate number: A462036

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Glazing requirements						Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Windows and glazed doors								
The applicant must install the windows, glazed doors and shading devices, in accordance with the specifications listed in the table below. Relevant overshadowing specifications must be satisfied for each window and glazed door.						✓	✓	✓
The following requirements must also be satisfied in relation to each window and glazed door:							✓	✓
Each window or glazed door with improved frames, or pyrolytic low-e glass, or clear/air gap/clear glazing, or toned/air gap/clear glazing must have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below. Total system U-values and SHGCs must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. The description is provided for information only. Alternative systems with complying U-value and SHGC may be substituted.							✓	✓
Windows and glazed doors glazing requirements								
Window / door no.	Orientation	Area of glass inc. frame (m2)	Overshadowing		Shading device	Frame and glass type		
			Height (m)	Distance (m)				
W1	NW	6	0	0	none	standard aluminium, clear/air gap/clear, (U-value: 5.34, SHGC: 0.67)		
W2	NW	2.1	0	0	none	standard aluminium, clear/air gap/clear, (U-value: 5.34, SHGC: 0.67)		

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BASIX Certificate number: A462036

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Legend
In these commitments, "applicant" means the person carrying out the development.
Commitments identified with a "✓" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
Commitments identified with a "✓" in the "Show on CC/CDC plans & specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
Commitments identified with a "✓" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate for the development may be issued.

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