

# BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT



*Lot & DP of Subject Property:* Lot 14 DP240055

*Address of Subject Property:* No.21 Maitland Street Davidson 2085 (Northern Beaches LGA)

*Allotment Area & Zoning:* ≈ 695sqm Zoned R2 – Low Density Residential

*Proposed Development:* Removal and replacement of existing residential structure with a new two storey residential building (Class 1a) – total building foot-print of ≈224m<sup>2</sup>.

*Standards / Guidelines:* NSW Planning for Bushfire Protection Guidelines 2019, herein 'PBP'.

*Plans / Advice Reviewed:* Attached Appendices 1 – 7.

For the purpose of this assessment, it is specifically noted, understood or assumed that:

1. The proposed development will be setback within the subject property by >13m from the southern / rear boundary of the subject property.
2. Adjoining the rear boundary of the subject property is a mostly cleared and managed water pipeline easement (Lot 4 DP84326) which reasonably affords the subject property at least 15-20m of additional Asset Protection Zone (APZ) area.
3. The primary bushfire vegetation or hazard likely to persist within direct vicinity of the subject property is located to the SW-SE within an adjacent area of Council Reserve land - Lot 7378 DP1165655 (Zoned E2 – Environment Conservation), opposite side of the 20m wide pipeline easement.
4. Bushfire vegetation / hazard is also likely to persist to the west of the subject property within Garigal National Park.
5. Potentially influencing a reduced intensity and size of a fire front which may impact upon the subject property, the primary hazard at the interface of the water pipeline easement (Lot 4 DP84326) is generally of lower scrub / heath vegetation only on occasional sandstone outcrops upslope of the site.
6. The subject property forms part of the existing Maitland Street, Richter Crescent & Orr Place residential precinct, with all neighbouring residential allotments being zoned R2 Low Density Residential.
7. The residential precinct of Maitland Street, Richter Crescent & Orr Place are entirely developed for residential building / living purposes, associated managed land and public roadway areas.
8. At least 1 existing street hydrant connection point is located within vicinity (≤70m) of the subject property or the furthest most point of the proposed development site.

*Date of Assessment:* 16<sup>th</sup> February 2021.



**BAL Assessment Procedure:** Site Assessment Methodology as per Appendix 1 of NSW Planning for Bushfire Protection 2019 (PBP).

**Fire Runs:** All potential fire runs are taken over a transect length considered to represent the reasonable gradient and extent of the vegetation hazard which will most significantly influence the fire behaviour directly impacting upon the proposed development site.

Four indicative transects identified A-D are as denoted Appendix 2.

**Relevant FDI:** 100 (Greater Sydney), as per Table 2.1 of AS3959.

**Effective Slope:** As denoted Appendix 2.

The effective slope to the subject property is reasonably considered;

- Level to upslope to the SW-SE, &
- 10-15° downslope to the WEST.

**Classified Vegetation Type:** The bushfire hazard is identified as;

- TALL HEATH to the interface of the water pipeline easement (Lot 4 DP84326),
- FOREST to the west of the precinct within Garigal National Park.

Biometric vegetation mapping for the location (see Appendix 2) indicates transitional areas of forest within vicinity of the site, albeit the forest vegetation type is well separated away from the subject property by either existing urban development or areas of tall heath vegetation.

**Site Distance to Vegetation,  
Effective Slope & BAL:**

Distance (m)	Vegetation Location / Direction	Effective Slope	BAL (RHF)
≥90m	FOREST Garigal National Park / W - Fire Run (A)	10-15°	12.5
≈30m	SCRUB (Tall Heath) Lot 7378 DP1165655 / SW-SE - Fire Run (B-D)	Level	19

**Determined Highest BAL:** Predicated upon the proposed development being ≈13m from the rear / south boundary of the allotment and the ongoing management of the adjoining water pipeline easement (Lot 4 DP84326), BAL-19 is reasonably determined.

**Other Estimate /  
Recommended BAL:**

Excluding the southern (rear) elevation (alfresco and associated roof area), BAL-12.5 would be technically permissible on all other sections of the proposed development where reasonably >32m away or shielded from the identified hazard within Lot 7378 DP1165655, as per Appendix 1 - Section A1.8 (Shielding) of PBP.

Recommended BAL-19 requirements to specific elevations / sections are as otherwise denoted Appendices 5-7.

**Conclusion:**

Based on the above assessment, it is determined that the proposed development would comply with the specific requirement contained within the 'State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 Clause 1.19A - Land on which complying development may not be carried out - bush fire prone land whereby the development must not be carried out on land in bush fire attack level-40 (BAL-40) or the flame zone (BAL-FZ) as outlined by the methodology specified by the document NSW Planning for Bush Fire Protection 2019.

Further, this BAL Assessment has been determined in accordance with the abovementioned SEPP Clause 1.19A (Subsection 3) by a person who is recognised by the NSW Rural Fire Service as a suitably qualified consultant in bush fire risk assessment.

The above BAL assessment has been prepared by:

**Matt Jones**

BAppSc Environmental Health  
Grad. Dip Design for Bushfire Prone Areas  
**BPAD-L3-14598 Accredited Practitioner**

(I hereby certify that I have undertaken the assessment of the above site and determined the Bushfire Attack Level stated above in accordance with the requirements of NSW Planning for Bushfire Protection Guidelines 2019)

**BUSHFIRE PLANNING AND DESIGN ACCREDITATION SCHEME**  
**ACCREDITED PRACTITIONER**

Name	Matthew Jones
Accreditation No.	BPAD14598
Valid to	February 2021
Jurisdiction	Level 3 - NSW



**BPAD**  
Bushfire  
Planning & Design  
Accredited Practitioner



The holder of this card is accredited in accordance with the FPA Australia Bushfire Planning and Design Accreditation Scheme to perform the services listed on the reverse of this card.

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**TERM OF VALIDITY:** Opinions and statements made within the following report will expire 2 years from the date of the report. Should the following report require re-examination with a view to the possible extension of its term of validity, please apply to Bushfire Protection Planning & Assessment Services before the date of expiry. Bushfire Protection Planning & Assessment Services reserves the right at any time to withdraw any opinions or statements in the light of new knowledge.

**DISCLAIMER:** Bushfire mitigation or protection measures as identified, recommended or purported by this report may not guarantee that the proposed building development will survive a bushfire event on every occasion. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather conditions, and the behaviour of building occupants or fire fighters defending the building when exposed to severe or greater bushfire attack conditions.

**Additional Note:**

It should be noted that this BAL Risk Assessment Certificate only forms part of the certifiable requirements which suitably address the 'Development standards for bush fire prone land' within *Part 3B.4 State Environmental Planning Policy (Exempt & Complying Development Codes) 2008*. The entire section is outlined below for reference.

It should also be noted that the proposed development must satisfy many other significant requirements to achieve overall compliance with the *State Environmental Planning Policy (Exempt & Complying Development Codes) 2008*, which are not related to 'bushfire development standards', and do not form part of this certification document.

**3B.4 Complying development on bush fire prone land**

(1) This clause does not apply to the following complying development under this code -

- (a) a non-habitable detached development that is more than 6m from any residential accommodation,
- (b) a landscaped area,
- (c) a non-combustible fence,
- (d) a swimming pool.

**Note.** See clause 1.19A for additional provisions relating to bush fire prone land.

(2) If complying development under this code is carried out on bush fire prone land, all of the following development standards also apply—

- (a) (Repealed)
- (b) the lot on which the development is to be carried out must have direct access to a public road or a road vested in or maintained by the council,
- (c) the dual occupancy or manor house must be able to be connected to mains electricity,
- (d) if reticulated or bottled gas is installed and maintained on the lot -
  - (i) it must be installed and maintained in accordance with AS/NZS 1596:2014, *The storage and handling of LP Gas*, and
  - (ii) the storage and handling of any LP gas on the lot must comply with the requirements of the relevant authorities (including the use of metal piping),
- (e) any gas cylinder stored on the lot within 10m of any dwelling must -
  - (i) have its release valves directed away from the dwelling, and
  - (ii) be enclosed on the hazard side of the installation, and
  - (iii) have metal connections to and from the cylinder,
- (f) there must not be any polymer sheathed flexible gas supply lines to gas meters adjacent to the dual occupancy,
- (g) if the development is carried out on a lot in Zone RU5, there must be—
  - (i) a reticulated water supply connection to the lot and a fire hydrant within 70m of any part of the development, or
  - (ii) a 10,000 L capacity water tank on the lot,
- (h) if the development is carried out on a lot in any zone other than Zone RU5, there must be—
  - (i) a reticulated water supply connection to the lot, and
  - (ii) a fire hydrant within 70m of any part of the development,
- (i) the development must conform to the specifications and requirements of *Planning for Bush Fire Protection* that are relevant to the development.

**Note 1.** Attached development, council and detached development are defined in clause 1.5.

**Note 2.** Bush fire prone land, landscaped area, road and swimming pool have the same meanings as they have in the Standard Instrument.

(3) (Repealed)

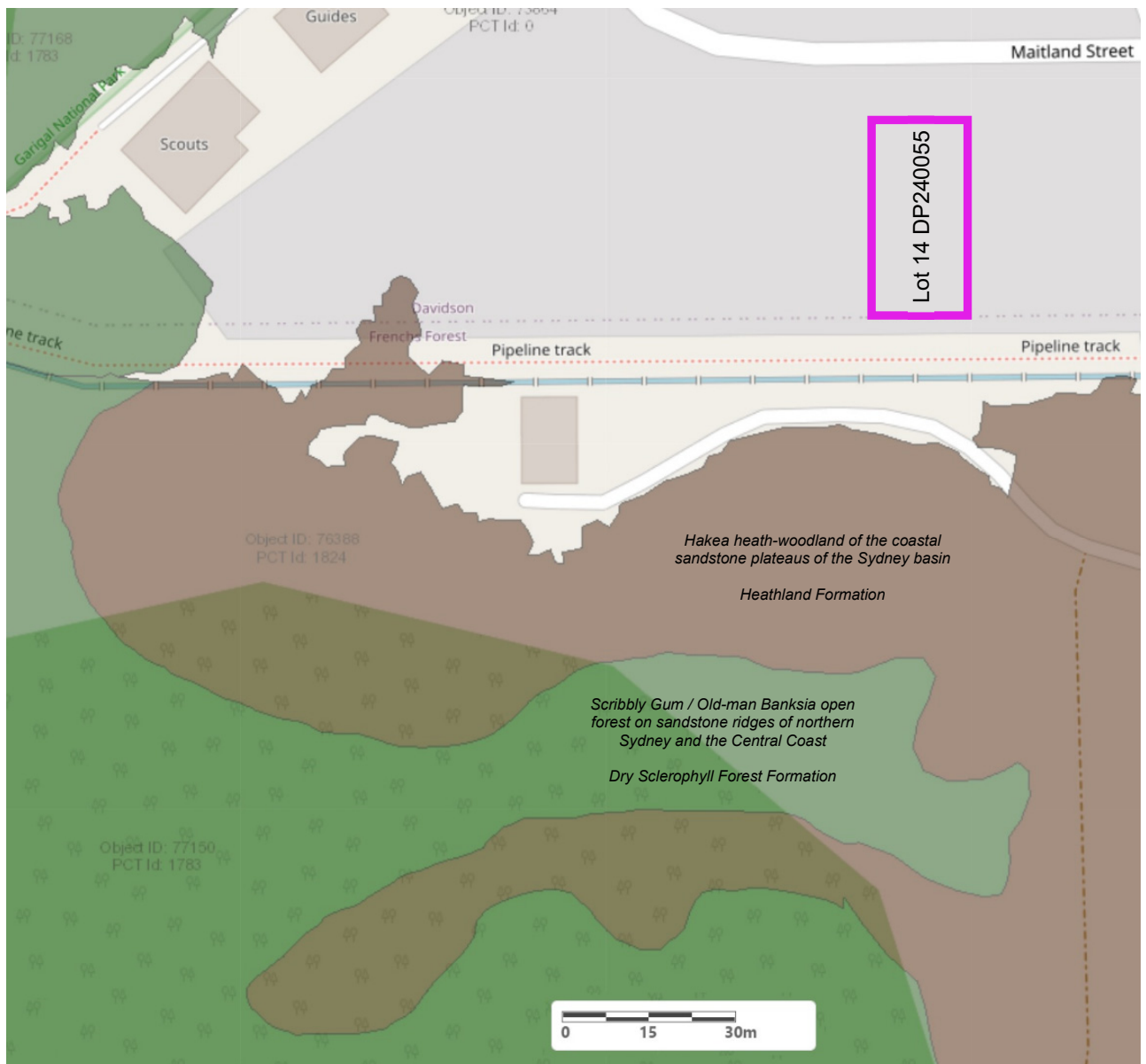


# Appendix 1 – Aerial Photo / Boundary Overlay Lot 14 DP240055



Courtesy: <https://maps.six.nsw.gov.au/>

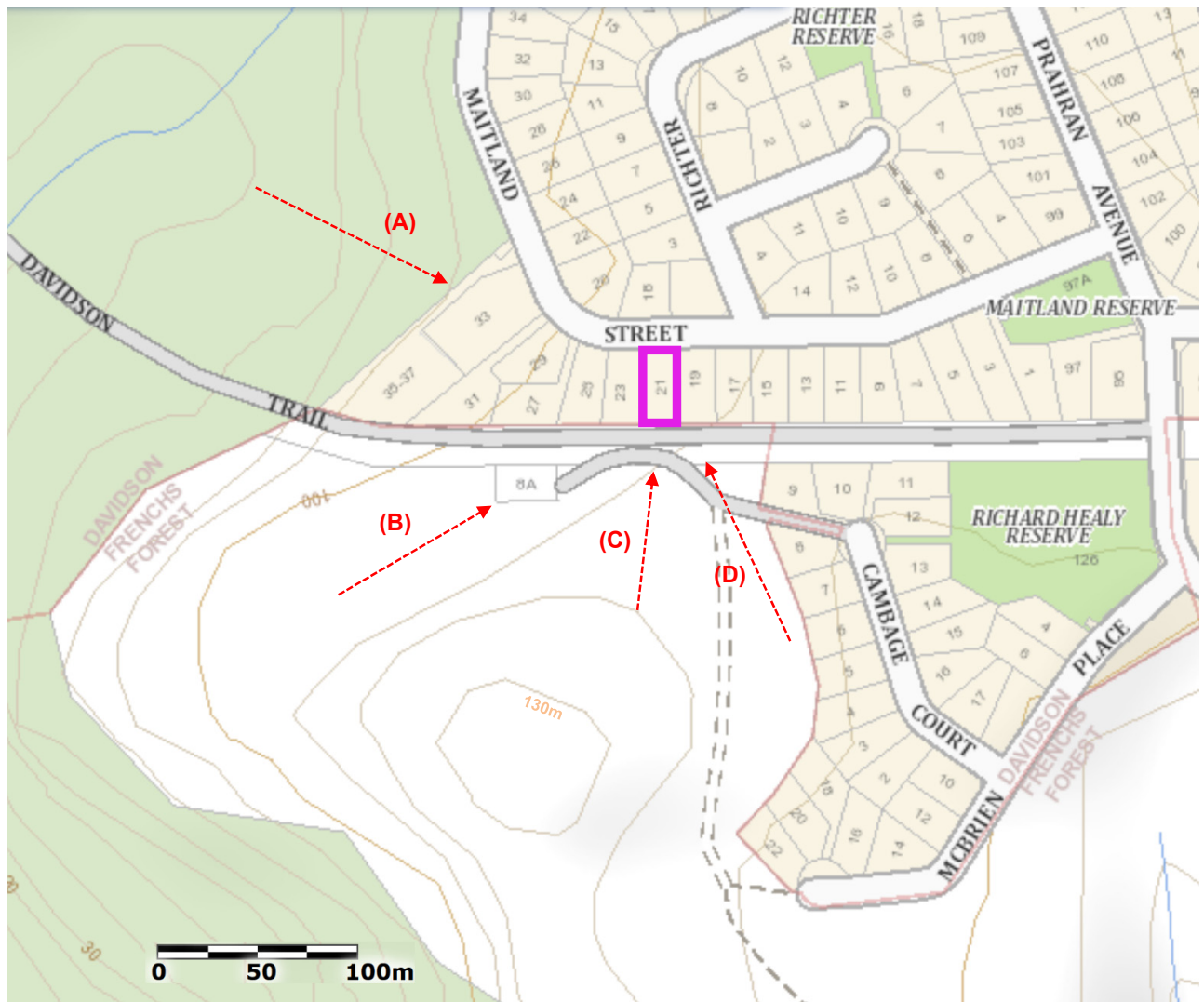
## Appendix 2 – Biometric Vegetation Mapping



Courtesy: <https://datasets.seed.nsw.gov.au/dataset/the-native-vegetation-of-the-sydney-metropolitan-area-oeh-2016-vis-id-4489>



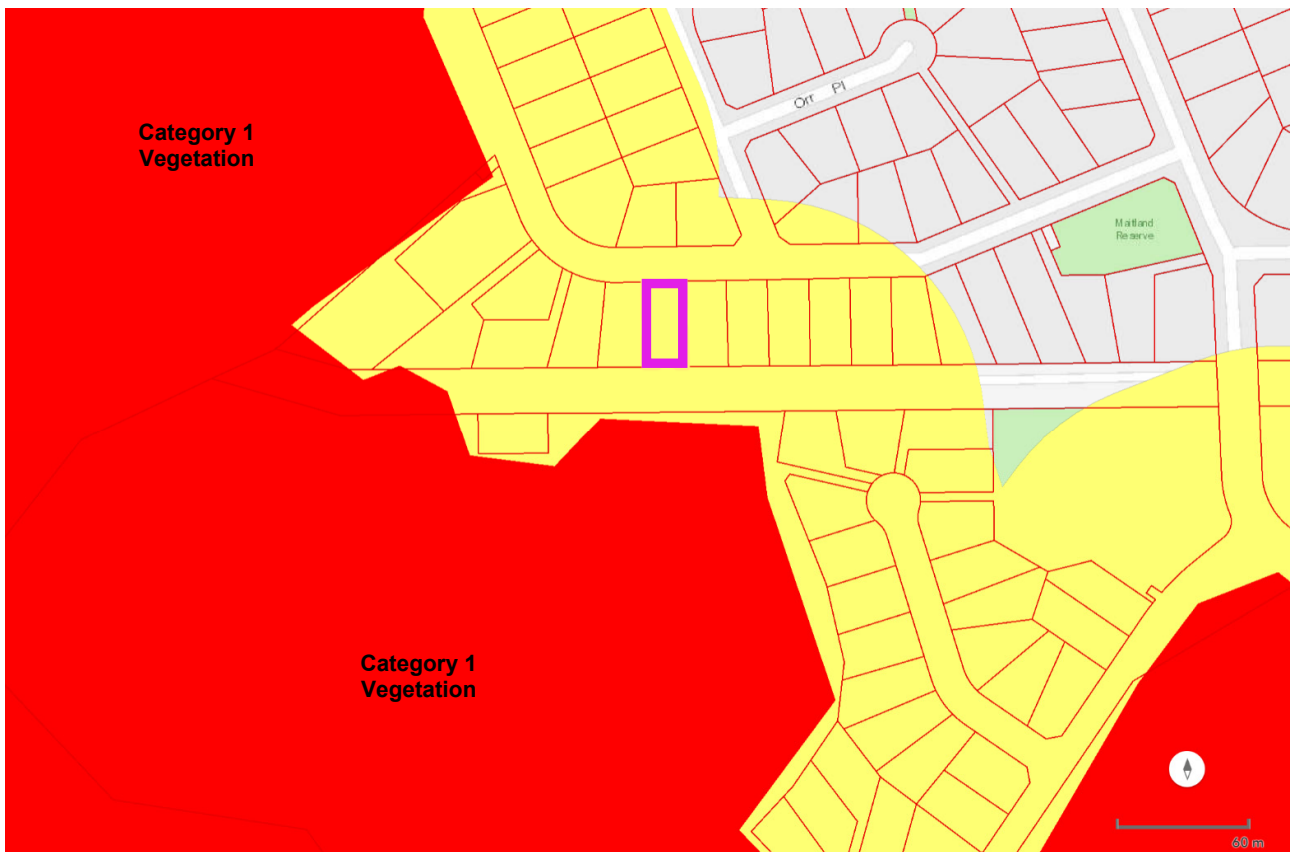
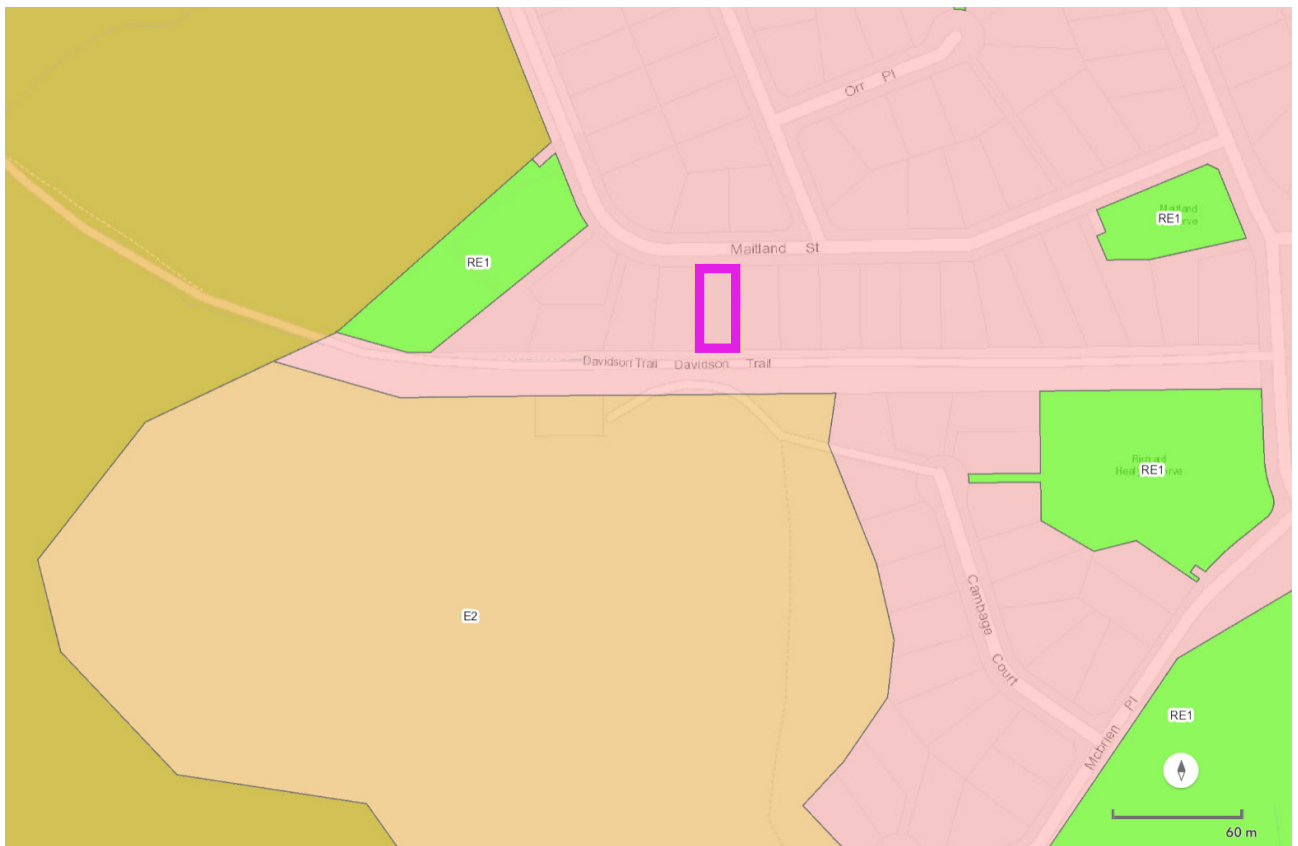
### Appendix 3 – Effective Slope Assessment



Effective slope estimate;

- (A)  $30/110 = 27\%$  or  $15^\circ$  ( $10-15^\circ$ )
- (B)  $0/100 = \text{Level}$
- (C)  $-10/75 = -13\%$  or  $-8^\circ$  (Upslope)
- (D)  $0/100 = \text{Level}$

## Appendix 4 – Zoning & Bushfire Prone Land Map



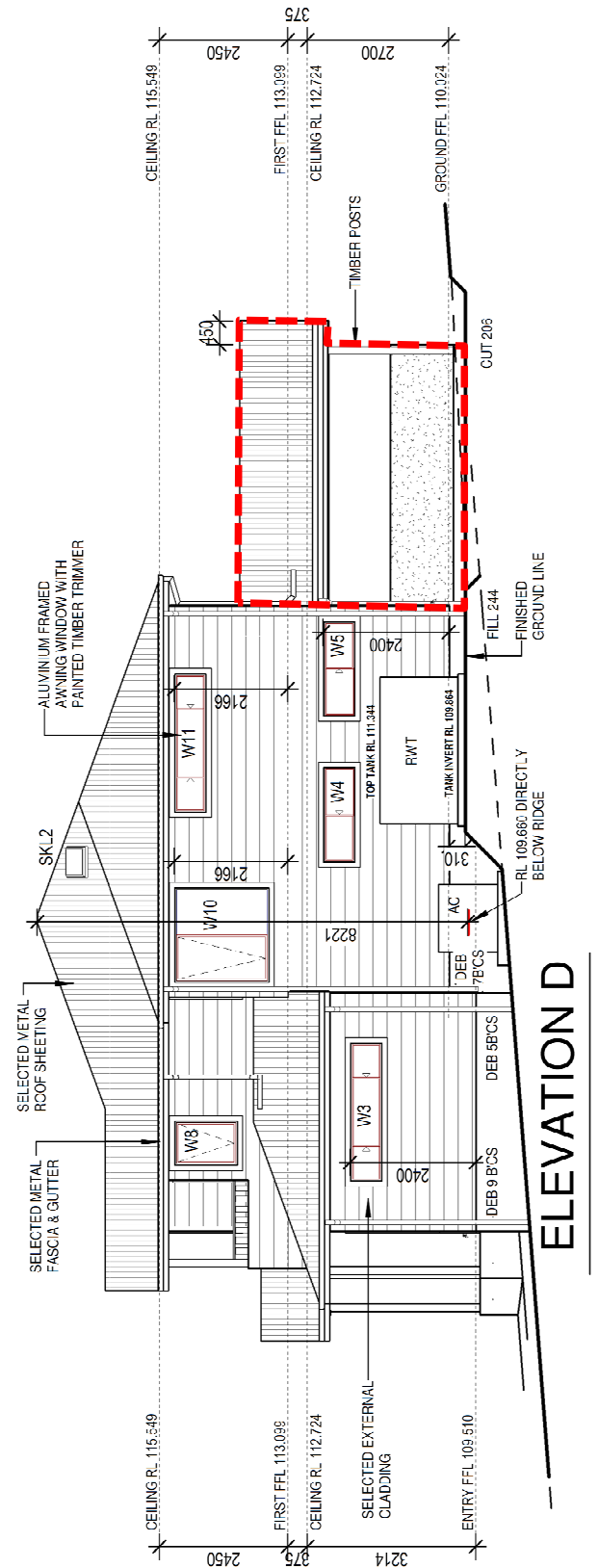
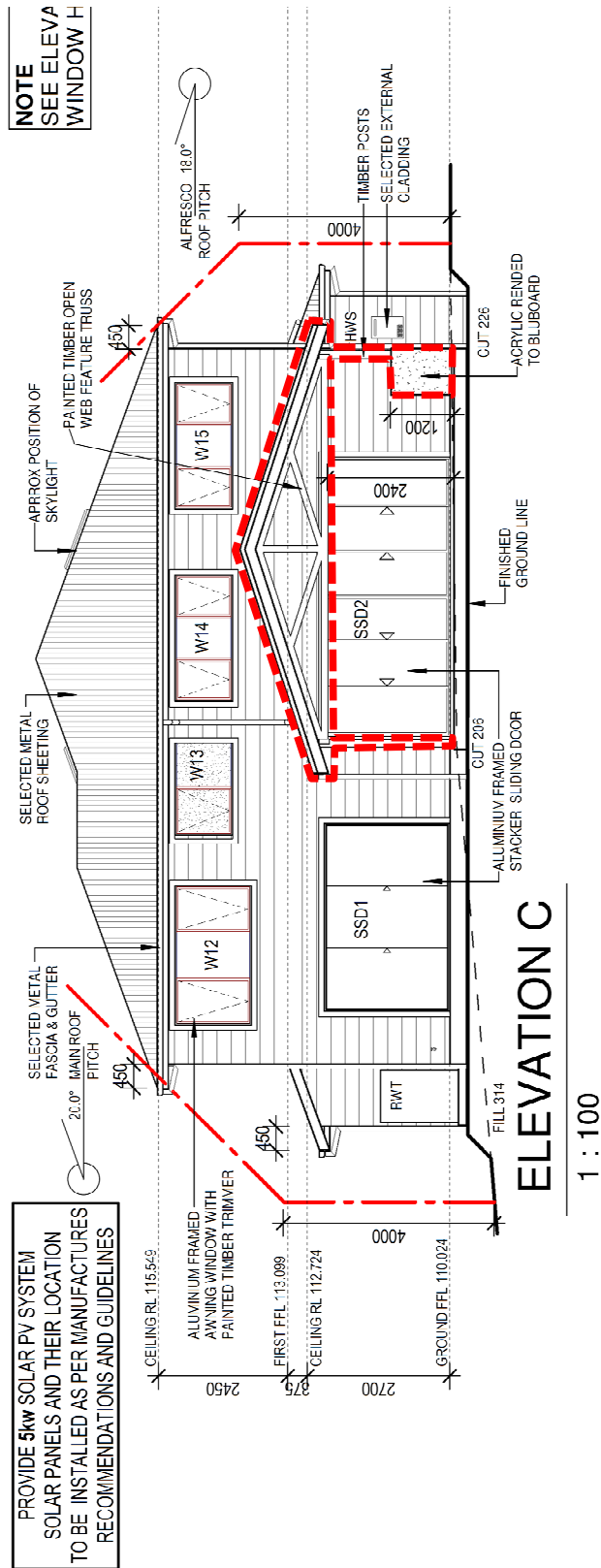
Courtesy: [ePlanning Spatial Viewer \(nsw.gov.au\)](https://www.nsw.gov.au/ePlanning/SpatialViewer)



### BAL-19 Minimum Required



## Appendix 6 – Proposed Elevations / Heights & Recommended BAL



BAL-19 Minimum Required

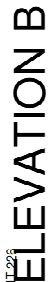


**NOTE**  
SEE ELEVATION F  
WINDOW HEAD HI

**PROVIDE 5kw SOLAR PV SYSTEM  
SOLAR PANELS AND THEIR LOCATION  
TO BE INSTALLED AS PER MANUFACTURES  
RECOMMENDATIONS AND GUIDELINES**



1 : 100



1 : 100

# TIONS



**BPAD**  
Bushfire  
Planning & Design  
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Level 3