



VEGETATION MANAGEMENT PLAN **CAMPBELLTOWN CAMPUS**

SEPTEMBER 2024

ENVIRONMENTAL SUSTAINABILITY, DIVISION OF OPERATIONS AND COMMERCIAL

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1. INTRODUCTION

Western Sydney University's Campbelltown campus is situated in Southwestern Sydney (approx. 59km from the Sydney CBD). The campus has reduced its footprint in recent years as the University has divested much of its land holding, to Landcom for housing (Figure 1 – Site Location).

The campus has two remaining small patches of remnant/revegetated vegetation, that is located next to student residences and a football oval. The area has not been formally assessed since 2007 and was categorised then as being solely Cumberland Plain Woodland. However, the NSW SEED mapping indicate that areas are characterised as Cumberland Plain Woodland in the Sydney Basin Bioregion and River-Flat Eucalypt Forest on Coastal Floodplains (Figures 2a and 2b).



Figure 1: Campbelltown campus – showing bushland location on the campus.

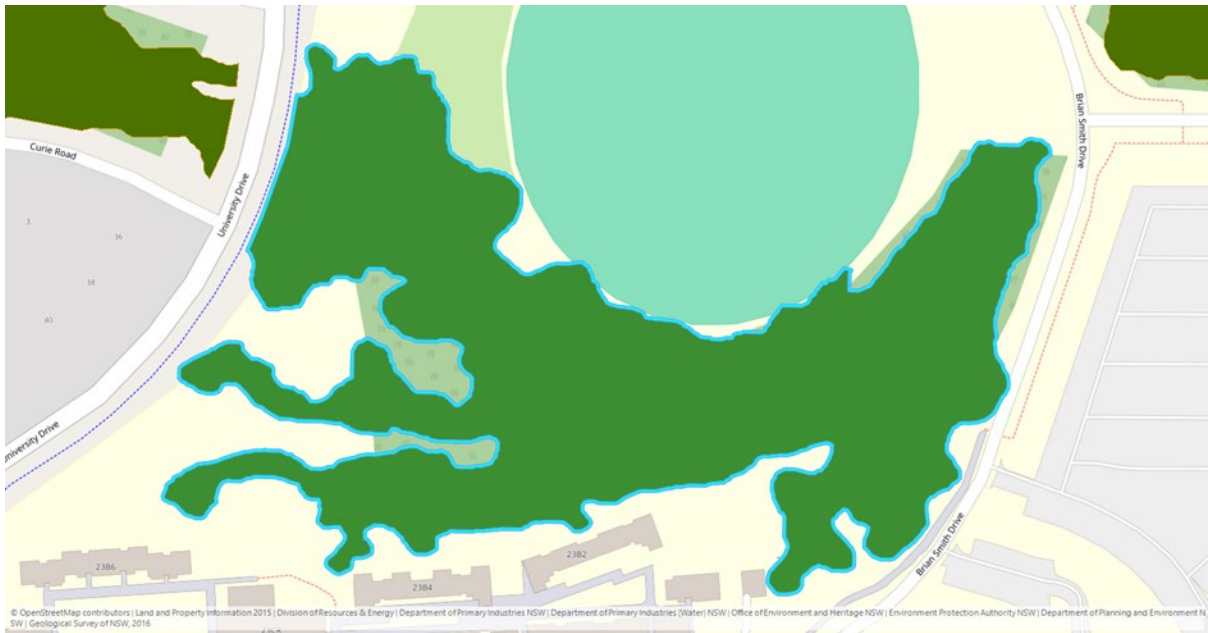


Figure 2a: SEED Map showing area of Cumberland Plain Woodland in the Sydney Basin Bioregion.



Figure 2b: SEED Map showing area of River-Flat Eucalypt Forest on Coastal Floodplains, on Campbelltown campus.

2. SITE DESCRIPTION

The two areas consist predominately of canopy trees, including *Eucalyptus moluccana* (Grey Box) and *E. tereticornis* (Forest Red Gum).

The mid-storey is sparse and consists of *Acacia implexa*, *A. decurrens* (Black Wattle) and *Bursaria spinosa* (Blackthorn).

The groundcover is very sparse and is dominated by a mixture of native and exotic grasses and weeds, to approximately 1m in height. Common native species present include *Dichondra repens* (Kidney Weed), *Themeda australis* (Kangaroo Grass), *Aristida ramosa* var *ramosa* (Purple Wiregrass), *Aristida vagans* (Three-awned Spear-grass), *Einadia hastata*, *Chloris ventricose* (Windmill Grass) and *Eragrostis leptostachya* (Paddock Lovegrass).

Exotic species recorded on this site, include *Asparagus asparagoides* (Bridal creeper), *Pennisetum clandestinum* (Kikuyu), *Olea europaea* subsp. *cuspidata* (African Olive) and *Cirsium vulgare* (Spear Thistle).

3. THREATENED FLORA AND FAUNA

The Bionet Atlas of NSW Wildlife lists 12 flora and 36 fauna species as vulnerable/endangered within a 10km radius of the site, as shown in Appendix 1.

A fauna survey has not been conducted and therefore it is unknown whether threatened fauna inhabit the bushland. It is likely that some of the larger trees may be used by bird or bat species while transiting from adjacent areas.

No threatened plant species have been observed on-site.

NSW SEED mapping does not indicate any vulnerable/threatened/endangered species have been observed within the site on Campbelltown campus (Figure 3).



Figure 3: NSW SEED mapping of species siting indicate that there have been no previous reports of vulnerable/threatened/endangered species within the site on Campbelltown campus.

4. WEED MANAGEMENT

Historically the extensive areas of Campbelltown campus were dominated by *Olea europaea subsp. cuspidata* (African Olive). In 2012 and 2013 extensive works were undertaken to eradicate this weed from across the campus and on the neighbouring land known as Macarthur Heights. However, in recent times the trees have started to regrow, and action is required to prevent this species from taking hold within the bushland area.

Weed control will also target any other weed deemed to be weeds of national significance and eco-transforming.

Weed management is undertaken utilising the methods in Table 1.

Table 1: Weed Management Techniques

VEGETATION TYPES	APPROVED METHOD OF WEED CONTROL	
Tree and shrub weeds	Large Plants • Cut stem and paint with systemic herbicide • Scrape stem and paint with systemic herbicide • Frill/chip and paint stem with systemic herbicide • Stem injection with systemic herbicide	Small Plants • Hand pull • Burn or steam weed • Spray foliage with systemic herbicide
Vine weeds	Large Plants • Cut stem and paint with systemic herbicide • Scrape stem and paint with systemic herbicide • Spray foliage with systemic herbicide • Crown, dig or lever	Small Plants • Hand pull • Burn or steam weed • Spray foliage with systemic herbicide • Crown, dig or lever
Grass, grass like & forb weeds	Large Plants • Cut stem and paint with systemic herbicide • Scrape stem and paint with systemic herbicide • Rope or wick wiper application of systemic herbicide • Slash/mow and apply systemic herbicide to regrowth • Burn and apply systemic herbicide to regrowth • Steam weed and apply systemic herbicide to regrowth • Spray foliage with systemic herbicide • Crown, dig or lever	Small Plants • Hand pull • Rake/roll and spray with systemic herbicide • Crown, dig or lever • Burn or steam weed • Spray foliage with systemic herbicide
Other weeds	Large Plants • Cut stem and paint with systemic herbicide • Scrape stem and paint with systemic herbicide • Frill/chip and paint stem with systemic herbicide • Spray foliage with systemic herbicide • Crown, dig or lever	Small Plants • Hand pull • Crown, dig or lever • Burn or steam weed • Spray foliage with systemic herbicide

5. ASSISTED REGENERATION

No assisted regeneration will be undertaken in these areas.

6. SEED COLLECTION

No seed collection will be undertaken within the area.

7. MONITORING AND EVALUATION

Monitoring is critical and regular monitoring can quickly highlight and avert negative impacts on the site, as well as the success of natural regeneration.

7.1. Photo Point Monitoring

Ongoing photographic evidence will be maintained, highlighting before and after shots of treated areas. These photos will be submitted along with a completed works undertaken report and before payment is made to the contractor.

7.2. Vegetation Monitoring

The area is reviewed annually, in conjunction with a university representative, to assess weed reduction, regeneration of endemic species and to plan future works.

APPENDIX 1

Table 2: Fauna – Blonet Atlas results showing vulnerable/endangered species observed within 10km of the site.

SCIENTIFIC NAME	COMMON NAME	STATUS – NSW	STATUS - COMMONWEALTH
<i>Pseudophryne australis</i>	Red-crowned Toadlet	Vulnerable	
<i>Heleioporus australiacus</i>	Giant Burrowing Frog	Vulnerable	Vulnerable
<i>Litoria aurea</i>	Green and Golden Bell Frog	Endangered	Vulnerable
<i>Stictonetta naevosa</i>	Freckled Duck	Vulnerable	
<i>Hirundapus caudacutus</i>	White-throated Needletail	Vulnerable	Vulnerable
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	Endangered	
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	Vulnerable	
<i>Hieraaetus morphnoides</i>	Little Eagle	Vulnerable	
<i>Lophoictinia isura</i>	Square-tailed Kite	Vulnerable	
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	Endangered	Endangered
<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-Cockatoo	Vulnerable	Vulnerable
<i>Glossopsitta pusilla</i>	Little Lorikeet	Vulnerable	
<i>Lathamus discolor</i>	Swift Parrot	Endangered	Critically Endangered
<i>Ninox connivens</i>	Barking Owl	Vulnerable	
<i>Ninox strenua</i>	Powerful Owl	Vulnerable	
<i>Tyto novaehollandiae</i>	Masked Owl	Vulnerable	
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (eastern subspecies)	Vulnerable	Vulnerable
<i>Chthonicola sagittata</i>	Speckled Warbler	Vulnerable	
<i>Anthochaera phrygia</i>	Regent Honeyeater	Endangered	Critically Endangered
<i>Daphoenositta chrysoptera</i>	Varied Sittella	Vulnerable	
<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	Vulnerable	
<i>Petroica boodang</i>	Scarlet Robin	Vulnerable	
<i>Stagonopleura guttata</i>	Diamond Firetail	Vulnerable	Vulnerable
<i>Phascolarctos cinereus</i>	Koala	Endangered	Endangered
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	Vulnerable	
<i>Petaurus norfolcensis</i>	Squirrel Glider	Vulnerable	
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable	Vulnerable
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	Vulnerable	
<i>Micronomus norfolkensis</i>	Eastern Coastal Free-tailed Bat	Vulnerable	
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	Vulnerable	
<i>Myotis macropus</i>	Southern Myotis	Vulnerable	
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	Vulnerable	

Table 3: Flora – Blonet Atlas results showing vulnerable/endangered species observed within 10km of the site.

SCIENTIFIC NAME	COMMON NAME	STATUS – NSW	STATUS - COMMONWEALTH
<i>Hibbertia puberula</i>		Endangered	
<i>Leucopogon exolasius</i>	Woronora Beard-heath	Vulnerable	Vulnerable
<i>Prostanthera marifolia</i>	Seaforth Mintbush	Endangered	Critically Endangered
<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Endangered	Vulnerable
<i>Melaleuca deanei</i>	Deane's Paperbark	Vulnerable	Vulnerable
<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	Endangered	Vulnerable
<i>Genoplesium baueri</i>	Bauer's Midge Orchid	Endangered	Endangered
<i>Grevillea parviflora</i> subsp. <i>parviflora</i>	Small-flower Grevillea	Vulnerable	Vulnerable
<i>Pomaderris brunnea</i>	Brown Pomaderris	Endangered	Vulnerable
<i>Persoonia hirsuta</i>	Hairy Geebung	Endangered	Endangered

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