



07 January 2020

Southern Cross Environmental was requested to investigate the Biodiversity Offset requirements for a proposed development at Lot 16 DP 1248291, Annett's Parade, Mossy Point NSW 2536.

## 1. Proposal and Site

Lot 16 DP 1248291 (the "site") is an area of 2 ha. A fourteen-lot subdivision is proposed over the area. The land is zoned as E4- Environmental Living with a minimum lot size of 1000m<sup>2</sup>. The land is also classified as Vegetation Category 1 bushfire prone land. In order to progress the proposal, initial surveys and two Biodiversity Assessment Method (BAM) plots were undertaken on 8<sup>th</sup> and 11<sup>th</sup> of December 2019.

Initial assessment of the site revealed an area in relatively good vegetation condition. Some weed infiltration and rubbish occurs across the site, as do bike/walking tracks and an access road for the adjoining Lot 63 DP 194047 which lies to the North. This Lot which has an existing dwelling DA in progress is an area of the endangered ecological community *Bangalay Sand Forest of the Sydney Basin and South East Corner Bioregion*.

Lot 16 DP 1248291 does not contain any area of this EEC.

The area is constricted by George Bass Drive to the West, Annetts Parade on the South and residential dwellings to the East. The adjacent Lot would allow the movement of some fauna species; however, it too is bordered by Tomaga river to the North (and estuarine wetlands to the east) and George Bass Drive. Therefore, the movement of many threatened fauna species, other than highly mobile, volante species, is restricted. For the purposes of this report it is assumed that the whole 2 ha of land will be required to be offset for the proposed subdivision.

## 2. Credit Requirements

Under the Biodiversity Offset Scheme, a project that meets benchmark clearing amounts or is within a mapped Biodiversity Value area will generate “credits” (cost) for the vegetation removal and for the species that would have utilised those resource. These credits are calculated by the NSW Department of Planning, Industry and Environment. The credit value will adjust based on the quality of the land, its situation within a landscape context and over time based on supply and demand. Therefore, credit figures within this report should be used to guide decisions regarding the project and not be read as a definitive costing for the BOS should the project proceed. The proponent should also be aware that “buying” into the BOF or purchasing credits is a stepped process, in which a request for purchase must be made for 90 days. Therefore, any decision to go ahead with the project would need to allow at least 4-5 months post BDAR completion to be finalised.

As credits may not always be available for a particular species or plant community type (PCT), there is the ability to divest the responsibility of purchasing credits to the Biodiversity Conservation Trust (BCT). This option comes with a risk weighting for each species/PCT for eventualities like the need to enhance poorer quality habitat etc. There is also an administration cost per credit.

### Ecosystem Credits that may be generated from project

The table below outlines the vegetation types found on site and an initial assessment of credits generated for the proposal.

### *PCT Credits that are likely to be generated from the project*

Plant Community Type (PCT)	Vegetation Integrity loss score	Area	Credits required	Cost per credit	Total (incl GST) to purchase PCT credits	Biodiversity Offset Fund Cost	Total (incl GST) to divest into Biodiversity Offset Fund
1120-Spotted Gum-White Stringybark-Burrawang shrubby open forest on hinterland foothills, northern South East Corner Bioregion	47.3	2 ha	35	\$8,936	<b>\$344,036</b>	19.72% Risk weighting & \$289 administrative cost per credit	<b>\$423,006</b>

For PCT 1220 offset credits may be from any PCT in the 'Southern Lowland Wet Sclerophyll forests vegetation class (these are PCT's 777,1079,1206,1212, 1214, 1206, 1283) that is less than 50% cleared group (including Tier 7 or higher) that contains hollow bearing trees, and is within the Bateman, Bungonia, Ettrema, Jervis and South East Coastal Ranges IBRA subregions (or any subregion within 100 km of the outer edge of the site). This does give the proponent some scope to find suitable ecosystem (vegetation) credits.

A search of the BOS credit database identified that the Eurobodalla Shire Council hold 153 credits for this PCT. It was not assessed whether these credits are allocated (retired). The proponent may have the ability to buy these credits instead of paying into the Biodiversity Offset Fund (BOF), which carries additional costs for entry (administration and “risk weighting”- future proofing the Biodiversity Conservation Trusts ability to purchase suitable PCT lands).

### Species Credits that may be generated from project

Calculation using the BAM online calculator identified 17 threatened fauna species, for which credits may be required. Of these 14 have been removed and are discussed below.

#### One species requires noting: **Yellow-bellied Glider**

This species is recorded in the NSW Atlas within a ten-kilometre radius of the site. The species is highly mobile, using hollows for denning and a variety of canopy trees for foraging in home ranges up to 85ha in size. Family groups move over their home ranges so as not to deplete resources from any one area. Large linear infrastructure clearing and larger patch clearing can constrict movement of the species, or confine populations to areas where resources become stretched and the population is at risk of extinction. The Yellow-bellied Glider did not appear in the BAM calculations as a potential credit requirement. However, as the species is well known in the area, it would be advisable to consider it early in calculations or survey design. Therefore, it has been added in to this costing.

#### ***Species Removed from Calculations***

A number of species have been removed from this preliminary report as onsite habitat assessment suggests they are unlikely to occur and survey effort could be utilized to verify. These species were:

- Regent Honeyeater (breeding)
- East Lynne Midge Orchid
- Little Eagle (breeding)
- Swift Parrot (breeding)
- Square-tailed Kite (breeding)
- Southern Brown Bandicoot
- Large Bent-wing Bat
- Powerful Owl (breeding)
- Squirrel Glider
- Koala (breeding)
- Grey-headed Flying Fox (breeding)
- Scrub Turpentine
- Masked Owl (breeding)
- Barking Owl
- Gang-Gang Cockatoo (breeding)
- Glossy Black Cockatoo (breeding)

It should be noted that the BAM requirements are rigid in survey to prove the absence of a species from a site. The proponent should be aware that surveys must be undertaken in certain months, and for varying lengths/methodologies. It is anticipated that survey for these species to discredit their presence on the site would take approximately 12 months. The proponent may opt to include some species that would require intensive or long survey. This would increase the species credits generated.

The proponent also has the option to gain an “expert report” on the suitability of the site for certain species. DPIE maintain a list of experts for various species that may be contracted to assess and comment on the habitat suitability of an area. This process may take less time than survey but does not come without cost, nor a guarantee that the habitat will not be assessed as suitable for that species.

### ***Species Calculated***

Initial onsite habitat assessment suggests the following species have a high likelihood of being present or utilising the site. Survey effort may be undertaken to assess the qualities of the area for these species; however, this is unlikely to adjust credit requirements greatly.

### ***Species Credits that are likely to be generated from the project***

<b>Scientific Name</b>	<b>Common Name</b>	<b>Credits required</b>	<b>Costs per credit</b>	<b>Total (incl GST) to purchase Species credits</b>	<b>Biodiversity Offset Fund Cost</b>	<b>Total (incl GST) to divest into Biodiversity Offset Fund</b>
<b><i>Myotis macropus</i></b>	Southern Myotis	47	\$741.31	\$38,325.73	19.99% risk weighting + \$29.65 admin per credit	\$47,519.94
<b><i>Phascogale tapoatafa</i></b>	Brush-tailed Phascogale	47	\$506.66	\$26,194.32	19.99% risk weighting + \$20.27 admin per credit	\$32,478.53
<b><i>Cercartetus nanus</i></b>	Eastern Pygmy Possum	47	\$245.86	\$12,710.96	19.99% risk weighting + \$20.00 admin per credit	\$16,285.88
<b><i>Pteraurus australis</i></b>	Yellow-bellied Glider	47	\$506.66	\$26,194.32	19.99% risk weighting + \$20.27 admin per credit	\$32,478.53
			<b>Total</b>	<b>\$103,425.33</b>	<b>Total</b>	<b>\$128,762.88</b>

### **3. Total Costs**

Preliminary assessment has identified that costs to progress the 14-lot subdivision would be in the order of (a) **\$447,461** to (b) **\$551,769**. These figures are (a) the costs should credits be purchased on the market at current prices to (b) the current estimated cost to pay into the BOF. As stated earlier, the figure may adjust somewhat depending on market forces and weightings given to species. The proponent should also be aware that over time other species may be listed as threatened and therefore need to be surveyed or credited, or species may be given greater weighting dependent on

ecological factors. These would influence credit prices and possibly increase the costs of the project. Therefore, the price is indicative of the figure that could be expected for the project, but is not a definitive costing.

#### 4. Alternative Options to the Proposal

The maximum clearing allowable for the site before the BOS is triggered is 2,500m<sup>2</sup>. This does not leave much scope for planning lot layouts for avoidance. Should a two-lot subdivision be considered with clearing kept to 5,000m<sup>2</sup> for each lot (access roads/dwelling footprint and APZ) costs would be reduced by approximately half. Another alternative may be to create a habitat corridor at the northern end of the lot along the steep bank that would allow species to move through. This would minimize clearing on the site, and this area would be exempt from biodiversity offset payments.

#### 5. Biodiversity Development Assessment Report

A detailed quote can be given should the proponent want to proceed with the project. Indicatively a BDAR is going to take approximately 12 months for the scope of survey work required to discredit the species indicated above and prepare the report as per the BAM requirements. Cost would be in the vicinity of \$12,000.