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- > Building Solutions Advice for Bushfire Prone Areas

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10 December 2024

GJ Gardner Homes Taree
63 Muldoon Street
TAREE NSW 2430

Attention: Jarad Winner

Our Ref: 24321

Dear Jarad,

**BUSHFIRE ASSESSMENT
LOT 1 DP 1262773, 1 ELLUISA CLOSE, FORSTER**

I refer to your request for a Bushfire Assessment for a proposed development on the above land (the subject land).

The proposed development that is the subject of the assessment is the construction of a dwelling on the land.

The following is a summary of the assessment.

BAL Assessment Procedure	Appendix 1 (PBP 2019)
Council Area	Mid-Coast
FFDI	80 (North Coast)
Applicable PBP 2019 Table	A1.12.6
Proposed Development	Dwelling
Vegetation formation	Forest
Effective slope	upslope
Land to be maintained as APZ	Land within the site
Highest BAL when assessed under Table A1.12.6 of PBP 2019	BAL-29

1 Introduction

The purpose of this assessment is to determine the category of bushfire attack and subsequent construction standard for the proposed erection of a dwelling on land at Lot 1 DP 1262773, 1 Elluisa Close, Forster.

Part of the land within the site is mapped as 'bush fire prone land' for the purposes of Section 10.3 of the *Environmental Planning and Assessment Act 1979*.

As part of the land within the site is mapped as bushfire prone land, the purpose of this Bushfire Assessment is to assist in the planning process, to identify the proximity of the proposed development to any potential bushfire threat and to determine what, if any, level of construction is required in accordance with the RFS guideline entitled *Planning for Bush Fire Protection 2019* (PBP).

The Bushfire Attack Level (BAL) for the proposed development has been assessed as per the site assessment methodology in Appendix 1 of PBP. Once the BAL is determined, construction requirements for the corresponding BAL apply subject to *AS3959-2018: Construction of Buildings in Bushfire Prone Areas*, or the NASH Standard - *Steel Framed Construction in Bushfire Areas* (2021), subject to any additional construction requirements detailed in Section 7.5.2 of PBP.

2 The Site

Address	1 Elluisa Close, Forster
Real Property Description	Lot 1 DP 1262773
Zoning	R2-Low Density Residential
Local EPI	Great Lakes Local Environmental Plan 2014

The site comprises land described as Lot 1 DP 1262773, 1 Elluisa Close, Forster, with an area of 496.37m².

The site is on the south-western corner of the intersection of Elluisa Close with Boundary Street.

The subject site is presently vacant. Access to the site is via Elluisa Close.

Land within the site is relatively flat, with a gentle slope from the northern (front) boundary towards the southern (rear) boundary. The site is vegetated with grasses.

Land to the west and south of the site, and on the opposite (eastern) side of Boundary Street, is occupied by established residential dwellings.

Land to the north of the site, on the opposite (northern) side of Elluisa Close, contains coastal swamp forest vegetation.

The nearest area of potential bushfire hazard vegetation in relation to the development is on land to the north of the site, within the unmanaged forest vegetation.

Reticulated water supply is available to the site with the nearest hydrants located in Boundary Street, near the north-eastern corner of the site. The site is serviced by underground electricity.

The following photo shows the vegetation on land on the northern side of Elluisa Close.



Photo 1: Looking north from the site, showing vegetation on land on the northern side of Elluisa Close

3 The Proposal

The development is for construction of a dwelling-house on the land. The siting of the proposed dwelling is shown in Figure 4.1.

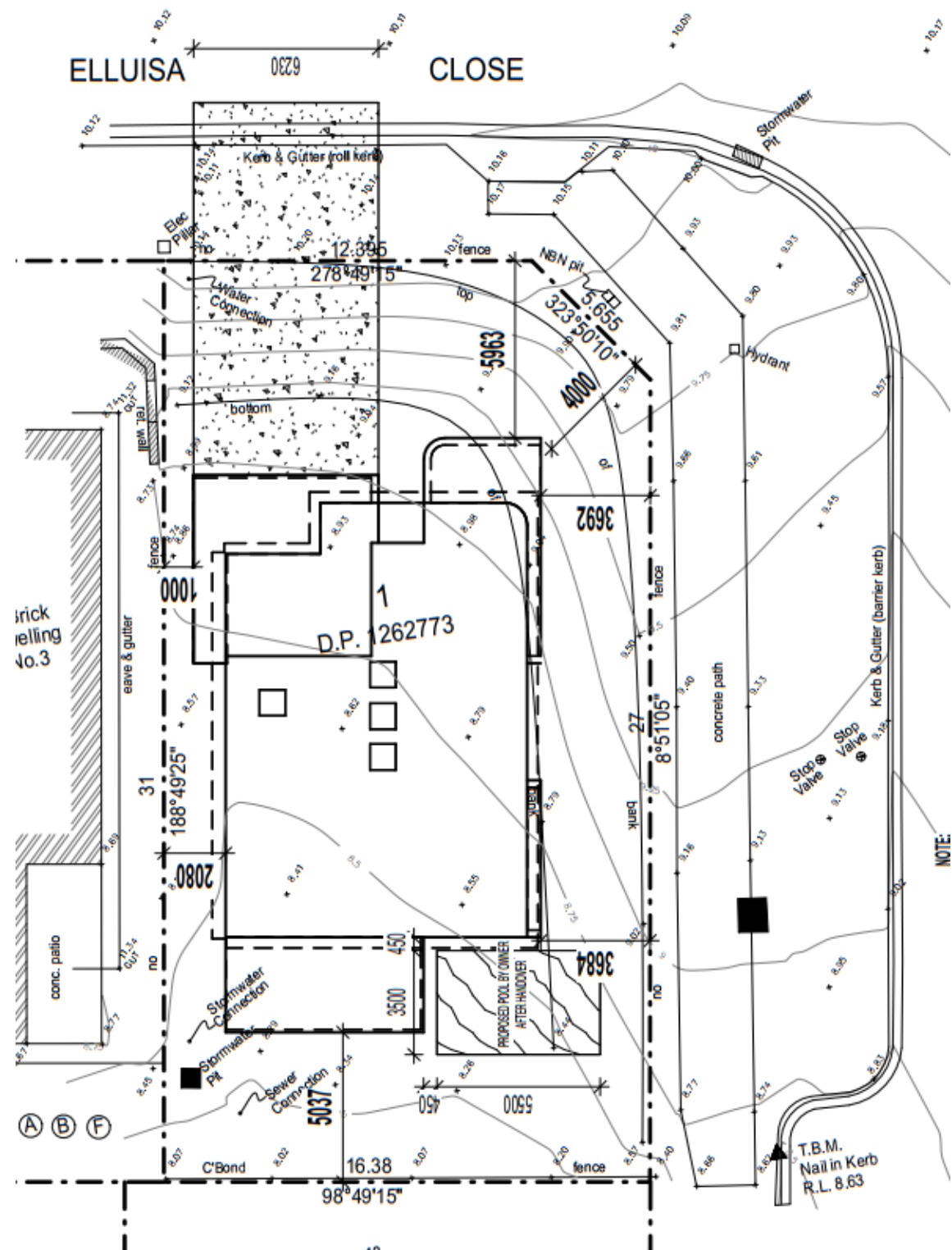


Figure 4.1: Site Plan Extract – Source: GJ Gardner. Not to Scale.
Elluisa Close to top of page, Boundary Street to right of page. North approx. to top of page.

4 Bushfire Assessment

The site assessment methodology as per Appendix 1 of *Planning for Bush Fire Protection 2019* (PBP 2019) outlines the procedure to determine Bushfire Attack Levels (BALs).

The site assessment methodology is summarised in the following steps:

- 4.1 Determine vegetation formation around building to a distance of 140 metres;
- 4.2 Determine effective slope of the land from the building for a distance of 100 metres;
- 4.3 Identify relevant Forest Fire Danger Index (FFDI) for the Council area;
- 4.4 Determine separation distance from the edge of the unmanaged vegetation to the closest external wall (or closest structural support element in the case of patios/porticos, etc.);
- 4.5 Match the relevant FFDI, appropriate vegetation, distance and effective slope to determine the appropriate BAL.

The steps are discussed in 4.1-4.5 below.

4.1 Vegetation

The nearest potential bushfire hazard vegetation relative to the proposed dwelling is on land on the northern (opposite) side of Elluisa Close.

The nearest potential bushfire hazard vegetation is ~15 metres north from the site and ~20.9 metres from the proposed dwelling location.

The area of vegetation to the northern side of the road reserve in Elluisa Close exhibits characteristics consistent with that of coastal swamp forest. Also, the area of the vegetated land is >1 hectare. PBP 2019 includes coastal swamp forest as a vegetation formation included in a classification as *forest*.

This vegetation is classified as *forest* vegetation to the north of Elluisa Close.

4.2 Effective Slope

The slope of the land under the nearest areas of potential bushfire hazard vegetation is upslope.

4.3 Relevant FFDI for Council area

The Council area in which the development is to be undertaken is the Mid-Coast Council area which is within the North Coast Fire Weather area. The applicable FFDI is 80.

The relevant table of PBP 2019 for determination of the BALs is Table A1.12.6.

4.4 Separation distance

The separation distance between the proposed dwelling and the nearest potential bushfire hazard vegetation is 20-29 metres (~20.9 metres).

It is to be recommended that land within the site be maintained as an Inner Protection Area (IPA) for the purposes of PBP 2019.

4.5 BAL Determination

The following table shows the determination of Bushfire Attack Level (BAL) as per Table A1.12.6 of PBP 2019 (Determination of BAL, FFDI 80 – residential development) for the proposed dwelling and subsequent required building standards.

Direction	Separation distance (metres)	Vegetation Formation	Effective Slope	Bushfire Attack Level (BAL)
North	~20.9 [20-<29]	forest	upslope	BAL-29

The highest assessed BAL is BAL-29.

According to Section A1.8 (Shielding) of PBP 2019, where an elevation is shielded from direct radiant heat arising from bushfire attack, then the construction requirements for that elevation can be reduced to the next lower BAL. A similar provision is contained in Section 3.5 of AS 3959-2018.

The south-facing elevation(s) of the dwelling does not have any direct line of sight to the vegetation on land to the north of the site. Applying Section A1.8 of PBP, consideration may be given to construction of the south-facing elevation being reduced by one level of construction to BAL-19.

Construction requirements apply for the purposes of AS 3959-2018 (*Construction of buildings in bushfire-prone areas*) for the relevant BAL. Additional construction requirements detailed in Section 7.5.2 of PBP apply in addition to any construction requirements detailed by AS 3959-2018.

5 Recommendation

In relation to the proposed dwelling on land at Lot 1 DP 1262773, 1 Elluisa Close, Forster, it is recommended that:

- A. Land within the site is to be maintained as an Asset Protection Zone (APZ) for the purposes of *Planning for Bush Fire Protection 2019*.
- B. The APZ is to be maintained in accordance with the requirements for an Inner Protection Area (IPA) as described in Appendix 4 of *Planning for Bush Fire Protection 2019* and any grassy vegetation within the IPA is to be maintained to a height <100mm. A clear area of low-cut lawn or pavement is to be maintained adjacent to the dwelling.
- C. Subject to (A), (B) and (D), construction of the proposed dwelling is to comply with the construction requirements for BAL-29 as per AS 3959-2018 (*Construction of buildings in bushfire-prone areas*) and the additional construction requirements/variations as outlined in 7.5.2 (page 70) of *Planning for Bush Fire Protection 2019*.
- D. Applying Section A1.8 of PBP, consideration may be given to construction of the south-facing elevation(s) of the dwelling being reduced by one level of construction to meet the requirements for BAL-19 as per AS 3959-2018 and the additional construction requirements for BAL-19 as per Section 7.5.2 of PBP.
- E. Any fences and/or gates should be made of either hardwood or non-combustible material.
- F. All above-ground water service pipes external to the building are to be metal, including and up to any taps.

- G. Any bottled gas is to be installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and:
- (i) all fixed gas cylinders are to be kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side;
 - (ii) if gas cylinders need to be kept close to the building, safety valves are to be directed away from the building and at least 2 metres away from any combustible material, so they do not act as a catalyst to combustion;
 - (iii) above-ground gas service pipes external to the building are to be metal, including and up to any outlets; and
 - (iv) connections to and from gas cylinders are to be metal.

Notes to assessment:

1. The assessment relates to a proposed dwelling (the proposed development) on the subject land only. Only the siting plan at Figure 4.1 has been considered.
2. This Assessment has been based on bushfire protection guidelines as outlined in the document entitled Planning for Bush Fire Protection 2019 (PBP).
3. Notwithstanding the precautions recommended, it should always be remembered that bushfires burn under a range of conditions and an element of risk, no matter how small, always remains.
4. Occupants are advised to consider preparation of a Bush Fire Survival Plan which is revised annually prior to the bushfire season. A *Guide to Making a Bush Fire Survival Plan* has been developed by the NSW RFS to assist residents in the preparation of their plan and can be found at the NSW RFS website - www.rfs.nsw.gov.au.

Yours faithfully



SIMON CARROLL

Graduate Diploma in Design for Bushfire Prone Areas
Graduate Diploma in Building Fire Safety & Risk Engineering
Bushfire Planning and Design Accredited Practitioner Level 3 – NSW
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