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Addendum to the Biodiversity Assessment Report

90 Gindurra Road, Somersby NSW 2250

State Significant Development Application (SSD 8660)

21st December 2020



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Report:	Addendum to the Biodiversity Assessment Report
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1. Introduction

1.1 Assessment Context and Scope of this Report

In January 2020 Narla Environmental submitted the amended Biodiversity Assessment Report (BAR), detailing the potential impacts associated with the development of the Kariong Soil Supplies Facility, which is classified as a State Significant Development (SSD-8660).

The content of the assessment was informed by the Secretary's Environmental Assessment Requirements (SEARs). The amended BAR was placed on public exhibition in August 2020.

On 24th September 2020, the Central Coast Council and Biodiversity Conservation Division of the Department of Planning, Industry and Environment (DPIE) provided comment on the response to submissions report on SSD-8660.

The purpose of this addendum to the BAR is to provide further information, including site survey, supporting maps and context in order to justify outstanding comments from the Central Coast Council and Biodiversity Conservation Division.

1.1.1 Comments from the Biodiversity Conservation Division

The Biodiversity Conservation Division of DPIE had only one recommendation:

“BCD recommends that a vegetation monitoring program be implemented to monitor the long-term survival of *Melaleuca biconvexa* on the site, to ensure the proposed mitigation measures are successful”.

The proponent will proceed with the preparation of a vegetation monitoring program for *Melaleuca biconvexa* within the site. This will be prepared and implemented post approval.

1.1.2 Comments from the Central Coast Council

Central Coast Council had comments relating to five (5) areas, including:

- Groundwater Dependant Ecosystems
- Barking Owl Species Credits
- *Prostanthera junonis* Species Credits
- Protection and Management of High Biodiversity “Avoid” Lands
- Hollow-Bearing Trees

The proponent has commissioned additional site surveys and this addendum report to provide clarification on the above-mentioned issues. These issues are discussed in the sections below.

2. Groundwater Dependant Ecosystems

"The Biodiversity Assessment Report states that "The Narla Ecologists did not find any vegetation communities or other ecosystems that would meet the definition of GDE during the site assessment", but it is not stated whether these surveys included the southern vegetated section of the property or any adjoining properties. Clarification is required".

Narla Environmental accessed the GDE Atlas on 23rd October 2018 which revealed that there are no GDEs within the Subject Site. The Narla Ecologists did not find any vegetation communities or other ecosystems that would meet the definition of GDE during the site assessment (Narla Environmental 2019).

Surveys for GDEs were conducted across the entire Subject Site. The southern vegetated section of the property was not assessed for GDEs. In addition, no adjoining properties were assessed.

3. Barking Owl Species Credits

"More assessment is required as to whether species credits for Barking Owl breeding habitat are required. The report details that the Barking Owl (Ninox connivens) was confirmed on site, but no further detail is given such as the type of sighting, timing of sighting(s) or location. This would need to include survey for nest trees within 100m of the development area in accordance with the requirements of the NSW Threatened Biodiversity Data Collection (TBDC)".

Barking Owl (*Ninox connivens*) was identified as potentially occurring in the Subject Site by Narla Environmental during the original biodiversity surveys conducted in January 2018, due to the presence of unconfirmed Barking Owl feathers and the remains of potential prey. Observing the precautionary principal, the species was assumed to be present within the Subject Site, however no species credits were allocated to Barking Owl in the BAR (Narla Environmental 2019).

To confirm the absence of the species within the Subject Site, additional targeted surveys were conducted by Narla Environmental in November 2020. In accordance with the recommended guidelines (DEC 2004) and the recommended survey period (DPIE 2020), five (5) nights of spotlighting and call playback were conducted within the Subject Site on the following dates:

- 24th November 2020
- 25th November 2020
- 26th November 2020
- 27th November 2020
- 30th November 2020

Table 1. Additional Threatened fauna species surveyed within the Subject Site

Candidate Fauna Species	Survey Period (DPIE 2020)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Barking Owl (<i>Ninox connivens</i>)											✓	
Key	✓ = Ecologist visit to Subject Property						= Optimum Survey Period					

No Barking Owls were present within the Subject Site during any of the additional surveys. As a result, no species credits are required to be retired for this species.

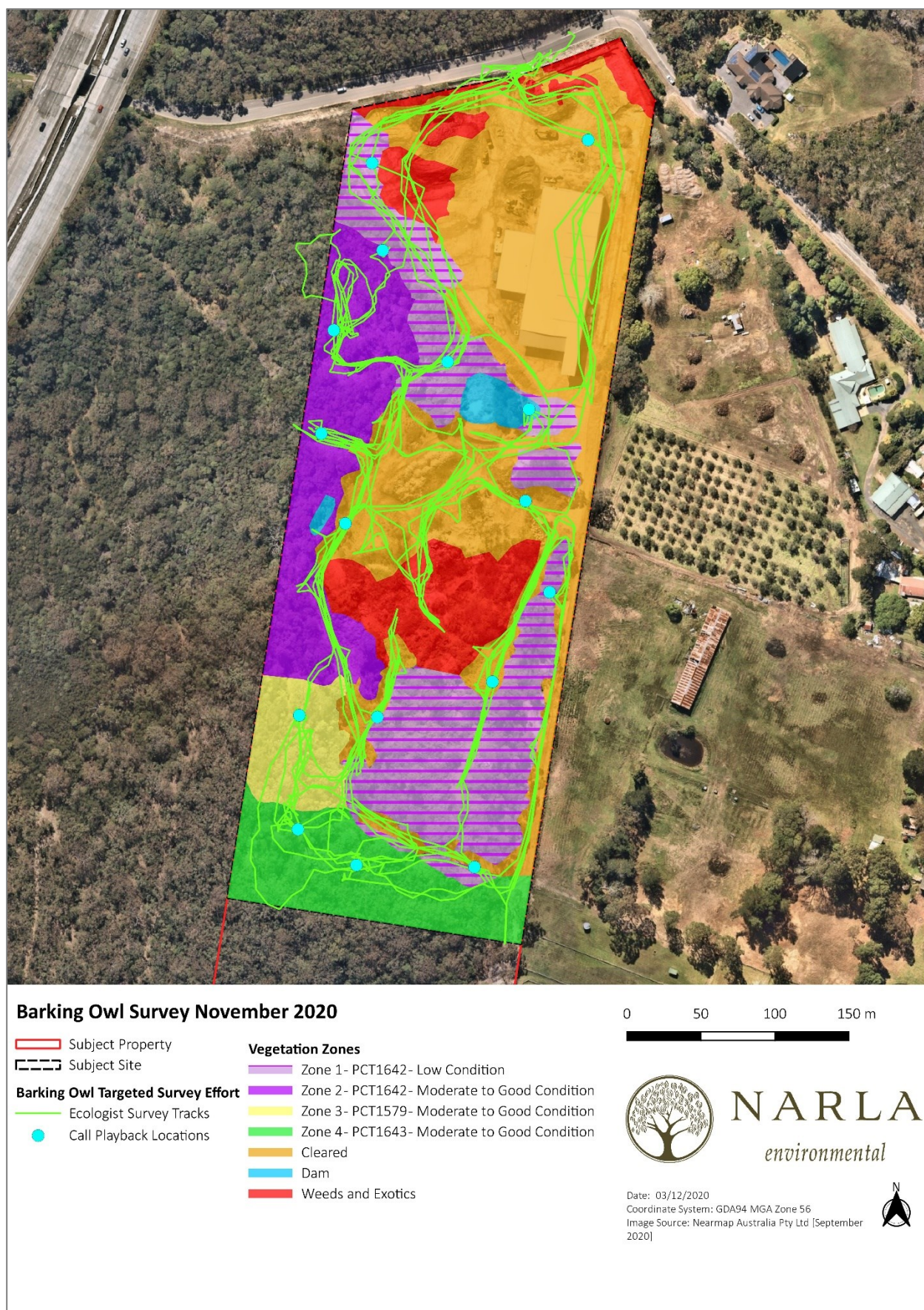


Figure 1. Barking Owl Targeted Survey November 2020 (Narla Environmental)

4. *Prostanthera junonis* Species Credits

“The purchase of *Prostanthera junonis* species credits is not included in the report. The 2020 DPIE “Surveying threatened plants and their habitats - NSW survey guide for the Biodiversity Assessment Method” includes the following recommendation on assuming presence of *Prostanthera junonis* on long undisturbed sites:

“Assuming species presence or the use of an expert report is recommended for some species, such as disturbance specialists, where site history indicates a long time since the required disturbance events. For example, *Prostanthera junonis* (Somersby mintbush) was rediscovered after 67 years on the Central Coast of New South Wales following soil disturbance associated with land clearing (Tierney & Gross 2001).

This species is now known to occur as a post-fire coloniser that eventually disappears from the above ground biomass as associated vegetation thickens and shades it out.” pp 20.

In the case of the current application, surveys have been undertaken but no expert report has been provided. Considering the above, calculation of applicable species credits OR provision of an expert report OR further discussion as to why presence within the development area has not been assumed is required, particularly given the known occurrence in the southern part of the property”.

Targeted surveys were undertaken for *Prostanthera junonis* (Somersby Mintbush) across the Subject site on 20th September 2019, 15th October 2019 and 1st November 2019. Narla Environmental contacted DPIE (formerly OEH) for the location of a suitable, proximal reference site for *Prostanthera junonis* in order to ensure that a local population of the species is in flower at the time of survey. In addition, it was important to understand the habitat requirements of the species for reference to the Subject Site. A reference population was provided by DPIE which is located at the end of Little Mooney Creek Road, Somersby, in Brisbane Water National Park. This reference population was visited immediately prior to the surveys on 20th September 2019, 15th October 2019 and 1st November 2019.

The reference population was in full flower when visited on 20th September 2019 and 15th October 2019. Flowering had significantly declined when visited on 1st November, although a number of flowers continued to remain on the plant. No *Prostanthera junonis* were observed in the Subject Site by Narla Environmental.

Table 2. Flowering times of threatened flora species

Candidate Flora Species	Survey Period (BAMC)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<i>Prostanthera junonis</i>										✓	✓	
Key	✓ = Ecologist visit to Subject Property						= Optimum Survey Period					

The latest document ‘Surveying threatened plants and their habitats - NSW survey guide for the Biodiversity Assessment Method’ in which Central Coast Council reference in their comments, was released in 2020, after the submission of the BAR (Narla Environmental 2019). For this reason, Narla do not believe that it is a reasonable request to apply the recommendation of this guideline to the proposed development.

The guideline that was available at the time of targeted surveys, which was subsequently the one that was referenced in the BAR (Narla Environmental 2019), was NSW Guide to Surveying Threatened Plants (OEH 2016). Within this document, the recommendations are clearly described, as follows:

- Targeted survey is to be undertaken during the flowering period of the species, or, if this is not possible, an expert report is to be prepared, or the species presence can be assumed; and,
- For a known population, a reference site or sites geographically or biophysically similar to your survey area can be used as a guide to indicate when the species may be flowering.

As discussed above, Narla undertook extensive targeted surveys for *Prostanthera junonis* in the appropriate survey period (DPIE 2020). The results of the targeted surveys are included on Page 63 of the BAR (Narla Environmental 2019), which outline that no *Prostanthera junonis* were located within the Subject Site. If *Prostanthera junonis* had been in the Subject Site, the Narla Ecologists would have identified individual plants as the nearby reference population was in flower at the time. Narla Environmental followed all possible guidelines and recommendations for the targeted survey of this species.

The Biodiversity Conservation Division (DPIE) have endorsed the targeted survey by providing confirmation that no further biodiversity assessment is required.

As such, it is Narla's conclusion that the species was sufficiently surveyed for and no further surveys, expert reports or offset credits should be required. Sufficient detail is provided in the FBAR.

5. Protection and Management of High Biodiversity “Avoid” Lands

“The “avoid” measures for the development include retaining the high biodiversity value southern area of the property (4.1ha) that is in part covered by the POM (approx. 2.1 ha). This area includes habitat for Eastern-pygmy Possum and a number of threatened species, including Prostanthera junonis and Hibbertia procumbens. No detail is given in the revised Biodiversity Assessment of any proposed ongoing management of biodiversity values within the area of the property covered by the POM.

The previous Biodiversity Assessment reviewed by Council (October 2018) stated that: “Avoidance of the southern portion of the Subject Property, which totals 4.1 ha and contains habitat for Prostanthera junonis and Hibbertia procumbens. The area partially falls under Management Zone 1b and 1d of the Somersby Industrial Park Draft Plan of Management (Connell Wagner 2005) and the feasibility of entering into a Biodiversity Stewardship Agreement will be investigated”.

The offset strategy presented in the revised report has removed reference to establishing a Biodiversity Stewardship Agreement over that land. There is no information provided on any steps taken to secure a Biodiversity Stewardship Agreement. It is Council's preference that biodiversity credits be secured within the Central Coast LGA. Establishment of a Biodiversity Stewardship site on the property would assist to provide a source of local credits.

Council would expect that as a minimum the retained area of habitat on the property would be subject to instruments under the Conveyancing Act including:

1) An 88B restriction that provides for biodiversity protection and;

2) An 88E positive covenant to ensure implementation of a comprehensive Bushland Management Plan with a minimum 10-year timeframe that addresses the requirements of the Somersby Industrial Park Plan of Management (POM)”.

In October 2018 the proponent commissioned Narla to undertake a Biodiversity Stewardship Agreement feasibility assessment for the southern portion of the site. This reference was removed from the BAR (Narla Environmental 2019) as the results of the feasibility assessment did not meet the necessary credits required to offset the development not cover the costs to establish a BSA. As a result, the proponent did not proceed with a BSA.

The proponent will endeavour to purchase and retire offset credits within the Central Coast LGA, where possible. Where this is not possible, the proponent will proceed with purchasing the 'Biobanking' credits directly from holders of such credits from the market. Alternatively, the proponent may request an 'assessment of reasonable equivalence'. This will result in the proponent being able to meet their offset obligation through the NSW Biodiversity Conservation Act 2016 Biodiversity Assessment Method (BAM). This option allows the proponent to either make a payment into the Biodiversity Conservation Fund (BCF) or purchase the equivalent 'BAM biodiversity offset credits' from the open market.

6. Hollow-bearing Trees

“There is a lack of information about distribution of hollow bearing trees on the site. The largest number of hollows is reported from Plot 6 within Zone 4 in the southern part of the study area. As there is no overlay of the development area shown on the figures in the Biodiversity Assessment Report, it is difficult to determine whether there is scope to retain any of the vegetation containing hollow bearing trees in this area. Council would request the Biodiversity Assessment Report include hollow bearing tree mapping and an overlay of the development footprint to better identify areas where hollow bearing trees would be retained”.

On 27th November 2020, Narla Environmental undertook an additional site survey to identify all hollow-bearing trees within the Subject Site. All hollow-bearing trees located within the Subject Site are identified within **Table 3** and Figure 2. Hollow-bearing Trees mapped by Narla Environmental in November 2020 **Figure 2**.

No hollow-bearing trees will be retained within the Subject Site. As a result, the proponent will commit to the following recommendation as outlined in the BAR (Narla Environmental 2019):

- *Assigning an Ecologist to be present on site during the clearing events. The Ecologist will be able to guide works crews away from sensitive ecological features and will be on hand to capture and relocate displaced fauna. Where possible the clearing of mature trees will be avoided if they can be accommodated into the development footprint.*

The Project Ecologist will document the actual number of hollows removed once vegetation clearing has concluded. Where possible, the hollows will be salvaged and replaced in bushland in the southern portion of the Subject Property. Where this is not possible, the proponent will commission the service of the Project Ecologist to source and install nest boxes into the southern portion of the Subject Property at a ratio of 2:1 (lost to replaced). The results of nest box salvage and installation will be detailed in a report prepared by the Project Ecologist and subsequently sent through to Central Coast Council.

Table 3. Hollow-bearing Trees Identified within the Subject Site on 27th November 2020

Species	Small	Medium	Large
<i>Corymbia gummifera</i>		1	
<i>Eucalyptus haemastoma</i>	1		
<i>Eucalyptus haemastoma</i>		2	1
<i>Eucalyptus capitellata</i>		1	
<i>Corymbia gummifera</i>	1		
<i>Eucalyptus haemastoma</i>			1
<i>Corymbia gummifera</i>	1		
<i>Eucalyptus haemastoma</i>	1		
<i>Eucalyptus capitellata</i>		1	
<i>Angophora costata</i>	2		
Stag	1		
<i>Angophora costata</i>	1		
<i>Eucalyptus capitellata</i>	1		
Stag	1	1	
Stag	1		
<i>Eucalyptus haemastoma</i>			1
Stag	1	1	
Stag	1	1	1
<i>Eucalyptus capitellata</i>	1		

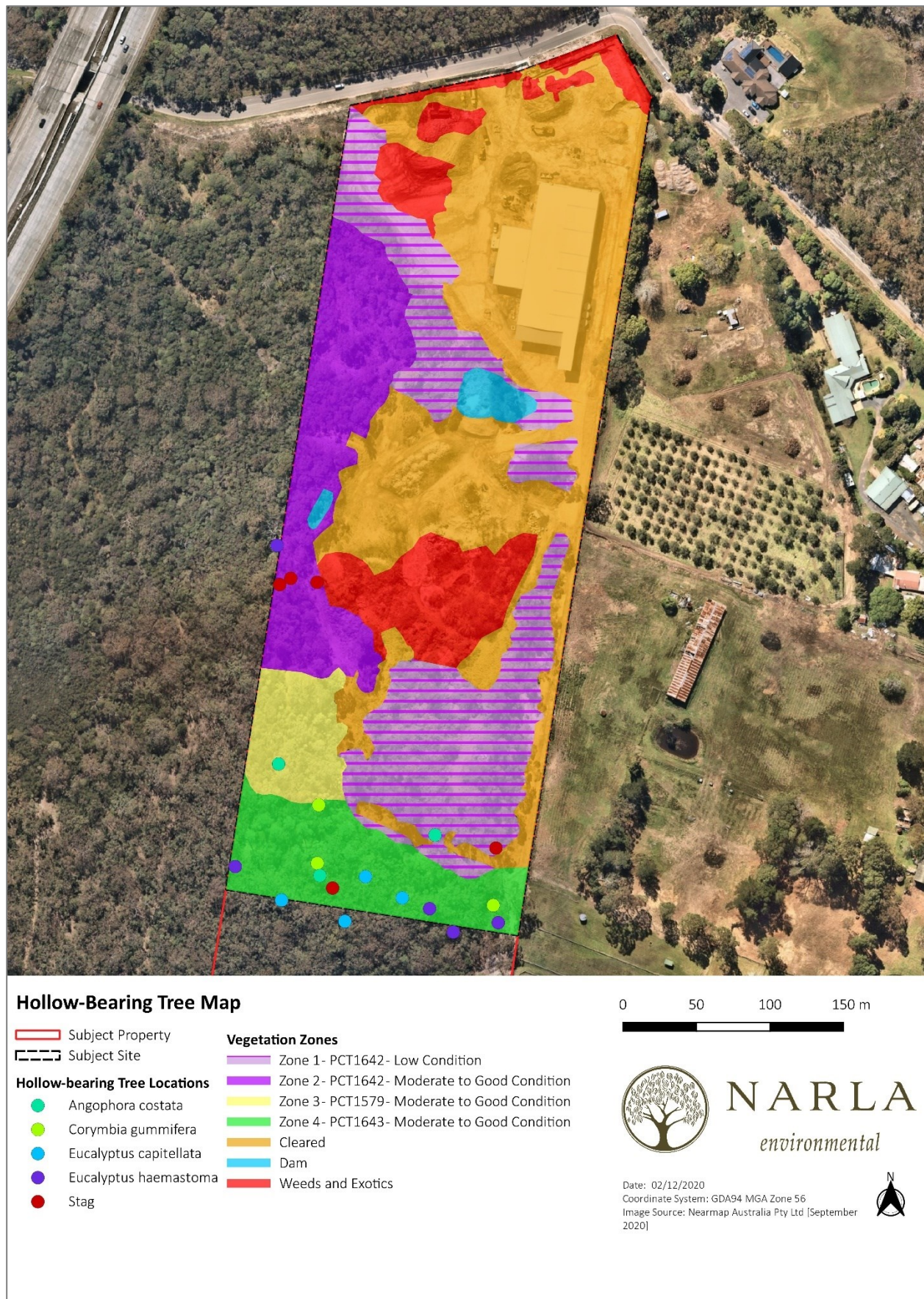


Figure 2. Hollow-bearing Trees mapped by Narla Environmental in November 2020

7. Offset Credit Calculations

Offset credits remain unchanged from the BAR (Narla Environmental 2019).

7.1 Ecosystem credits

In total 103 credits are required for the proposed impact of 3.11 ha of native vegetation and ecosystem species habitat.

Table 4 Ecosystem credit requirements

Plant community type	Condition	Area impacted (ha)	Credits required
Zone 1: PCT 1642 / HU856 (<i>Scribbly Gum - Red Bloodwood - Old Man Banksia</i> heathy woodland of southern Central Coast)	Low	1.4	13
Zone 2: PCT 1642 / HU856 (<i>Scribbly Gum - Red Bloodwood - Old Man Banksia</i> heathy woodland of southern Central Coast)	Moderate to Good	0.78	38
Zone 3: PCT 1579 / HU793 (<i>Smooth-barked Apple - Turpentine - Blackbutt</i> open forest on ranges of the Central Coast)	Moderate to Good	0.3	11
Zone 4: PCT 1643 / HU857 (<i>Red Bloodwood - Smooth-barked Apple - Scribbly Gum - Old Man Banksia</i> heathy woodland on sandstone ranges of the Central Coast)	Moderate to Good	0.63	41
Total		3.11	103

7.2 Species credits

The impact to 1.41 ha of Eastern Pygmy-Possum habitat requires 28 species credits to be retired.

No other species credits will need to be retired to facilitate this project.

8. References

DEC, 2004, Threatened Species Survey and Assessment: Guidelines for developments and activities (working draft), New South Wales Department of Environment and Conservation, Hurstville, NSW.

Department of Planning Industry and Environment (DPIE) (2020) NSW Bionet. Threatened Biodiversity Data Collection

OEH (2016) NSW Guide to Surveying Threatened Plants. February 2016. NSW Office of Environment and Heritage, Sydney.

Narla Environmental (2019) Framework for Biodiversity Assessment Report - 90 Gindurra Road, Somersby NSW 2250 - State Significant Development Application (SSD 8660)



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