

Preliminary Bushfire Risk Assessment – Planning Proposal Woollamia Rural Residential Lots

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2 Background

The Woollamia Farmlets area is located south of Nowra in the Jervis Bay region. The farmlets are dissected east-west by Woollamia Road, the main road providing access from the Princes Highway to Woollamia and Huskisson. The northern boundaries of the study area are shared with Currumbene Creek (which forms part of the Jervis Bay National Park) and Woollamia Road. To the south is the Woollamia Nature Reserve which is managed by NSW National Parks & Wildlife Service (NPWS).

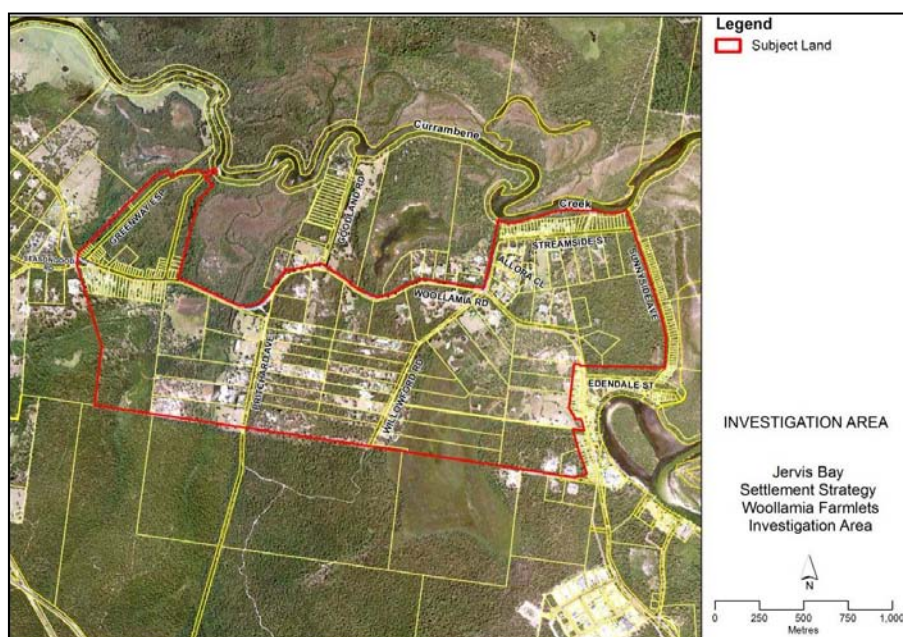


Figure 1: Woollamia Investigation Area

Council at its Ordinary Meeting 16 November 2012 resolved to prepare two Planning Proposals for the Woollamia Farmlets Small Lot Rural Subdivision Area as follows:

- a) Pursuant to Section 55 of the Environmental Planning and Assessment Act (1979), Council commence the Gateway Process and prepare two Planning Proposals for the Woollamia Farmlets Small Lot Rural Subdivision Area identified in the Jervis Bay Settlement Strategy as follows:
 - i. Proposal 1 - To investigate the capacity for residential development (including lot size and configuration) of the Small Lot Rural Subdivisions located within the Greenway Esplanade/Woollamia Road sector (Area 1). See on attached map.
 - ii. Proposal 2 - To permit one (1) dwelling per lot on those discrete undeveloped rural residential lots located outside of the 1% AEP floodline within the Woollamia Road/Willowford Road sector (Area 2) that do not currently have a dwelling entitlement as follows: Lot 92 DP15266 (1 Pritchard Avenue), Lot 79 DP 9289 (Willowford Road), Lot 78 DP 15266 (87 Willowford Road), Lot 78A DP15266 (Willowford Road), Lot 82A DP 15266 (84 Willowford Road) and Part Lot 72 DP 15266 (Woollamia Road).
- b) Exclude those lots wholly identified within the Flood Planning Area (1% AEP) from either Planning Proposal.

- c) Consider the financial arrangements for cost recovery following consideration of the Planning Proposal at the Gateway stage.

3 Bushfire Risk Management

The Jervis Bay Settlement Strategy (JBSS), Council's planning strategy for the subject land contains the following objective relating to Bushfire:

Objective: To ensure that settlements are protected from bushfire risk.

The JBSS seeks to achieve this objective by:

- The provision of appropriate Asset Protection Zones
- Asset Protection Zones associated with new development being contained within developable areas, and excluded from protected areas (wildlife corridors, riparian areas etc.)
- New settlement to be planned to include bushfire risk management measures that are relative to the associated risk of the locality
- Bushfire risk arrangement measures associated with new development will comply with relevant assessment and policy requirements.

The subject land is designated as Bushfire Prone Land under the Rural Fires and Environmental Assessment Legislation Amendment Act 2002 (see fig. 4). Section 117 Direction 4.4 (Planning for Bushfire Protection) requires Council to consult the NSW Rural Fire Service (RFS) when preparing an amending LEP over, or in proximity to bushfire prone land.

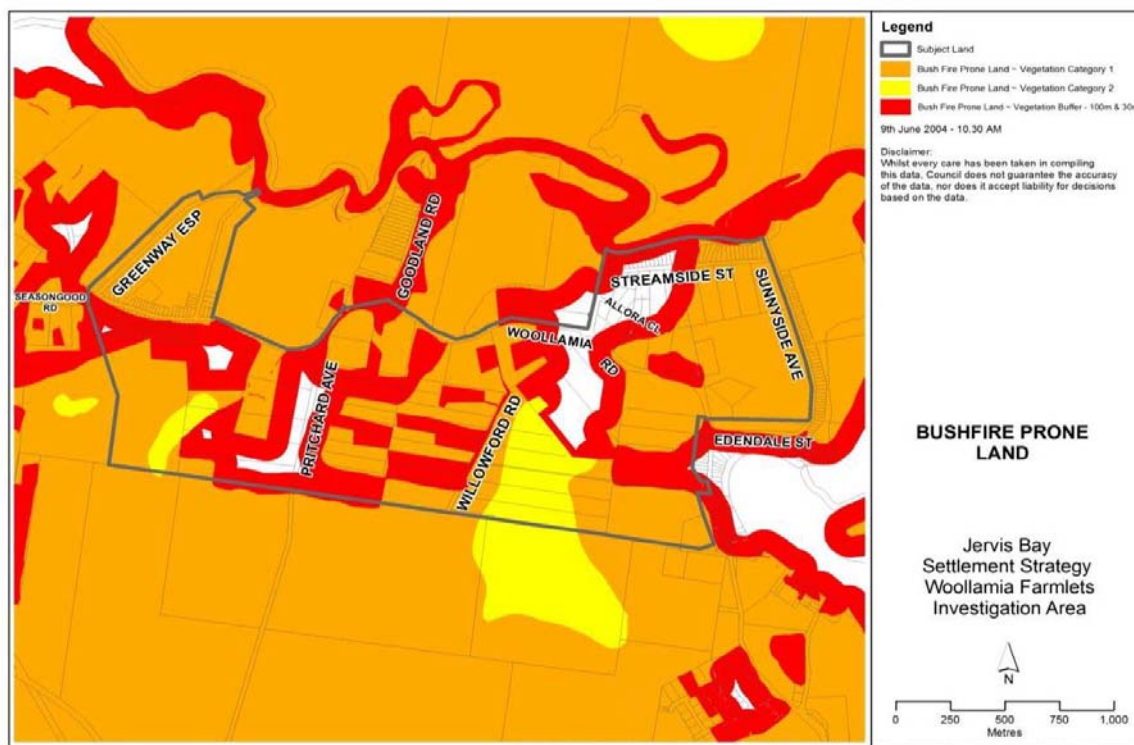


Figure 2: Bushfire Prone Land

The nearby Woollamia residential settlement is identified in the Bush Fire Risk Management Plan (BFRMP) prepared by the Shoalhaven Bush Fire Management Committee as being a “medium” risk. The likelihood is classed as “unlikely” and the consequence is classed as “major”.

The current proposal has been prepared with preliminary consideration of Planning for Bush Fire Protection 2006 provisions to ensure that these requirements are available on each site. Any future residential development proposed in this area will be subject to detailed bush fire assessment and protections measures required at development application stage under 79BA of the EP&A Act.

4 Purpose

This preliminary Bushfire Risk Assessment has been prepared following Section 56 consultation of the *Environmental Planning and Assessment Act 1979* (EP&A Act) with NSW Rural Fire Service (RFS) and NSW Office of Environment and Heritage (OEH).

OEH in its letter dated 17 August 2012 requested that the Planning Proposal identify the location of a building envelope and Asset Protection zone and that the building envelopes and Asset Protection Zones (APZs) are sited to minimise vegetation clearance.

The RFS in its letter dated 6 July 2012 stated that it does not object to the progression and exhibition of the planning proposal and does not believe the proposal is non-compliant with Planning for Bush Fire Protection 2006. However the RFS have advised that Council should consider the impact of implementation that will be required at development application stage under 79BA of the EP&A Act. The RFS have requested that Council consider the following issues, based on *Planning for Bush Fire Protection 2006*:

- Asset Protection Zones (APZ) and the level of clearing that may be undertaken on environmentally sensitive lots. The RFS has also recommended a Bush Fire Attack level (BAL) 29 or below to achieve APZ requirements on site;
- Appropriate location of dwellings to ensure adequate separate to inappropriate radiant heat levels;
- Access requirements;
- Water supply; and,
- Minimising the interface to the bush fire hazard through the proposed dwelling location.

5 Study Area

The land which is the subject of Planning Proposal 2 comprises of the following six lots and is outlined in figure 2 below:

- Lot 92A DP 15266
- Lot 79 DP 9289
- Lot 78 DP15266
- Lot 78A DP 15266
- Lot 82A DP 15266
- Lot 72 DP 15266

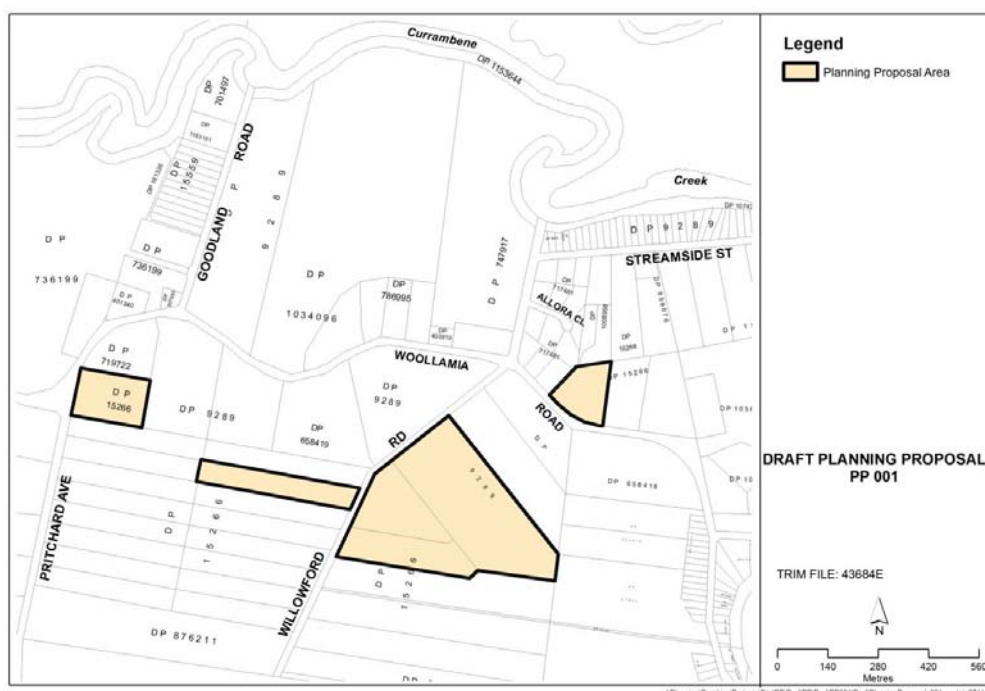


Figure 3: Draft Planning Proposal Area

Following further investigation of historic ownership patterns, Lot 78A DP 15266 appears to be a 1964 holding and benefits from an existing dwelling entitlement in accordance with Clause 14(2)(b) in Shoalhaven Local Environmental Plan 1985. It is therefore not necessary to rezone Lot 78A for the purposes of enabling a dwelling to be constructed as the property already benefits from a dwelling entitlement; however an indicative building envelope has been included in this assessment to indicate the clustering of adjoining dwellings.

The NSW Office of Environment and Heritage (OEH) and the NSW Catchment Management Authority (CMA) have also advised they do not support the inclusion of Lot 72 DP 15266. A site inspection by OEH and Council officers revealed that the site appears to be completely waterlogged and is covered by an EEC which would prevent any future development. The CMA considers this site to be highly constrained and does not support a reduction in the minimum lot size without detailed flora and fauna studies undertaken. Following this advice, Lot 72 DP 15266 has not been mapped with any additional development potential.

5.1 Vegetation

The vegetation communities within the subject area have been identified by NSW Office of Environment & Heritage as follows:

Lot 78, 78A DP15266 & Lot 79 DP 9289

Most of Lot 78 & 79 is designated as a SEPP 14 Wetland (No. 329). This wetland area is vegetated with *Swamp Paperbark – Swamp Oak tall shrubland on estuarine flats*, which conforms to the EEC *Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions*. This also represents habitat for a range of threatened species, including Green and Golden Bell Frog. Lot 78, 78A & 79 have a strip of land, approximately 80 metre wide, between the SEPP 14 wetlands and Willowford Road. This buffer area is cleared on Lot 79, however this strip of land on Lot 78 & Lot 78A is vegetated with *Red Bloodwood – Hard leaved Scibbly Gum – Silvertop Ash heathy open forest on sandstone plateaux of the lower Shoalhaven Valley, Sydney Basin*.

This is not an EEC, but is likely to contain habitat for a range of threatened species, including Glossy Black Cockatoo and Yellow-bellied Glider.

Lot 82A DP 15266 & Lot 92A DP 15266

Lots 82A and 92A are both completely vegetated and are likely to provide habitat for a range of threatened species, including Glossy Black Cockatoo and Yellow-bellied Glider. However, the vegetation present is *Red Bloodwood – Hard-leaved Scribbly Gum – Silvertop Ash heathy open forest on sandstone plateaux of the lower Shoalhaven Valley, Sydney Basin* is not listed as EEC.

Predominant Vegetation

PBP 2006 requires the 'predominant vegetation' occurring up to 140m from each potential building site to be determined in all directions. It also states that "where a mix of vegetation types exist the type providing the greater hazard is said to predominate" i.e. to be used in determining the bushfire protection measures required.

The predominant vegetation (as classified by Table 2.4 and the RFS vegetation types) in all directions of each proposed building envelope is detailed below:

- Lot 92A DP 15266 (1 Pritchard Ave) – forests to the north and east and managed land to the south and west.
- Lot 79 DP 9289 (Willowford Rd) – managed land to the north, woodland to the west, managed land to the east and short heath to the south.
- Lot 78 DP15266 (87 Willowford Rd) – forests to the north and west, woodlands to the south and managed land to the east.
- Lot 78A DP15266 (Willowford Rd) – forests to the north, woodlands to the south and west and short heath to the east.
- Lot 82A DP 15266 (84 Willowford Rd) – Forests to the north, woodlands to the east and forest to the south and west.



Figure 4: Aerial photograph of land subject to this preliminary bushfire risk assessment

5.2 Slope

Planning for Bushfire Protection 2006 (p. 50) defines the effective slope as “that slope within the hazard which most significantly affects fire behaviour of the site having regard to the vegetation class found”. The effective slopes are classified within five slope classes, one being upslope and four being downslope, ranging from flat to 18 degrees in steps of five degrees.

A bushfire risk assessment was commissioned by Council and completed by Bushfire and Environmental Services (BES) in January 2009 to investigate rezoning of land at Goodland Rd, Woollamia. Figure 5 below was obtained from this report and identifies the subject properties as 0-5° slope.

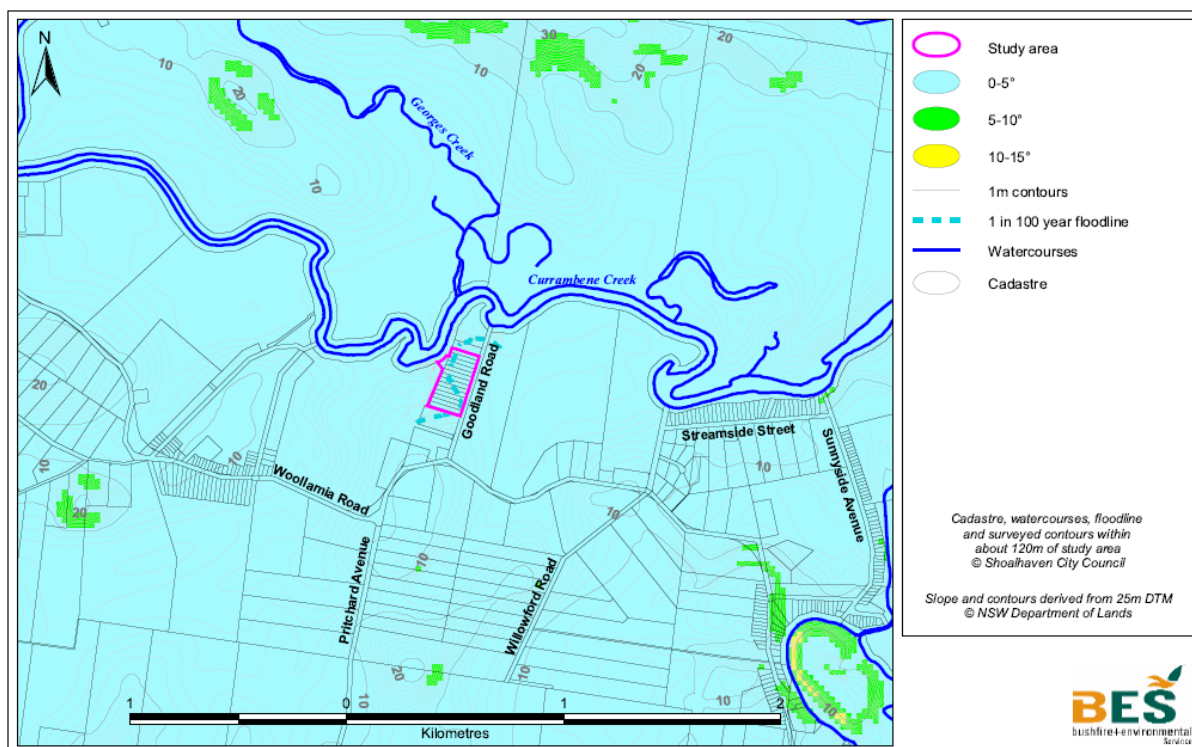


Figure 5: Slope Map included in Bushfire Assessment – Rezoning investigations of land at Goodland Rd, Woollamia (BES, January 2009)

5.2.1 Bushfire asset protection zones (APZ's)

Asset Protection Zone setbacks (i.e. the separation of buildings from unmanaged bushfire prone vegetation) are required at the interface between all bushfire-prone vegetation and built assets vulnerable to bushfire damage.

The gradient of the slope and whether it is upslope or downslope from the asset, and the type of vegetation on that slope are used within *Planning for Bush Fire Protection 2006* to determine the size of the APZ. Generally APZ incorporate an Inner Protection Area (IPA) and an Outer Protection Area (OPA).

Minimum indicative APZ's have been determined using table A2.4 of PBP 2006 (FDI = 100) to ensure that any dwellings adjacent to surrounding bushfire prone vegetation and/or internal bushland would not be within the flame zone.

The vegetation and slope variables are:

- Vegetation classification: forest (dry & wet sclerophyll forest), woodlands, short heath and managed land
- Slope classification: 0-5° upslope and 0-5° downslope (refer to slope map)

Depending on the slope, minimum APZ's of between 10 metres or 25 metres would be required to ensure any dwellings are located outside of the flame zone. Exact APZ dimensions including inner and outer protection areas, access, water supply and construction standard would be determined at development application stage. A development application for each dwelling would need to be accompanied by an individual bushfire assessment.

5.2.2 Dwelling construction levels and bushfire asset protection zones

Dwellings would need to be constructed to the appropriate standard under AS3959 (Construction of buildings in bushfire-prone areas) as determined using Appendix 3 in Planning for Bush Fire Protection 2006 (PBP). The categories of bushfire attack, level of slope and the estimated bushfire asset protection zone (APZ) dimensions are identified in Table 4. The RFS in its letter dated 6 July 2012 recommends a Bush Fire Attack Level (BAL) 29 or below to achieve APZ requirements. Applicable construction levels under AS3959 and exact APZ buffers will be determined during development assessment for each property.

Table 1 – Summary of bushfire attack and relevant APZ's determined in accordance with Table 2.4 in PBP

		Lot 92A DP 15266	Lot 79 DP 9289	Lot 78 DP15266	Lot 78A DP 15266	Lot 82A DP 15266
North	Vegetation	Forests	Managed Land	Forests	Forests	Short Heath
	Slope	Upslope/Flat	>0-5°	Upslope/Flat	>0-5°	>0-5°
	Minimum APZ (m)	20	0	20	25	10
East	Vegetation	Forests	Reduced Vegetation	Short Heath	Short Heath	Woodlands
	Slope	Upslope/Flat	Upslope/Flat	>0-5°	Upslope/Flat	>0-5°
	Minimum APZ (m)	20	0	10	10	15
South	Vegetation	Managed Land	Short Heath	Woodlands	Woodland	Forests
	Slope	Upslope/Flat	Upslope/Flat	>0-5°	>0-5°	Upslope/Flat
	Minimum APZ (m)	0	10	15	10	20
West	Vegetation	Forest	Woodland	Forests	Woodland	Forests
	Slope	>0-5°	Upslope/Flat	Upslope/Flat	Upslope/Flat	Upslope/Flat
	Minimum APZ (m)	25	10	20	15	20

Note: Slope analysis mapping shows that the slope of the land does not exceed 5 degrees.

Access/egress will be available via Willowford Rd, off Woollamia Road, and via Pritchard Ave, off Woollamia Road.

Provision of access for fire fighting vehicles to the rear of dwellings in the subject area would need to be demonstrated by each development application and development approvals conditioned accordingly. Maintenance would be the responsibility of individual property owners.

5.3 Conclusion

Under Ministerial Direction 4.4, draft LEPs must have regard to Planning for Bush Fire Protection 2006 and to comments received from the Commissioner of the NSW Rural Fire Service (RFS). Initial correspondence received from RFS (23 May 2012) requested that Council prepare a Bush Fire Risk Assessment for each lot, however following Council's Ministerial request, the RFS subsequently agreed that the recommended assessments can be undertaken at the development application stage.

This preliminary bush fire assessment has been completed to determine if minimum APZ requirements and building envelopes can be accommodated on site with minimal vegetation clearance in accordance with advice received from OEH. Indicative building envelopes, on-site effluent reserve areas and the approximate APZs recommended in this assessment have been outlined in the Indicative Development Area mapping prepared for public exhibition.

Preliminary