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17 July 2019

Brenchley Architects
Level 1, 46-48 Dunning Ave
Rosebery NSW 2018
Attention: Deborah Allen

Dear Deborah,

Re: 49 Lauderdale Ave, Fairlight – BCA Assessment Report

Reference is made to a review of the proposed Secondary Dwelling that is to be located beneath the carport as shown in Figure 1 below. The proposed dwelling at the property is subject of a Development Application for a new Dwelling that is to incorporate a Secondary Dwelling. Northern Beaches Council issued the Notice of Determination for the proposal under DA No. DA2018/0880 dated 16 November 2018.

The plans reviewed for this assessment are architectural plans prepared by Brenchley Architects, Drawing Nos. 2018-050-A01 to A07 dated June 2019.

The following comments are made in response to DA Condition No. 10 of Consent No. DA2018/0880. This is to assist where clarification is required for the purposes of the Building Code of Australia 2019 (BCA) in relation to submission to Council as part of the S4.55 Modification of the Development Application.

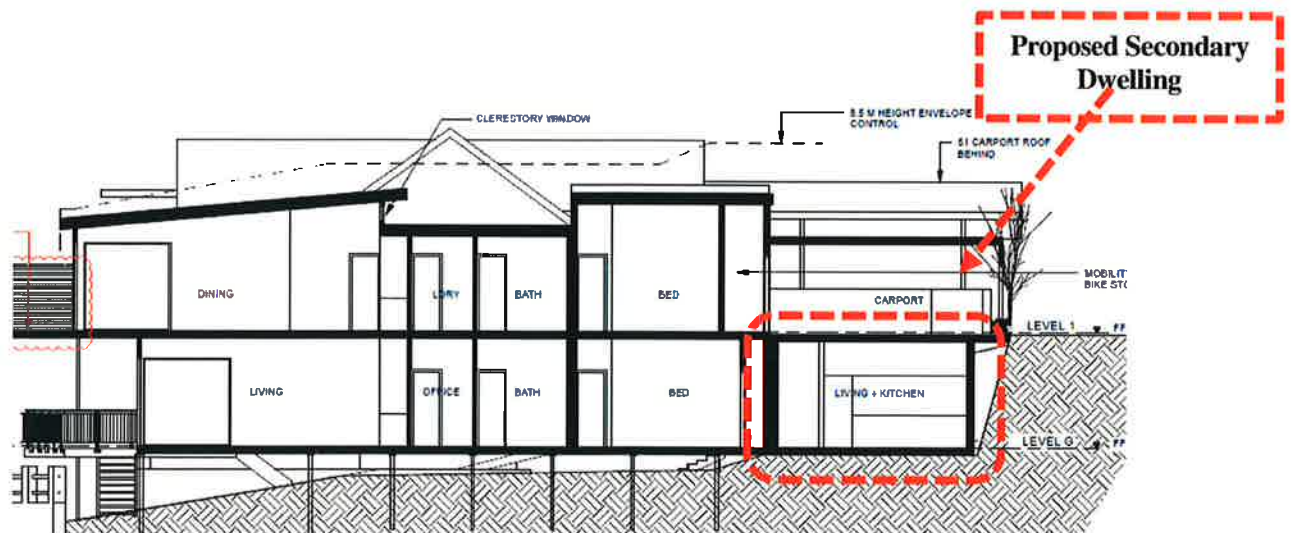


Figure 1 – Section showing proposed Secondary Dwelling beneath Carport

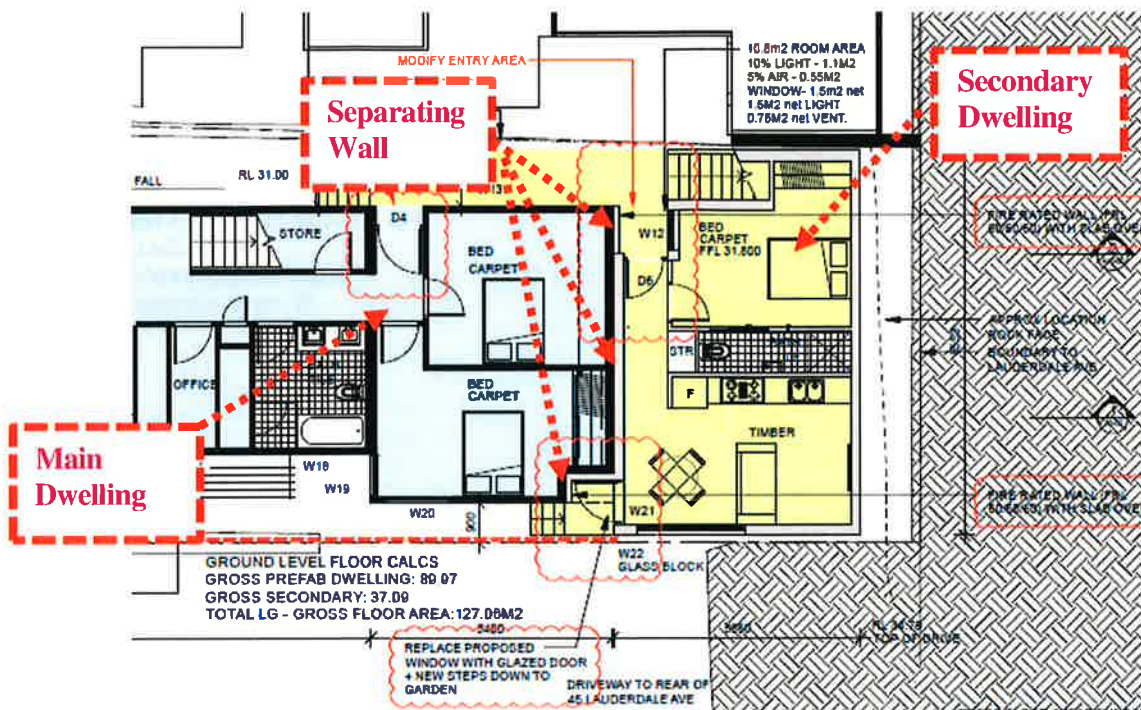


Figure 2 – Ground Floor showing Secondary Dwelling and Separating Wall

1. Building Description & Assessment

The proposed building contains a Main Dwelling that incorporates a Secondary Dwelling as detailed in the approved DA Consent No. DA2018/0880 dated 16 November 2018. This BCA assessment is in response to Condition No. 10 of Consent No. DA2018/0880 and relates solely to providing comments on the proposed Secondary Dwelling that is to be attached to the Main Dwelling. The main dwelling is to incorporate 2 storeys, being Ground Floor and Level 1 Floor levels. The Secondary Dwelling is to be located at the Ground Floor directly beneath the carport that is attached and forms part of the Level 1 Floor of the Main Dwelling. There is a common separating wall between the Secondary Dwelling and the Main Dwelling at Ground Floor as shown in Figure 2 above.

Condition No. 10 of Consent No. DA2018/0880 nominates: -

"The existing building that is proposed to be converted to a secondary dwelling will result in a change of classification to a Class 2 building and will be required to be upgraded to comply with the Building Code of Australia"

This DA Condition No. 10 of Consent No. DA2018/0880 should be deleted for the following reasons: -

1. The proposal is a new dwelling, therefore reference to an existing building or subsequent upgrade of an existing building is not relevant.
2. The assessment and classification of the building is proposed to be considered as multiple Class 1a dwellings for the purposes of the BCA as outlined in this Report.
3. An assessment of the building for the purposes of the BCA is a requirement of the subsequent Construction Certificate, therefore comments on this need not be included in the Development Consent.

2. BCA Description

For the purposes of the BCA, the building may be described as follows:

a) Classification

The building is classified in accordance with BCA Clause A6.1 as follows:

- Class 1a (Residential Dwellings)
- Class 10a (Carport)

Limitation 1 of BCA Clause A6.1 states: -

"For A6.1, a Class 1 building cannot be located above or below another dwelling or another Class of building, other than a private garage."

On the basis that the Secondary Dwelling is not located above or below the Main Dwelling, other than the carport for the Main Dwelling, it is considered that the proposal may be two Class 1a dwellings.

b) Number of Storeys

The building contains two (2) storeys.

c) Type of Construction

NA – Due to Class 1a

d) Building Setback

- Setback is < 900mm from adjacent side boundary to Secondary Dwelling. This is understood to be unchanged from the current DA approval.

3. BCA Assessment and Comments

Following a review of the plans, it is evident that there are elements relating to the proposed Secondary Dwelling where verification is necessary to confirm how compliance with the BCA may be achieved.

The following is a schedule of recommendations to incorporate in plans for the proposed Secondary Dwelling to assist to satisfy the provisions of the BCA;

a) External Walls - Fire Resistance Level (FRL).

As a result of the building being Class 1a the following FRL's apply for walls less than 900mm from boundary;

- FRL of 60/60/60 when tested from the outside, or
- be of masonry-veneer construction in which the external masonry veneer is not less than 90 mm thick; or
- be of masonry construction not less than 90 mm thick.

The external walls (i.e. proposed eastern and western walls of the Secondary Dwelling as shown in Figure 2 above) are less than 900mm from the side boundary, therefore are required to achieve the above FRL. This is likely to be readily achievable and may be detailed with the Construction Certificate. It is noted that no FRL applies to the external walls at right angles to the boundary.

b) Protection of Openings in External Walls.

There are openings in the external wall of the proposed Secondary Dwelling Openings that requires an FRL, therefore this provision applies. Openings in external walls required to be fire-resisting as noted in Item 1 above, must be protected by—.

- non-openable fire windows or other construction with an FRL of not less than –/60/–; or
- self-closing solid core doors not less than 35 mm thick.

There is a fixed window in the eastern wall of the lounge room of the Secondary Dwelling that is able to be fire rated and may be detailed with the Construction Certificate.

c) Internal Floor Separating Dwelling (Fire Rating).

The floor separating the Ground Floor (Secondary Dwelling) and Carport at Level 1 (Main Dwelling Carport) is to be confirmed as being provided with either;

- An FRL of 30/30/30 when tested from the underside, or
- A floor / ceiling system with a resistance to the incipient spread of fire of not less than 60 minutes, or
- Lined on the underside including supporting beams with a fire protective covering, i.e. 13mm fire grade plasterboard.

The proposed concrete slab and supporting structure separating the Secondary Dwelling from the Main Dwelling Carport is likely to achieve an FRL of 30/30/30 and may be detailed with the Construction Certificate.

d) Internal Wall Separating SOU's (Fire Rating).

The walls separating the Ground Floor (Secondary Dwelling) and Ground Floor (Main Dwelling) is to be provided with an FRL of not less than 60/60/60. This fire rated wall must extend to;

- the underside of a floor having an FRL of 30/30/30 or fire protective covering (ie 13mm fire grade plasterboard), or
- the underside of a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes, or
- the underside of the roof covering if it is non-combustible, and except for roof battens with dimensions of 75mm x 50mm or less or sarking material, must not be crossed by timber or other combustible building elements.

To satisfy the BCA the separating wall must be detailed as follows;

- The internal separating wall between the Secondary Dwelling and the Main Dwelling is to extend from the eastern elevation to the western elevation as shown in Figure 2 above with the wall having an FRL of 60/60/60, and
- The internal separating wall is to extend from the footings / ground floor slab to the underside of the carport slab to achieve an FRL of 30/30/30, and
- The separating wall may be detailed with the Construction Certificate.

e) Stairway Configuration and Landing.

A dwelling must be provided with a stairway with riser dimensions (R) that are a minimum of 115mm and maximum of 190mm. Treads are to have minimum going dimensions (G) of 240mm to 355 maximum going. The Quantity (2R + G) of the stairs must be a maximum of 700mm and minimum of 550mm.

Goings and risers are to be constant throughout each flight (i.e. not > 5mm variation between consecutive goings / rises and not > 10mm between smallest and largest. goings / rises in flight). Treads or nosings must have a slip resistance classification in accordance with Table 3.9.1.3 and AS4586-2013.

The proposed stairways may readily be detailed with the Construction Certificate.

f) Smoke Detection and Alarm System.

A Class 1a building must be provided with hard wired smoke alarms in accordance with AS3786 - 2014. Smoke alarms must be located on or near the ceiling of every storey between each part of the SOU containing bedrooms and the remainder of the SOU, and where bedrooms are served by a hallway in that hallway.

The proposed Secondary Dwelling is to be provided with a smoke alarm in the corridor outside the Bedroom. This smoke alarm must be hard wired connected to the consumer mains and may be detailed with the Construction Certificate.

g) Facilities.

The proposed Secondary Dwelling must be provided with kitchen, shower, closet pan, washbasin and clothes washing facilities in accordance with BCA Part 3.8.3.

The BCA necessitates clothes washing facilities, comprising a washtub and space for a washing machine in the same room and may be detailed with the Construction Certificate.

h) Internal Wall Separating SOU's (Acoustic Rating).

The walls separating the Secondary Dwelling from the Ground Floor of the Main Dwelling must be provided in accordance with BCA Part 3.8.6 with construction having —

- a Weighted Sound Reduction Index with Spectrum Adaption Term [Rw + Ctr] (airborne) not less than 50, if it separates dwellings; and
- have discontinuous construction if it separates a bathroom, sanitary compartment, laundry or kitchen in one dwelling from a habitable room (other than a kitchen) in an adjoining dwelling. Discontinuous construction means a wall having a 20mm cavity between separate leaves, and;
 - for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and
 - for other than masonry, there is no mechanical linkage between leaves except at the periphery.

The separating walls must achieve an Rw + Ctr (airborne) not less than 50 and may be detailed with the Construction Certificate.

i) **Sound Insulation of Internal Services (Acoustic Rating).**

Services must not be chased into concrete or masonry separating walls.

Any waste or water supply pipe, mechanical duct that is located in a wall or floor cavity, that serves or passes through more than one dwelling; then the pipe or duct must be treated in accordance with BCA Clause 3.8.6.5 and may be detailed with the Construction Certificate.

4. Conclusion:

This report and assessment relates to the proposed Secondary Dwelling in response to Condition No. 10 of Consent No. DA2018/0880 dated 16 November 2018. The assessment confirms that DA Condition No. 10 is not appropriate and may be deleted. It is concluded that the proposed design for the Secondary dwelling is readily capable of being detailed to satisfy the BCA provisions for a Class 1a dwelling with further construction details being prepared and submitted at the appropriate time with the Construction Certificate Application.

5. Limitations:

This report and assessment does not address issues in relation to the following:

- a) The recommendations are not intended to assess the proposed new works satisfy the provisions of the BCA as this is to be determined by the Accredited Certifier at Construction Certificate stage.
- b) Review or assessment of the Main Dwelling and associated Carport in accordance with the relevant provisions of the BCA. That is the assessment relates solely to the Secondary Dwelling and the ability for the proposal to be considered as a Class 1a dwelling.
- c) The BCA Structural Provisions of the building elements (unless specifically referred to).
- d) The design, maintenance or operation of any existing or proposed electrical, mechanical, hydraulic or fire protection services.
- e) Development Consent conditions of approval issued by the Consent Authority, except as noted above.
- f) Environmental Planning and Assessment Act, associated Regulations, Local Government Act and Regulations unless where nominated.
- g) Work Health & Safety Act / Regulations and WorkCover Authority requirements.
- h) Water, drainage, gas, telecommunications and electricity supply authority requirements.
- i) Disability Discrimination Act (DDA) and Premises Standard.

Should you require any further details, please do not hesitate to call me on 0417 247 447.

Yours faithfully,

GRS Building Reports Pty Ltd.



Graham Scheffers