



# Narara Ecovillage Coastal Open Space System (COSS) Bushland Management Plan

Lot 39, DP 270882  
10 Syncarpia Crescent, Narara

## Prepared by

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## 1. Introduction

### 1.1. Location and Background to Plan

*This section provides the background information to the Bushland Management Plan (BMP). It identifies the subject site, describes the context, states the report purpose and outlines the scope of the works.*

The land is owned by Narara Ecovillage Co-Operative Ltd (incorporated as a trading co-operative under the Co-operatives Act 1992 (NSW) on 27 July 2012. Narara Ecovillage Co-Operative Ltd (NEV) is undertaking a sustainable urban development of lands on the former Lot 13, DP 1126998 (now Lot 39/DP270882), at 10 Syncarpia Crescent, Narara.

The former Gosford Horticultural Research and Advisory Station was established as the Narara Viticulture Nursery in 1912 on the south-eastern corner of the Narara State Forest No 289 (renamed Strickland State Forest in 1917). The property was used as a horticultural research station until 2013 when it was sold to the Narara Ecovillage Co-Operative (NEV) for urban development. NEV is developing a sustainable urban development at the site.

Stage 1 of the development has been completed, the subdivision approved (see Figure 1) and houses are beginning to be built by the Cooperative members who have purchased a lot in the subdivision.

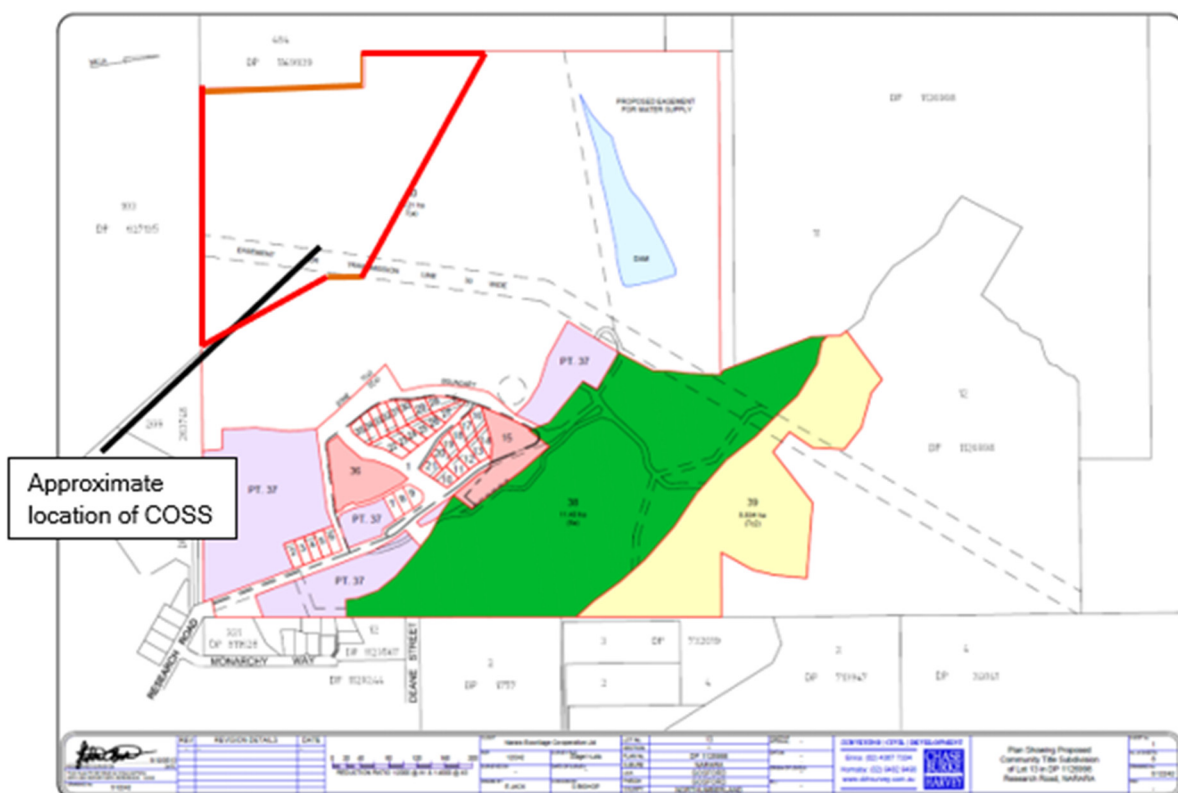


Figure 1 - Map: Showing land purchased by NEV, Stage 1 subdivision and the approximate location of the land to be transferred to Central Coast Council for inclusion in the COSS lands within context of current zoning of Narara Ecovillage (Image source: Chase Burke Harvey plans submitted with Stage 1 DA)



A condition of purchase was a Voluntary Planning Agreement between the former Gosford Shire Council and the NEV, to transfer to Gosford City Council (Lot 38) land zoned RE1. The option developed by Central Coast Council, is to exchange the RE1 zoned land (flood liable) to NEV in exchange for an equal portion of Coastal Open Space Scheme (COSS) classified lands to the Council (see Figure 2).

NEV agreed to survey the site to clearly define the area identified by Central Coast Council (CCC) as suitable for inclusion into the COSS and provide a Bushland Management Plan for this land.

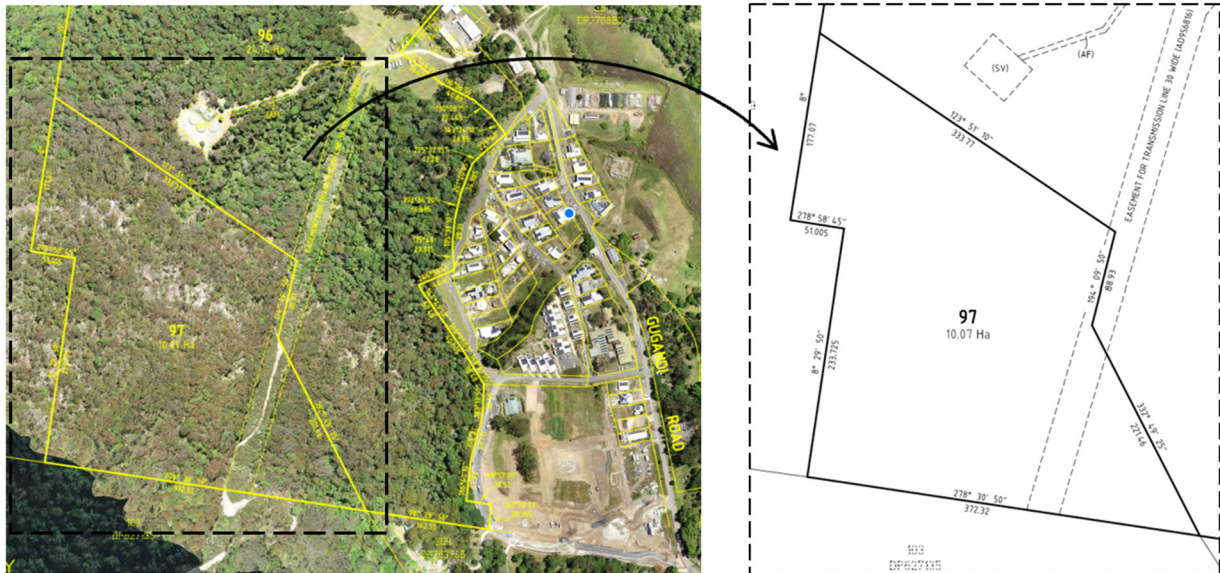


Figure 2 Map: proposed approximate location of land identified by Central Coast Council to be transferred to CCC for inclusion in the COSS is shaded in blue (Image source: Chase Burke Harvey plans submitted with Stage 1 DA)

The proposed COSS lands (see Figure 2) are on a site to the west of the main housing development. Under the Central Coast Development Control Plan (DCP) 2022 the land is zoned as an Environment Protection Zones: C2 Environmental Conservation (see Figure 3).

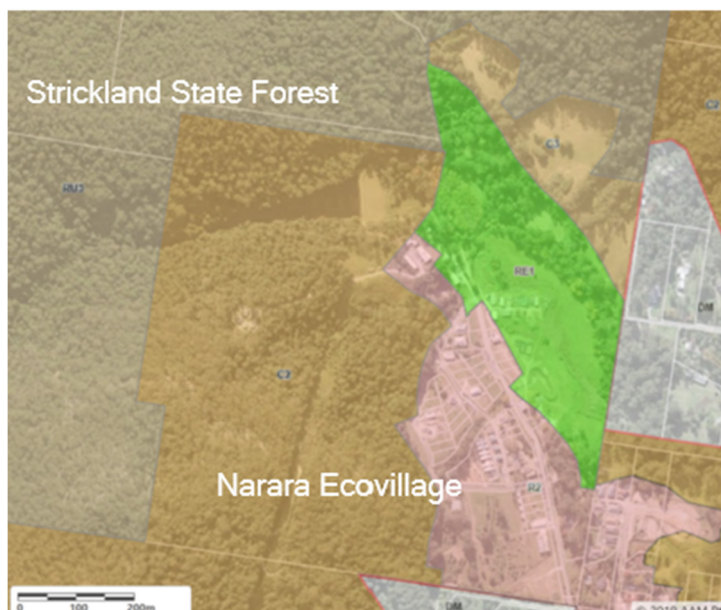


Figure 3 Map: Existing Central Coast Council zoning of Narara Ecovillage

## 1.2. Planning and Legislative Framework

A number of local planning policies, State and Commonwealth Acts are relevant to the proposed plan. The most relevant items are listed in Table 1 below.

Table 1 Summary of relevant local planning policies and legislative requirements.

Government Level	Relevant policy instrument	Relevance to COSS transfer land
Central Coast Council Local Planning Instrument	COSS Strategy	Part of the former Horticultural Research Station, and now owned by the Narara Ecovillage, which supports native vegetation is identified as Proposed Coastal Open Space System (COSS) in the Coastal Open Space System (COSS) Strategy 2010.
	<i>Central Coast Council Local Environmental Plan 2022 (CCLEP 2022)</i>	Under the current Central Coast Development Control Plan (DCP) 2022 the proposed COSS land is zoned C2 Environmental Conservation
	<i>Community Strategic plan 2018-2028</i>	The addition of the NEV land to COSS lands is consistent with Plan objectives:  <i>F1 Protect our rich environmental heritage by conserving beaches, waterways, bushland, wildlife corridors and inland areas and the diversity of local native species</i>  <i>F2 Promote greening and ensure the wellbeing of communities through the protection of local bushland, urban trees, tree canopies and expansion of the Coastal Open Space System (COSS)</i>  <i>F4 Address climate change and its impacts through collaborative strategic planning and responsible land management and consider targets and actions</i>
NSW State legislation	<i>State Environmental Planning Policy No 19 – Bushland in Urban Areas</i>	Empowers Council to require the preparation of Plans of Management for bushland zoned or reserved for public open space purposes within urban areas including Gosford.  The subject area is in C2 zoned Environment Conservation
	<i>Biodiversity Conservation Act 2016</i>	Threatened species priority action statements and plans prepared by the NSW Office of Environment and Heritage (OEH). No relevant species, populations or ecological communities occur in the subject land.
	<i>Environmental Planning and Assessment Act 1979</i>	A Section 5(a) Eight-part Test for endangered ecological community has been undertaken (Payne 2014). This identified an EEC in the headwaters portion of a gully north of the proposed COSS land.

Government Level	Relevant policy instrument	Relevance to COSS transfer land
	<i>Biosecurity Act 2015</i>	Includes powers and obligations regarding the control of weeds and other biosecurity risks on private and public land. The management of weeds is discussed in Section 5.3 below.
	<i>Rural Fires Act 1997</i>	The area is largely bounded by urban development to the east and south, and by Strickland State Forest to the north and west. The proposed COSS land has been subject to bushfires in the past and is accessible via a fire trail. The power line easement is maintained by Ausgrid.
C'wealth legislation	<i>Environment Protection Biodiversity and Conservation Act 1999</i>	No relevant species, populations or Ecological Communities occur in the subject land (see Payne 2017).

### 1.3. Report Purpose and Objectives

This report is in support the renegotiation of a Voluntary Planning Agreement with the Central Coast Council. The purpose of this report is to provide a comprehensive Bushland Management Plan (BMP) for the area to be transferred to Central Coast Council for inclusion in the COSS, see Figure 2 for proposed area. The report identifies the existing natural features of the land proposed for inclusion in the COSS and outline proposed actions to:

- maintain and enhance the aesthetic, educational and scientific values of the existing bushland,
- maintain biodiversity of locally indigenous species and communities,
- maintain and protect habitat for wildlife,
- support natural bush regeneration processes and
- protect the area from biosecurity risks.

Weed removal will be carried out by Central Coast Council, paid for during the first 3 years after implementation of this Plan through an endowment fund provided by NEV.

### 1.4. Definitions

**Bush regeneration** is the practice of restoring bushland by focussing on reinstating and reinforcing the systems' ongoing natural regeneration processes.

**Conservation management** is the maintenance of existing and traditionally occurring ecosystems, including their structure, function and dynamics. This is identical to the meaning of the term 'preservation' used elsewhere and recognises intrinsic values of natural systems, not primarily their usefulness to humans.

**Ecological restoration** aims to restore pre-existing indigenous ecosystems and ecological processes, maintaining and developing the capacity of a natural system to self-perpetuate. (Perkins 1999, cited in NSW Department of Infrastructure, Planning and Natural Resources 2003)

**Resilience** refers to the ability of an ecosystem to regenerate naturally and to withstand, or recover from, disturbances such as weed invasion, clearing, or fire (Australian Association of Bush Regenerators).

## 2. Existing Native Vegetation and Weeds

*This section provides a description of the physical and biological characteristics within the subject site.*

A review of the relevant State (Biodiversity Conservation Act 2016) and Commonwealth (Environmental Protection and Biodiversity Conservation Act 1999) environmental legislation was carried out in order to identify endangered ecological communities and threatened flora species known to occur in the locality (Payne 2015). The upper slopes vegetation community is identified as Exposed Hawkesbury Woodland in the Council's vegetation map (CC-WL02i) after Bell 2019 (see Figure 4). The initial survey by Payne noted the significant old growth in the upper forest which incorporates the proposed COSS lands. A drainage line running down from the upper forest contains CC-WS04i riparian vegetation types.

The proposed land to be included in the COSS, (Figure 2 shows this area) has undergone fewer disturbances than the main NEV development site and during site inspection walks in December 2018 and March 2019 was observed to be free of weeds except for some on the access trails and power easement. Some Whisky Grass (*Andropogon virginicus*) was observed along a fire trail within the area. Further information on this weed and its recommended management is provided at Appendix 2. Other weeds likely to be found in these areas are Fireweed (*Senecio madagascariensis*), and Lantana (*Lantana camara*), all of which are easily removed by hand when small.



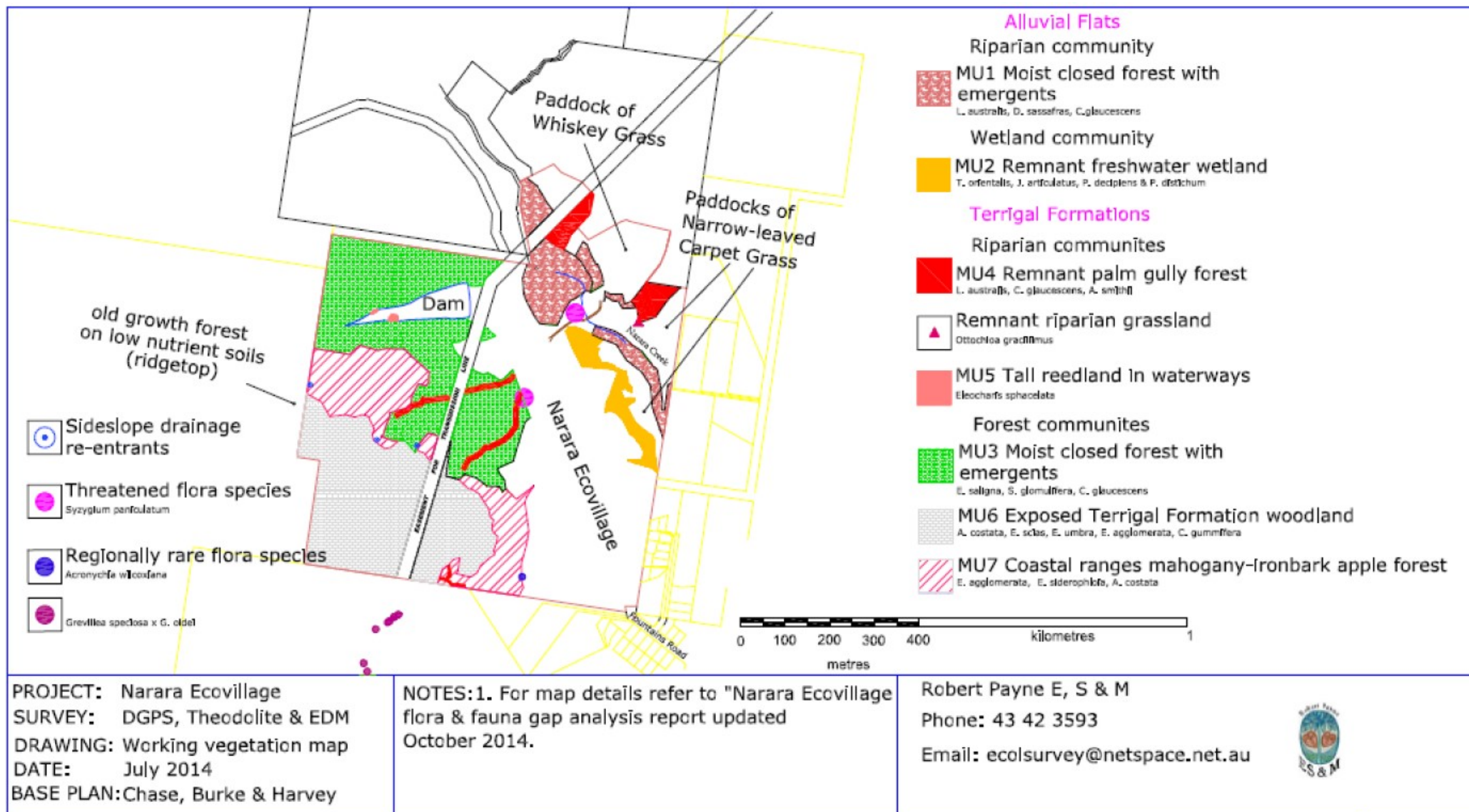


Figure 4 Map: showing Ecological communities as identified by R Payne. Source: Narara Ecovillage Flora and Fauna gap analysis report-update: Version 5



## 2.1. Natural Values

A number of studies of the natural values have been conducted on the NEV land since the DPI proposed to sell it and to supplement DAs (see Table 2 below). NEV contracted ecologist Robert Payne from Ecological Surveys and Management for surveys and flora and fauna gap analysis between 2013 and 2017, see Appendix 4 and 5. These studies included the area for inclusion in the COSS. A map showing survey quadrats and transects undertaken during 2013/14 (see Figure 5). The list of plants found in these surveys is provided in Appendix 5.

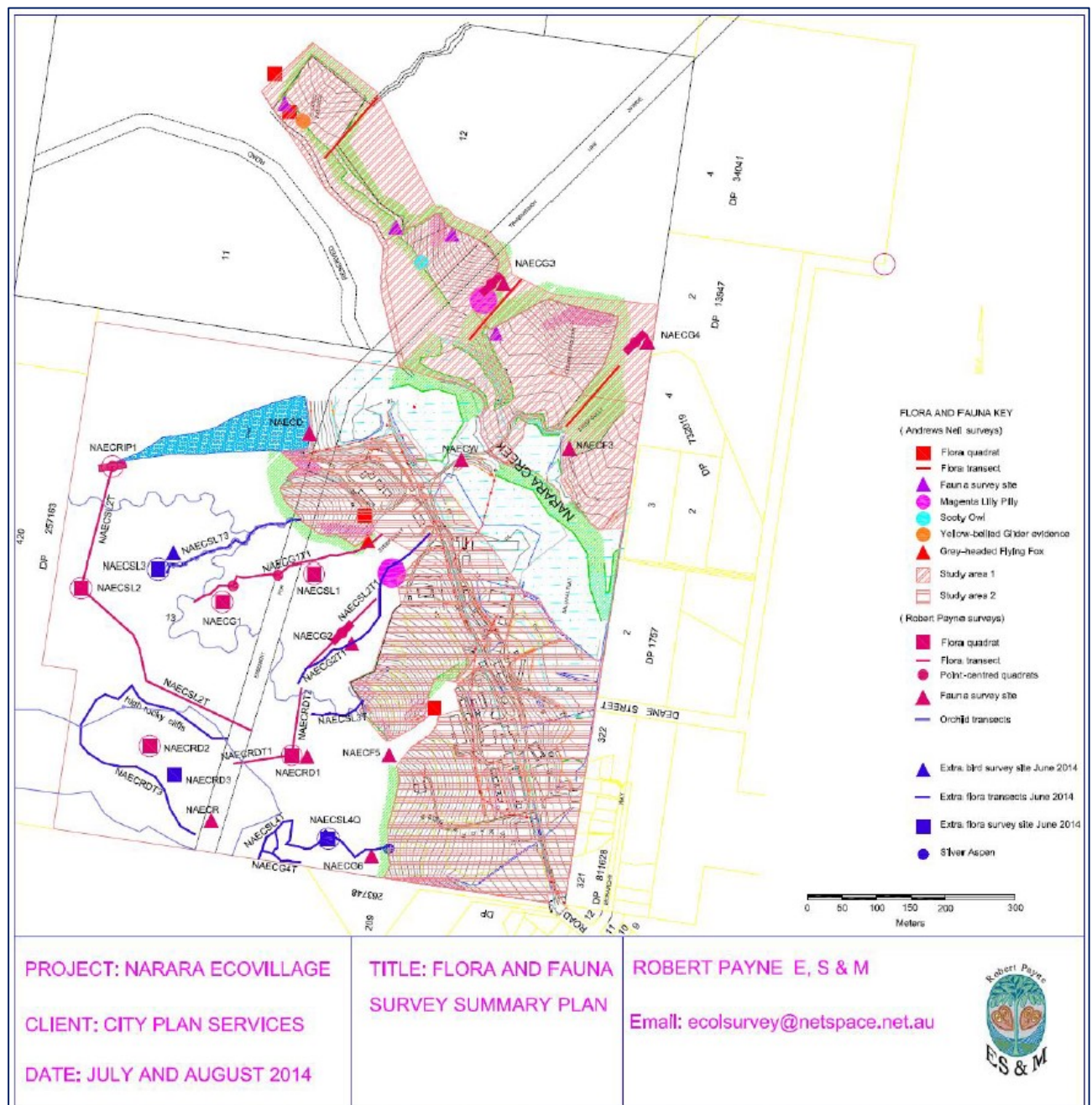


Figure 5a Map: Surveys conducted by Robert Payne (2017), identifying locations of transects and quadrats within the subject site

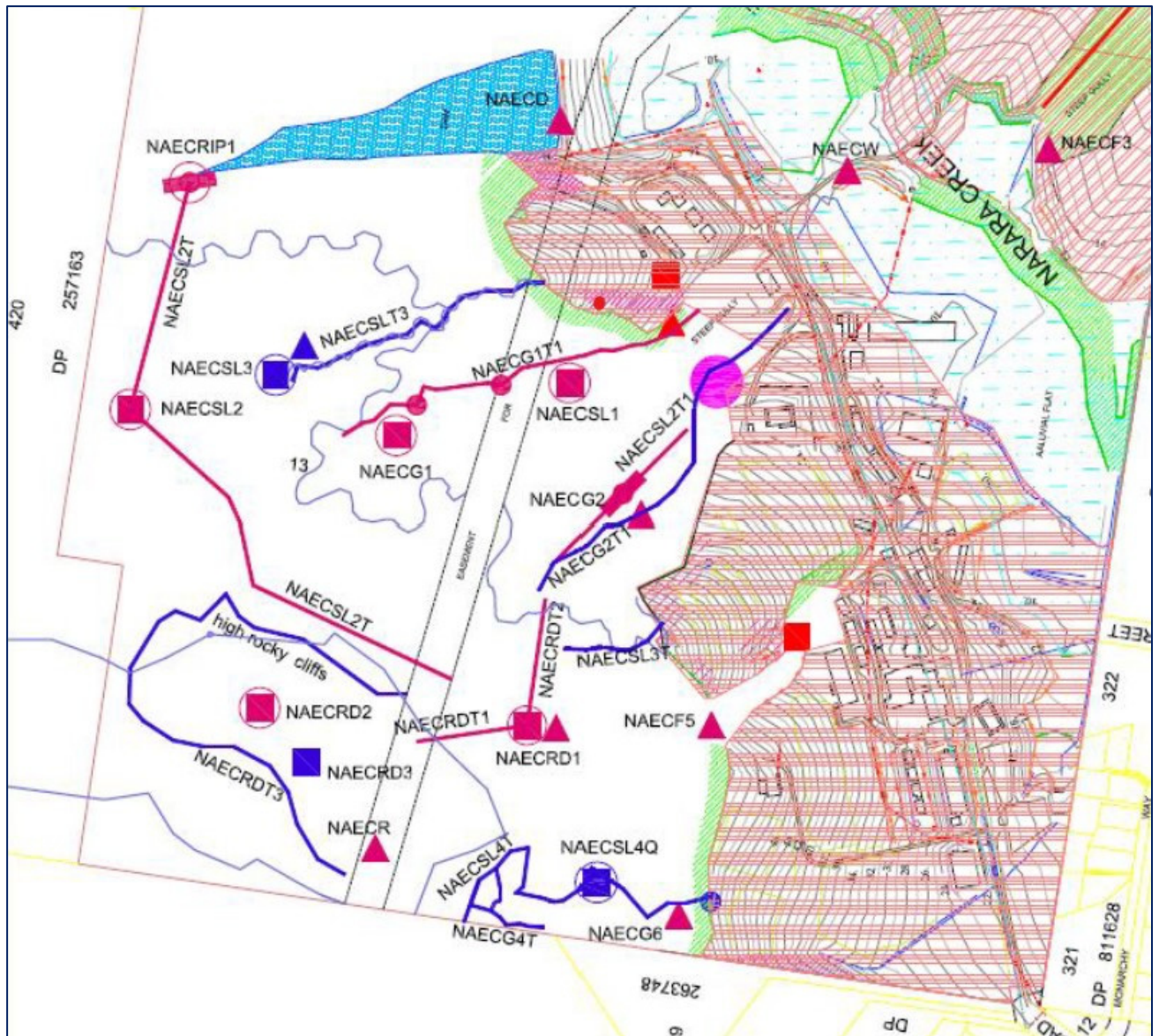


Figure 5b Map: Surveys conducted by Robert Payne (2017), identifying locations of transects and quadrats in the southern part of the Narara Ecovillage site.

The proposed site has the following attributes which make it an ideal proposition for COSS acquisition:

- Very low weed load (infestation)
- Accessible via existing Council maintained. trail.
- Direct linkage to existing Council COSS lands to the south.
- The area of bushland to be transferred to Central Coast Council for inclusion in the COSS is part of an extensive area of relatively intact bushland associated with the western escarpment of the Narara Valley and the Somersby Plateau.

The proposed COSS lands also provide significant connectivity between the adjoining COSS lands and Strickland State Forest. As natural landscapes are transformed for development, remnant areas can become isolated from established patterns of ecological and genetic movement across habitats. Maintaining connected areas of bushland helps mitigate the effects of fragmentation of habitats.



Table 2 Previous studies of the Narara Ecovillage site

TITLE	DATE	AUTHOR(S)	DESCRIPTION
Initial flora and fauna assessments	2006b	Andrews-Neil	Focused on the cleared land and vegetation remnants associated with the valley floor of the former Horticultural Research Station
Aboriginal Archaeological and Cultural Heritage Assessment Report	May 2006	Danny O'Brien	Prepared for the for the proposed rezoning of Gosford Horticultural Research Station
NEV Flora and Fauna Gap Analysis Report	2013	Robert Payne	Includes a map of plant communities on the NEV site as a whole. The gap analysis survey for the Narara Ecovillage increased the number of fauna species from 45 to 117 and for flora from approximately 55 to over 310 species.
Narara Ecovillage - Ecological Restoration Plan (Appendix 6)	2016	Robert Payne and Catherine Inwood	
Due Diligence Aboriginal Heritage assessment	May 2016	Alyce Haast and Fenella Atkinson with Sharon Hodgetts	Artefact report to Sara Roach Planning Services prepared as part of the proposal to rezone part of Lot 13 DP 1126998, undertaken in partnership with Darkinjung Local Aboriginal Land Council. This assessment meets the requirements of the <i>OEH Due Diligence Code of Practice for the protection of Aboriginal objects in NSW</i> (2010)
Narara EcoVillage Flora and Fauna Gap Analysis Report- Update: Version 9	Dec 2017	Robert Payne	Latest version update by Robert Payne. Updated after doing further surveys of flora and fauna in the NEV land. (Appendix 5)

## 2.2. Other Site Values

An Aboriginal archaeological and cultural heritage assessment was commissioned by the NSW Department of Commerce (on behalf of NSW Department of Primary Industries) for the proposed rezoning of the Gosford Horticultural Research Station in May 2006.

Also, the Darkinjung Local Aboriginal Land Council (2014) completed a site inspection of the Narara Ecovillage property as part of the assessment for the Stage 1 development application. It was found that the area proposed for development had low potential for the presence of Aboriginal cultural heritage but that the undeveloped part of the broader property has high potential for the presence of further sites. (Artefact Heritage 2016) and contains two aboriginal sites in the proposed COSS land. Both are registered with the Aboriginal Heritage Information Management System (AHIMS). Along with 4 other sites.

Information included on the AHIMS register is shown in Table 3 below.

Management recommendation for heritage sites is set out Darkinjung Local Aboriginal Land Council dated 23 October 2015 and included as Appendix 7 of this management plan



Table 3 Extract from AHIMS Register

Site ID	Site Name	Datum	Zone	Easting	Northing	Context	Site Status	Site Features
<b>Identified by Darkinjung Local Aboriginal Land Council (2014)</b>								
45-3-3332	Stone Arrangement	AGD	56	343956	6303744	Open Site	Valid	Artefact
45-3-3319	Scarred Tree 2	GDA	56	344174	6303958	Open Site	Valid	Modified Tree (Carved or Scarred): 1
<b>Other sites listed on the AHIMS Register</b>								
45-3-3326	Spear Sharpening Groove 2	GDA	56	343982	6304038	Open Site	Valid	Grinding Groove
45-3-3329	Shelter with Art	GDA	56	343982	6304036	Open Site	Valid	Art (Pigment or Engraved)
45-3-3330	Axe Grinding Grooves HRS	GDA	56	344021	6303957	Open Site	Valid	Grinding Groove
45-3-4429	Narara Ck End Rock	GDA	56	344292	6303854	Open Site	Valid	Art (Pigment or Engraved)
45-3-4444	Narara Ck Charcoal SWA	GDA	56	344292	6303875	Open Site	Valid	Art (Pigment or Engraved)

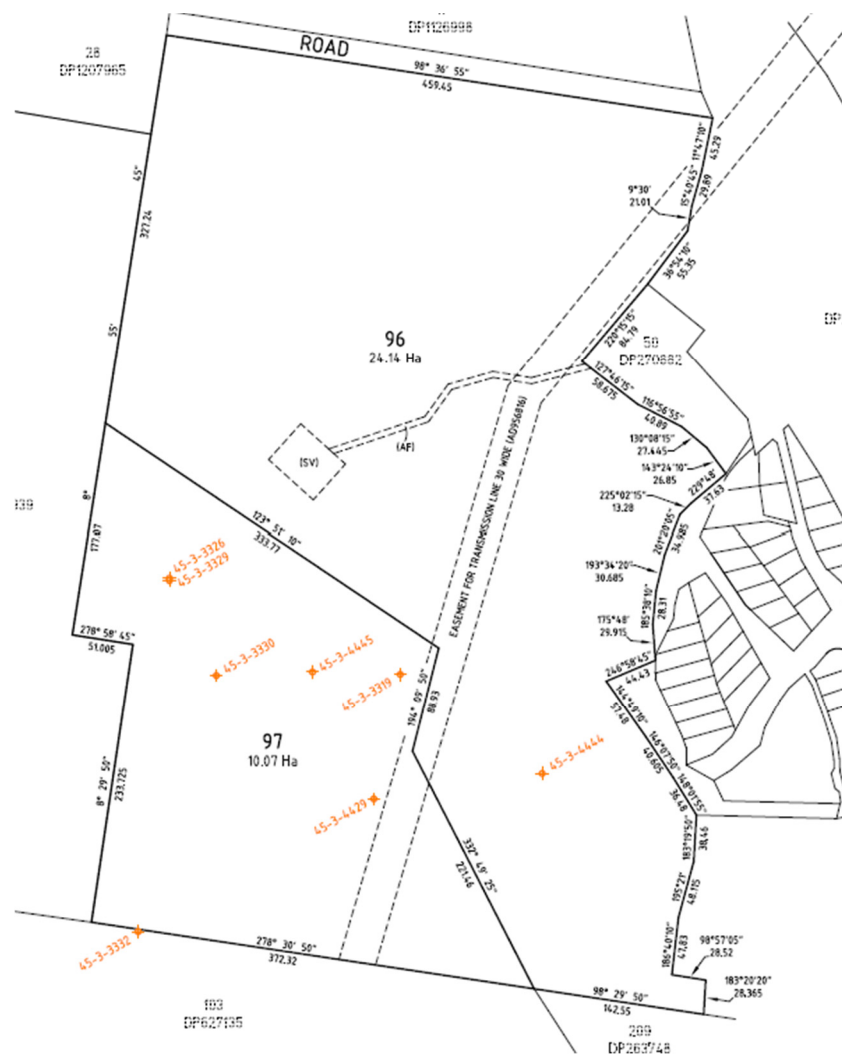


Figure 6 Map: Location of AHIMS Registered Sites

### 3. Management Issues

*This section identifies the issues impacting on potential values of the area, examining particularly issues that could interfere with the area's environmental values.*

Key management issues are:

#### Weed presence.

The proposed COSS lands are largely free of weeds, with the small number of weeds only found along the power easement. Weeds likely to be found in these areas are Whisky Grass (*Andropogon virginicus*), Fireweed (*Senecio madagascariensis*), and Lantana (*Lantana camara*). The effort required to manage these is minimal, as all of them are easily removed by hand when small.

Strategies for managing weed invasion and establishment:

1. Bush regeneration to remove existing weeds and subsequent weed growth with a focus on the power easement.
2. Managing weed invasion from horses by excluding horse riding would be achieved by erecting gates and signage on the southern boundary of the fire trail. This gate would also be used to restrict the vehicle traffic to a minimum for maintenance only, and so manage weed invasion via vehicles.
3. Managing windborne weed seeds, such as those mentioned above, by regular weed control. This activity has been scheduled more regularly in and around the fire trail and powerline easement, than the weed free areas with natural vegetation (see Work Plans in Section 5.4).

### 4. Management Objectives and Strategy

#### 4.1. Management Objectives

- Protect and maintain native vegetation and fauna that inhabit the area
- Keep the proposed COSS land weed free or as close to weed free as possible

This will be achieved by:

- managing access. Access may be managed by Council in the reserve to the south of Dawson Street, and not necessarily within the site to be dedicated to Council. The extent of unauthorised access and the damage that occurs will determine if further access solutions are required.
- regular weed management on the fire trail and power line easement as required within the land to be dedicated to Council.

#### 4.2. COSS Objectives

The Coastal Open Space System (COSS) is a network of reserves supporting native vegetation that are managed by Central Coast Council for their environmental and community values. The COSS reserves are consistent with the community land classification of 'bushland' as defined in section 36 of the Local Government Act 1993. The network is not contiguous, and the reserves are situated predominately in six separate units that are located close to each other in the eastern part of the former Gosford Local Government Area.

The primary purpose of the COSS is to maintain areas of native vegetation and habitat for native animals on public land in the eastern part of the former Gosford Local Government Area. The reservation of the land in the COSS also has the effects of protecting Aboriginal cultural sites and non-Aboriginal heritage items as well as local water catchments and geological formations. In addition, the retention of native vegetation provides a green back drop to many of the urban areas in the City and ensures that most of the residents of the Central Coast live in the vicinity of natural environments.

The specific objectives of the COSS are:

- a. to conserve the visual and environmental quality of the natural scenery of the Central Coast
- b. to protect the vegetated ridgelines which provide a green backdrop and visual relief to the urban areas;
- c. to provide habitat for native flora and fauna, and for the protection of biodiversity within the City;
- d. to provide vegetated connections between ridgelines and wetlands to allow movement of wildlife and the plant gene pool;
- e. to facilitate and enhance the enjoyment of the conservation areas by the provision for passive recreation activities compatible with the natural environment;
- f. to ensure natural areas with water catchments remain undeveloped thus not causing deterioration in water quality entering receiving waters;
- g. to ensure natural areas are preserved for the educational and scientific value they provide to the community; and
- h. to bring land that has environmental and scenic value into public ownership. (Coastal Open Space System/Gosford Council 2013)

#### 4.3. Management Strategies and Priorities

The strategy to implement the above objectives, outlined in the Work Plans (see Section 5.6), is to:

- Exclude horse riding and minimise vehicle traffic by installing gates and signage, to reduce uncontrolled access impacting of the ecosystems.
- Minimise new weed incursions into the bushland on the site from access trail and easement on the COSS lands by carrying out regular weeding on access roads/tracks. The weeding has been scheduled at optimum times for seeds to get established and flower, so they are removed before setting seed. Detailed methods for weed control can be found in The National Trust of Australia (NSW) Bush Regenerator's Handbook (2010).

### 5. Management Guidelines

*This section provides guidelines for the management of the land proposed to be included in the COSS by identifying threatening processes, where they may occur and management responses.*

Table 3 Key Threatening Processes listed in of the Biodiversity Conservation Act applicable to the proposed COSS site (both directly and indirectly)



Key Threatening Processes	Action	Management zone (see Section 5.4)
Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands	Conservation of vegetation adjoining gullies within the site will protect the natural drainage lines and prevent erosion	Area 3 =Gully
Bush rock removal	The site is not easily accessed by vehicle and this will minimise the risk of bush rock removal	Area 2 Ridgeline
Competition and grazing by the feral European rabbit ( <i>Oryctolagus cuniculus</i> )	Monitoring	Area 1- Roadside
Forest Eucalypt dieback associated with over-abundant psyllids and bell miners	Conserve multi-layered habitat of ground covers, small and medium shrubs, and trees that provide food and shelter locations all year to support a variety of insect-eating species. Continue work to remove lantana from NEV land on the lower slopes.	Area 2 Ridgeline
High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition	NEV fire plan Strickland State Forest Fire Plan Ausgrid maintaining the powerline easement.	All areas
Herbivory and environmental degradation caused by feral deer	Monitoring for the presence and numbers of feral deer will be ongoing. NEV will liaise with Local Land Services as required.	All areas
Infection of frogs by amphibian chytrid causing the disease chytridiomycosis	Monitoring for any affected frogs	Area 3 - Gully
Infection of native plants by <i>Phytophthora cinnamomi</i>	Previous surveys have suggested the presence of this pathogen in or adjacent to part of the proposed COSS lands. Access to this area should be restricted and biosecurity precautions (disinfection of clothing and equipment when entering and exiting the area) should be undertaken. Confirmation of pathogen presence and a management plan have been included in the Work Plan (Section 5.6).	All areas
Introduction and establishment of exotic rust fungi of the order <i>Pucciniales</i> pathogenic on plants of the family Myrtaceae	<i>Austropuccinia psidii</i> (myrtle rust) is known to be present on the site and was originally identified on the Central Coast. Biosecurity precautions (disinfection of clothing and equipment when entering and exiting the area) should be undertaken.	All areas
Introduction of the large earth bumblebee ( <i>Bombus terrestris</i> )	Monitoring should detect any presence on the COSS lands or on NEV owned land adjoining the site	All areas
Invasion and establishment of exotic vines and scramblers	Monitoring and, if necessary, removal by the NEV Land team on NEV owned land adjoining the site	All areas
Invasion and establishment of Scotch	Monitoring and, if necessary, removal by the NEV Land team on NEV owned land	All areas

Key Threatening Processes	Action	Management zone (see Section 5.4)
broom ( <i>Cytisus scoparius</i> )	adjoining the site	
Invasion and establishment of the cane toad ( <i>Bufo marinus</i> )	Monitoring and, if necessary, report to NPWS office, the Office of Environment and Heritage or online at ToadScan	All areas
Invasion of native plant communities by African Olive <i>Olea europaea</i> L. subsp. <i>cuspidata</i>	Monitoring and, if necessary, removal by the NEV Land team on NEV owned land adjoining the site	All areas
Invasion, establishment and spread of <i>Lantana camara</i>	Monitoring and, if necessary, removal by the NEV Land team on NEV owned land adjoining the site	All areas
Invasion of native plant communities by <i>Chrysanthemoides monilifera</i> (Bitou Bush and Boneseed)	Monitoring and, if necessary, removal by the NEV Land team on NEV owned land adjoining the site	All areas
Invasion of native plant communities by exotic perennial grasses	Monitoring and hand removal	Area 1 - Roadside
Invasion of the yellow crazy ant ( <i>Anoplolepis gracilipes</i> (Fr. Smith)) into NSW Loss of hollow-bearing trees	Monitoring	All areas
Loss or degradation (or both) of sites used for hill-topping by butterflies	Monitoring	All areas
Predation and hybridisation of feral dogs ( <i>Canis lupus familiaris</i> )	Monitoring for the presence and numbers will be ongoing. NEV will liaise with Local Land Services as required.	All areas
Predation by the European red fox ( <i>Vulpes vulpes</i> )	Monitoring for the presence and numbers will be ongoing. NEV will liaise with Local Land Services as required.	All areas
Predation by the feral cat ( <i>Felis catus</i> )	Monitoring for the presence and numbers will be ongoing. NEV will liaise with Local Land Services as required.	All areas
Removal of dead wood and dead trees	Removal of dead wood and dead trees is not expected and the maintenance of tree hollows and habitat is a priority of this plan.	All areas

### 5.1. Weed Management

The area is generally weed-free, except for a few weeds occurring on the fire trail and powerline easement. Figure 6 maps the different management zones, showing Area 1 where any weeds are likely to occur. Even in this area, the number of weeds is small and scattered along the whole cleared area, requiring minimal effort to control if done regularly. The six-monthly weeding has been scheduled at optimum times for seeds to get established and flower, so they are removed before setting seed. Weeds are most likely being introduced to these areas by either horse riding along the fire trail or by vehicle access to the fire trail, including on vehicles and equipment used to maintain the powerline easement. Restricting access to the fire trail by the installation of a locked gate will assist in managing the weed load into all areas.

Detailed methods for weed control can be found in The National Trust of Australia (NSW) Bush Regenerator's Handbook (2010). Weeds likely to be found in these areas are Whisky Grass (*Andropogon virginicus*), *Senecio madagascariensis*, Fireweed, and *Lantana camara*, *Lantana*, all of which are easily removed by hand when small.

All work to be carried out in the Work Plans must be overseen by an experienced Bush Regenerator or Ecologist.

## 5.2. Cost of the Works

The estimated cost of works includes:

- Weed management (see Section 5.1 )
- Installation of gate and signage on southern boundary of the fire trail.

Table 4 Cost of works

Component	number of days/ yr	unit cost	total cost/yr
Works organised by Central Coast Council and paid for during the first 3 years following implementation of this Plan through an Endowment Fund provided by NEV			
1. Weed removal by Professional Bush Regenerators on the site twice per year	2 day x 2	\$ 500.00	\$2,000.00
2. Installation of gate to control access to the COSS land	Potential works based on need	\$5,000	\$5,000
3. Maintenance of access control fencing and gate	Potential works based on need	\$500	\$500
4. Installation of signage to advise of the status of the land and ecological value of the site.	2 days / one off	\$4,500	\$4,500
5. Feral animal control (see key threatening process list – Table 3)	Potential works based on priority	\$2,000	\$2,000

## 5.3. Management Units or Zones

Management zones within the COSS lands (see Figure 6) will be:

**Area 1** Fire trail and transmission lines – disturbed area with minor weed incursion

**Area 2** Ridgeline – CC-WL02i– Exposed Hawkesbury Woodland

**Area 3** Gully and other CC-WS04i Coastal Narrabeen Moist Forest (variant) – areas above and below Area 1, incorporating drainage lines.

Classification of management areas above is taken from the former Gosford City Council mapping (<https://www.centralcoast.nsw.gov.au/plan-and-build/planning-controls-and-guidelines/online-maps>) based on Stephen Bell's Revised Interim Vegetation Classification of the Central Coast Local Government Area in 2019.



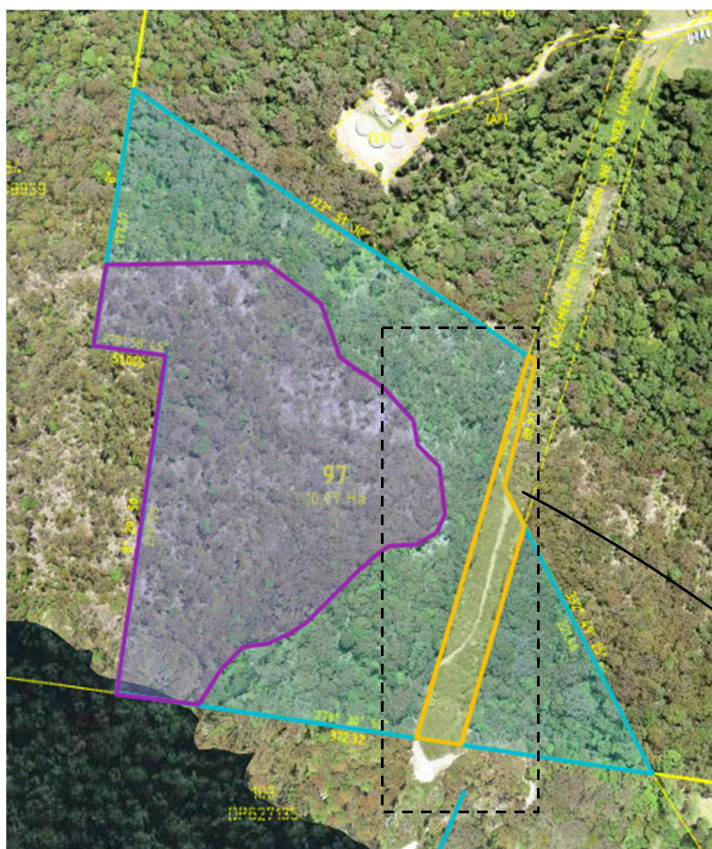
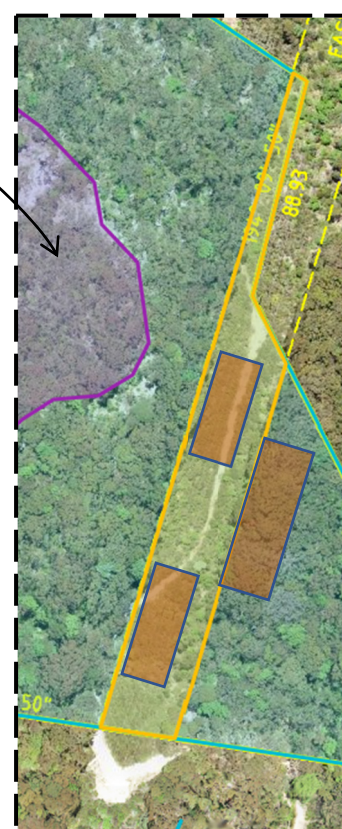


Figure 7a Map: Approximate management zones based on vegetation classifications of Bell (2019) shown in the context of NEV boundaries

- Area 1** Fire trail and transmission lines
- Area 2** Ridgeline – CC-WL02i– Exposed Hawkesbury Woodland
- Area 3** Gully and other CC-WS04i Coastal Narrabeen Moist Forest (variant).




-  Areas of Weed Infestation

Figure 7b Map: Area 1 management zone Showing location of Weed Infestation

## 5.4. Vegetation Management Work Plans

Table 5 Work plan for the proposed COSS lands– work to be carried out the Central Coast Council

Task	Zone	Calendar Year 1 by month												Calendar Year 2 by month												Calendar Year 3 by month												
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Hand Removal of Plants																																						
Andropogon virginicus	1			✓						✓						✓						✓							✓					✓				
Lantana, Lantana camara	1			✓						✓						✓						✓							✓					✓				
Fireweed, Senecio madagascariensis	1			✓						✓						✓						✓							✓					✓				

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## 7. Appendices

- **Appendix 1:** Draft Boundary Survey of proposed COSS Land
- **Appendix 2:** Whisky Grass, *Andropogon virginicus*; Lantana, *Lantana camara* and Fireweed, *Senecio madagascariensis* information sheet
- **Appendix 3:** Flora survey site details according to stratification units.
- **Appendix 4:** Plant species list from Robert Payne June 2015 V6 sorted with COSS extras
- **Appendix 5:** Robert Payne Narara Ecovillage Flora and Fauna Gap Analysis Report- Update: Version 9
- **Appendix 6:** Robert Payne and Catherine Inwood Narara Ecovillage - Ecological Restoration Plan
- **Appendix 7:** Darkinjung Local Aboriginal Land Council. Letter of Participation – Narara Eco Village Proposed Rezoning dated 23 October 2015

# **Appendix 1**

## **Boundary Survey of proposed COSS Land**

## Appendix 2

**Whisky Grass, *Andropogon virginicus*; Lantana, *Lantana camara* and Fireweed, *Senecio madagascariensis* information sheet**



## Appendix 3

Flora survey site details according to stratification units.

## Appendix 4

Plant species list from Robert Payne June 2015 V6 sorted with COSS extras

## **Appendix 5**

**Robert Payne - Narara Ecovillage Flora and Fauna Gap Analysis Report-  
Update: Version 9**

## **Appendix 6**

**Robert Payne and Catherine Inwood**

**Narara Ecovillage - Ecological Restoration Plan**

## **Appendix 7**

**Darkinjung Local Aboriginal Land Council. Letter of Participation – Narara Eco Village Proposed Rezoning dated 23 October 2015**