

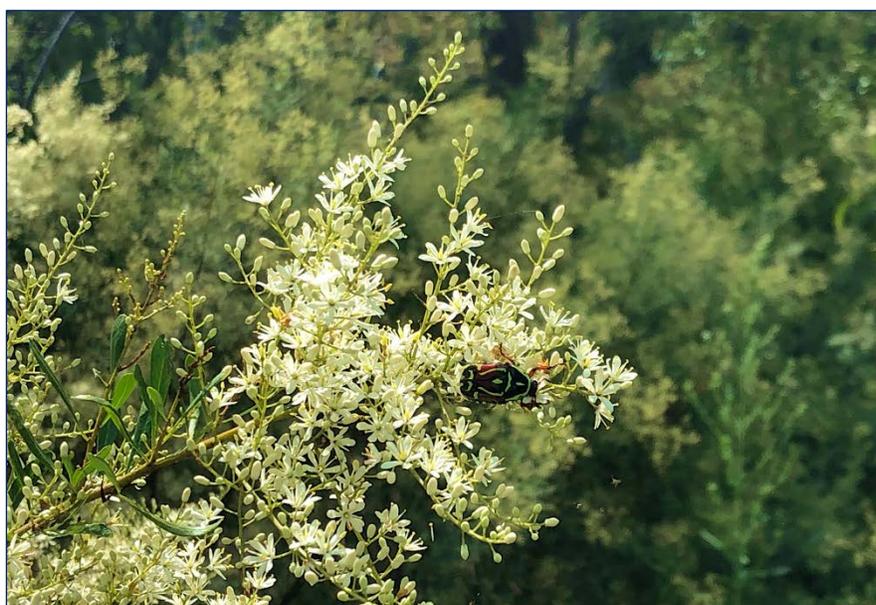


Landcare Led Bushfire Recovery Project

Nangarin Landcare

Nangarin Vineyard Estate

-Barkers Lodge Road, Picton-



Cumberland Plain Regeneration ABN: 2991 457 6361

e. cumberlandplain@gmail.com | m. 0439811008

Cumberland Plain Regeneration

Author(s)	Adrian O'Hara	
Report Number	1	Site Visit Report
Date	2/2/22	
Revision	REV01	

Checker Details	Qualifications and Experience
Adrian O'Hara	Adrian has over 10 years' experience in bush regeneration in western Sydney and the Blue Mountains. Adrian has worked in and led small teams in a variety of bush regeneration settings. Adrian also undertakes flora and fauna surveys and has extensive experience with local provenance seed collection, weed management plans, vegetation management plans, community engagement and biodiversity education.

Revision	Date	Description	Prepared by	Approved by
REV02	22/2/22		AO	AO

Acronyms and Definitions

Acronym/Term	Meaning
CPR	Cumberland Plain Regeneration
CPW	Cumberland Plain Woodland
SSTF	Shale Sandstone Transition Forest
MSW	Moist Shale Woodland
SGTF	Shale Gravel Transition Forest
PCT	Plant Community Type
SEED	Sharing and Enabling Environmental Data Portal
OEH	Office of Environment & Heritage
BRP	Bushfire Recovery Project

Front Cover:

Bursaria spinosa in flower with Fiddler Beetle *Eupoecila australasiae*.

Disclaimer: This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only and has been based in part on information obtained from the client and other parties. The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. Cumberland Plain Regeneration accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client or amended in any way without prior approval by Cumberland Plain Regeneration, and should not be relied upon by other parties, who should make their own enquires. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements. Limited sampling and analyses were undertaken as part of the investigations undertaken, as described herein. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations. This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site, Cumberland Plain Regeneration reserves the right to review the report in the context of the additional information.

Table of Contents

Site Map	- 1 -
Introduction	- 2 -
<i>Notes 28-1-22</i>	3
Site 1-.....	3
Site 2-.....	- 4 -
Site 3-.....	5
Site 4-.....	6
Appendices	- 7 -
<i>Site Location Geography</i>	- 7 -
<i>Site Map Detail</i>	- 8 -
<i>Site Map- Hydrolines</i>	9
<i>Site Map -Plant Community Types</i>	10
<i>Site Map -Endangered Ecological Communities</i>	- 12 -
Plant List	- 13 -
<i>Fauna Lists</i>	- 17 -

List of Figures

Figure 1 Site Map	- 1 -
Figure 2 Site Map- Landcare weed removal Sites	2
Figure 3 Site 1- Weed treatment areas with dense weedy annual recruitment (left) after Lantana removal and treated Lantana patch (right) after contractor works	3
Figure 4 Site 1- Josephs Coat Moth Caterpillar (left) on Cayratia clematidea vine, Ajuga australis (centre) and Mock Olive Notelaea sp. in flower (right)	3
Figure 5 Site 2-Desmodium varians patch (left) and Dichondra repens, Oplismenus sp. and Brunoniella australis patch	- 4 -
Figure 6 Gravel Ant nest (left) and Native Bluebells	- 4 -
Figure 7 Cumberland Plain Land Snail (left), Geranium and Hypoxis flowers (middle) Hesperidae family Skipper butterfly (right)	5
Figure 8 OEH SEED Portal Cumberland Plain Land Snail sightings in the local area	5
Figure 9 Calandrinia pickeringii (left), Plectranthus parviflorus (middle) and Pyrrosia rupestris (right)	6
Figure 10 OEH SEED Portal recent Powerful Owl sightings (NB one record is on/adjacent to Nangarin)	6
Figure 11 Site Map- Landscape Level	- 7 -
Figure 12 Site Map- Detail	- 8 -
Figure 13 Site Map- Hydrolines and Water Bodies	9
Figure 14 Site Map- Plant Community Types	10
Figure 15 Site Map- Endangered Ecological Communities	- 12 -
Figure 16 Pellaea falcata (Sickle Fern) with sori	- 16 -

List of Tables

<i>Table 1 Plant List</i>	- 13 -
<i>Table 2 Bird List</i>	- 17 -
<i>Table 3 Insect List</i>	- 17 -
<i>Table 4 Snail List</i>	- 17 -
<i>Table 5 Spider List</i>	- 17 -

Site Map



Figure 1 Site Map

Introduction

This report covers a site visit at the Nangarin Landcare site in the Southwest of Sydney near Picton. The Landcare sites are in and around Nangarin Vineyard Estate. The estate is accessed off Barkers Lodge Road and bounded by Long Gully hydroline to the north and Stone Quarry Creek to the east and south.

The woodland onsite is a mix of Cumberland Plain Woodland (CPW), Shale Sandstone Transition Forest (SSTF) and Riparian Woodland. There is a wide variety of native flora species in the Estate's remnant bushland and the volunteers have done a great job of improving their local landscape. Each area has varying degrees of woody and annual weeds but also an array of insect and bird life.

The woodlands are being managed by a local Landcare group from the estate. The site visit was led by Reg Collins (Nangarin Landcare) through the various Landcare sites on the estate. A plant list has been created with reference to the OEH SEED portal as an indicator of the range of species (flora) which may be found in and around the Nangarin Landcare sites. This list will provide a valuable reference for Landcarer's to help identify additional species throughout the years and different seasons. Often more species are located and identified after Landcarer's have completed initial weed removal works as the seed bank becomes open or bushland patches are revealed to the elements and passing fauna.

"Native Flora on Shale Soils of the Cumberland Plain Western Sydney" by Teresa James provide further flora species assistance and Landcarer's are encouraged to log flora and fauna sightings on the iNaturalist app (appended to Cumberland Plain Flora and Fauna Project), the Atlas of Living Australia or OEH Bionet.



Figure 2 Site Map- Landcare weed removal Sites

Notes 28-1-22

Site 1-

North and East facing areas of Moist Shale Woodland Hillside (MSW) and Cumberland Plain Woodland (CPW) intergrade (a mix of both woodland types) with Lantana and weedy annuals (such as Fleabane *Conzya sp.*, Fireweed *Senecio madagascariensis* and Farmers Friends *Sida sp.*) under management. In areas where weed removal had been done by contractor's annual weeds have taken over. However, the native herb ground layer was very dense due to recent good growing weather.

A nearby north facing area of dense Lantana was recently treated by contractors utilising a high-volume spray method, and it would be recommended that this area be monitored for secondary annual weed infestation and to carefully monitor for re-emergent native herbs, forbs, shrubs and trees. Woody debris generated by dead Lantana and other weeds can be repurposed and realigned in windrows across the slope to preserve moisture and prevent topsoil loss from drying wind. Shade and humidity can be created at ground level in this fashion and habitat created for small animals. It should be noted that the mid layer floristics are more indicative of MSW and the crest of the ridgeline more gravel and shale mix of dry and poor soil tolerant species representative of CPW.

The East facing zone was in good condition with dense grass and herb layers after recent rains and areas of dense annual weeds colonizing where contractors had removed areas of thick Lantana. If feasible this area could be brush cut before a seeding event or hand weeded. There is likely to be native recruitment at ground level below the annual weeds.



Figure 3 Site 1- Weed treatment areas with dense weedy annual recruitment (left) after Lantana removal and treated Lantana patch (right) after contractor works



Figure 4 Site 1- Josephs Coat Moth Caterpillar (left) on Cayratia clematidea vine, Ajuga australis (centre) and Mock Olive Notelaea sp. in flower (right)

Site 2-

This area consisted of North facing MSW and CPW intergrade where volunteers have worked consistently. A low level of annual weeds was present, and the native herb and shrub layer (CPW indicative plants) was dense and of a good variety.

We observed a large Gravel Ant (*Iridomyrmex purpureus*) nest with a surrounding fringe of various native herbs and grasses. Excavating animals such as Gravel Ants turn over the soil (this process is called bioturbation) and bury long lived seeds for species such as *Acacia* that may be recruitment growth when the soil is disturbed in the future either from fire or tree fall or animal activity. This species often has a symbiotic relationship with butterfly species that occur locally. Along the crest where poorer soils occur is several Fabaceae family plants which assist soil fertility via fixing nitrogen in root nodules.

Bursaria spinosa growing along the ridgeline that joins Site 1 and Site 2 (running East to West, North of The Grange Rd) was in profuse flower attracting many pollinator species (ranging from wasps, bees and beetles). *B. spinosa* plays an integral role in providing a home for Bright Copper butterfly caterpillars (*Paralucia sp.*) and small native ants an example of local symbiotic relationships.

We observed a flock of about 15 Varied Sittellas (*Daphoenositta chrysoptera*) moving in the tree canopy between Site 1 and Site 2. This species is listed as Vulnerable in NSW. It prefers closely spaced mature native trees with lots of loose bark and dead limbs for foraging. They are a small woodland bird species which has declined in numbers due to the reduction in suitable habitat. The Nangarin site has plenty of remnant large Eucalypts and connectivity to other bushland patches in the local landscape so this species can move freely. Land clearance that creates large open spaces prevents the Sittella from travelling as they are not a strong flying bird and dislike open pasture.



Figure 5 Site 2-*Desmodium varians* patch (left) and *Dichondra repens*, *Oplismenus sp.* and *Brunoniella australis* patch



Figure 6 Gravel Ant nest (left) and Native Bluebells

Site 3-

This area consisted of North facing MSW and CPW intergrade. A live Cumberland Plain Land Snail was discovered in this area under woody debris. This species prefers relatively undisturbed native bush land patches with older native Eucalypts to provide woody debris and constant bark fall that creates a layer of decomposing material for this snail to inhabit. It is highly likely that this area would also be home to the native carnivorous snail *Austrorhytida capillacea* and the Red-footed Semi-slug (*Staniscarion freycineti*) although on this visit we did not observe those species. Micro snails are very likely to be present in the substrate in the better bushland patches as well.



Figure 7 Cumberland Plain Land Snail (left), Geranium and Hypoxis flowers (middle) Hesperidae family Skipper butterfly (right)

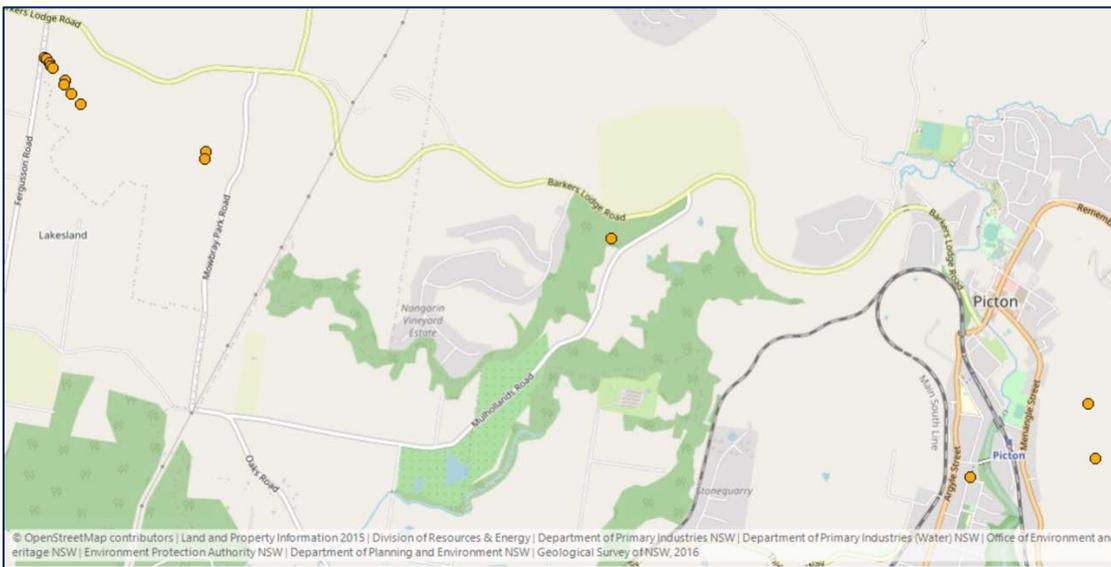


Figure 8 OEH SEED Portal Cumberland Plain Land Snail sightings in the local area

Certain patches in this zone had dense growth of quick growing annuals and biennial's such as *Sida rhombifolia* (Paddy's Lucerne). A targeted strategy of manual removal and management of seeding cycles via brush cutting tough weedy annuals allowing native regeneration at the ground level may be beneficial rather than a chemical weed treatment via spray.

If spraying is required, a surgical approach can be used by first locating and weeding around any remnant, emergent grass or shrubs to make a buffer between the spray zone and the regenerating patches.

The woodland running East to West along The Grange Rd could support small glider species such as the Sugar Glider (*Petaurus breviceps*) due to the regular emergent Eucalyptus trees with *Acacia sp.* growing in between which provide feeding areas for gliders. Native microbats have been seen roosting in nearby buildings. Microbats will generally use dead trees, old growth Eucalyptus or cave like structures for roosting sites. Several species of microbats are listed as endangered and vulnerable in NSW. Identification is done by netting or ultrasonic call capturing.

Site 4-

This area has been maintained by local volunteers and is in very good condition. The woodland in this area is influenced by sandstone and dominated by flora species consistent with riparian (creek line) and high sandstone geology. The number of native species here is impressive and would be a great area for harvesting local provenance flora species including grasses and mid layer shrubs.

The closed canopy forest type is likely conducive to the presence of small marsupials such as Ring-tailed Possums which are a primary food source for the endangered Powerful Owl (*Ninox strenua*). Hollow bearing trees were present in the area we surveyed which would provide nesting opportunities for larger owls. Volunteer landcarers can keep an eye out for carcasses, scat and owl pellets when working in this area for stronger evidence of this iconic species. Figure 10 shows recent Powerful Owl (as of January 2022) sightings in the area. Data sourced from SEED portal and Bionet.



Figure 9 *Calandrinia pickeringii* (left), *Plectranthus parviflorus* (middle) and *Pyrrosia rupestris* (right)

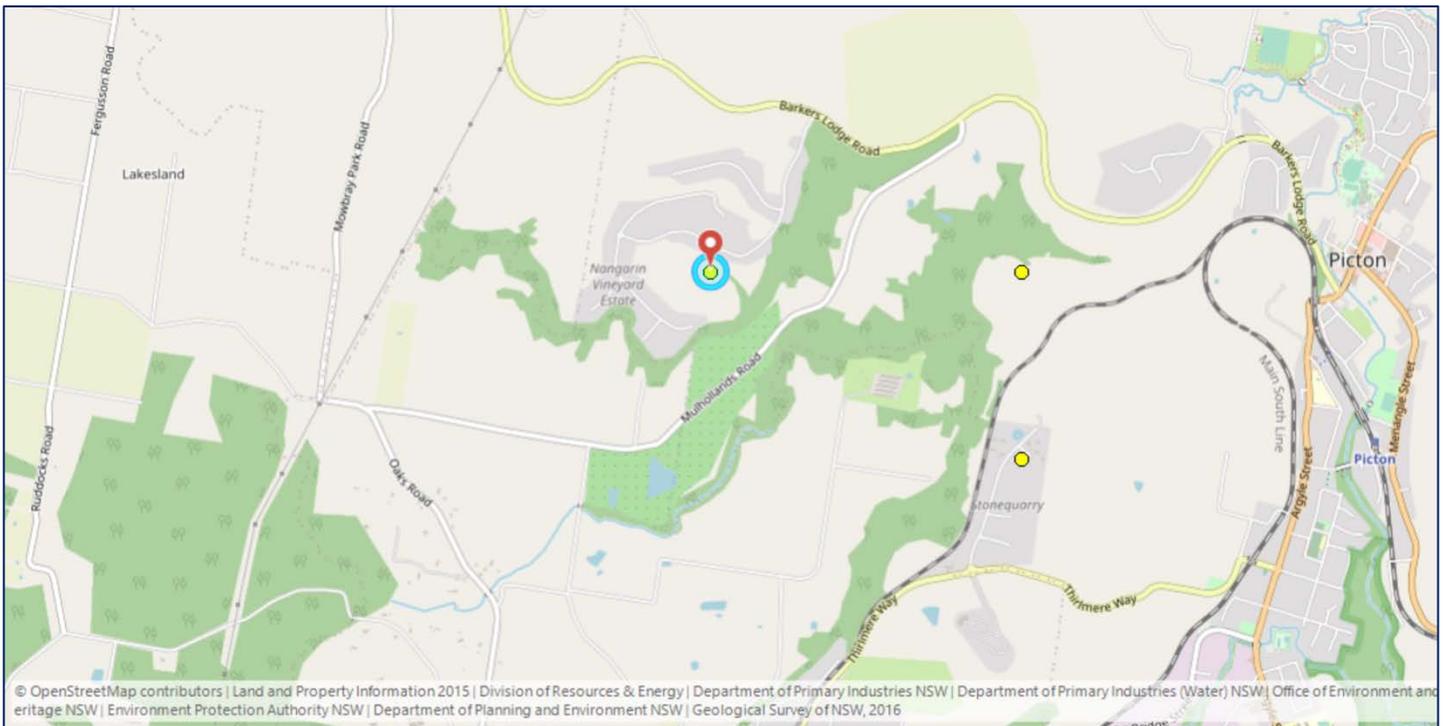


Figure 10 OEH SEED Portal recent Powerful Owl sightings (NB one record is on/adjacent to Nangarin)

Site Map Detail

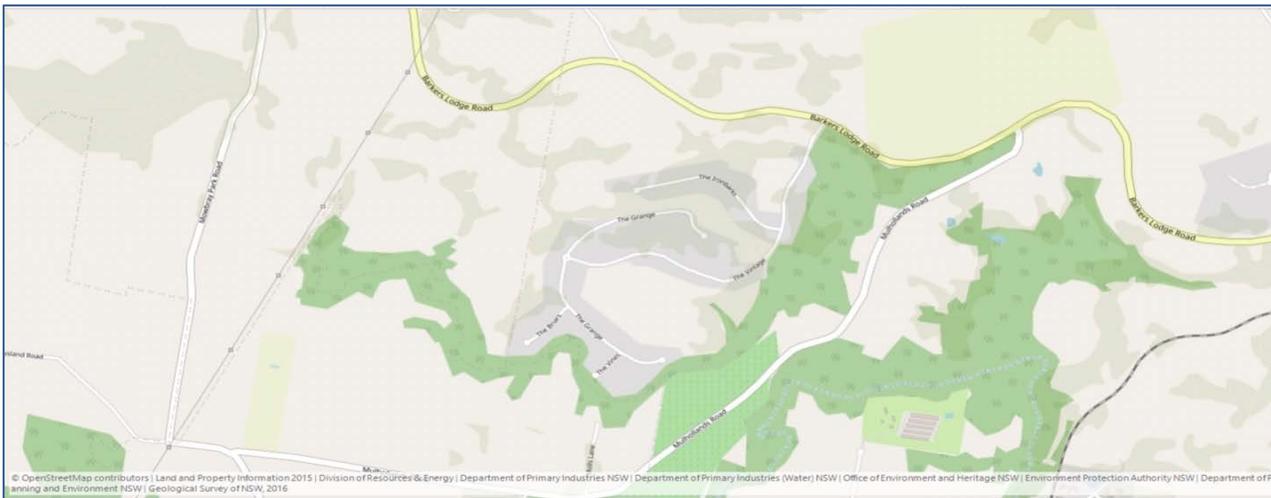
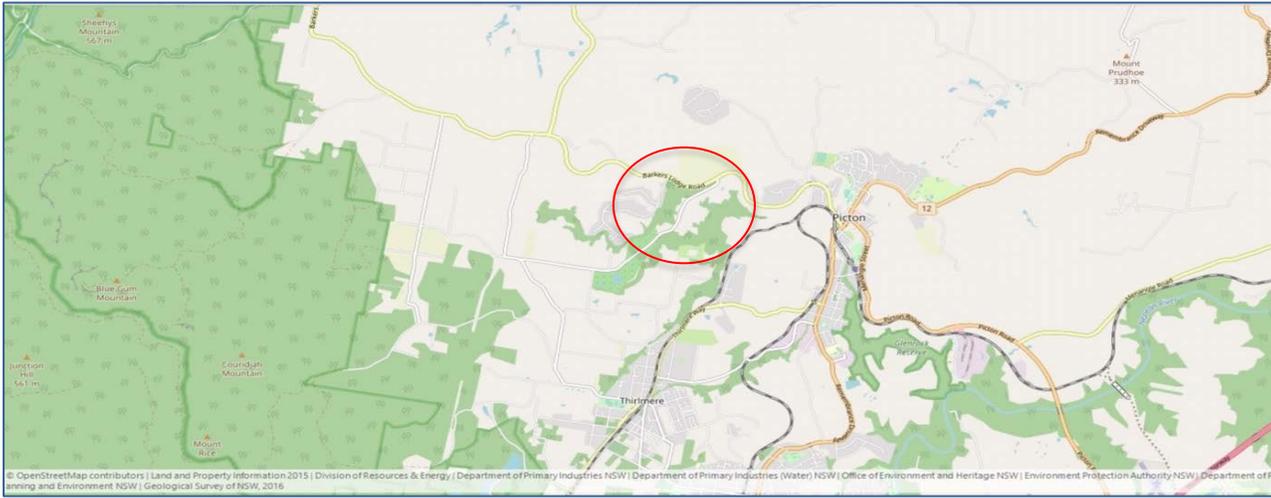


Figure 12 Site Map- Detail

Site Map- Hydrolines



The below diagrams show the various water bodies in the local area to Nangarin including creeks, drain lines and dams. The various water bodies can indicate the different woodland types adjacent to them (allowing for slope and orientation). This is included to show the potential for a variety of transitional woodlands in the local landscape outside of the SEED portal data. Also, the various drains and creeklines allow for the movement of fauna and flora through the landscape.



Figure 13 Site Map- Hydrolines and Water Bodies

Site Map -Plant Community Types



Figure 14 Site Map- Plant Community Types

PCT849- [CPW-]Grey Box/ Forest Red Gum grassy Woodland (usually dominated by *E. tereticornis* and *E. moluccana* with *E. crebra* less common. *Bursaria spinosa* dominant in the shrub layer and *Microlaena stipiodes* and *Themeda triandra* the dominant grass species).

PCT850- [CPW/ MSW]-Grey Box/ Forest Red Gum grassy Woodland on Shale (usually dominated by *E. tereticornis* and *E. moluccana* at the canopy level with a lesser amount of *E. fibrosa* occurring. Shrub layer can include *Acacia sp.* And *B. spinosa*. The tussock grasses dominate (*T. triandra*) with *M. stipiodes* in shadier zones and plants that prefer slightly more moist ground and shade such as Kurrajong (*Brachychiton populneus*) and Mock Olive (*Notelea longifolia*) can be found sporadically.

PCT877- [WSDR]-Grey Myrtle dry rainforest (typically dry vine scrub woodland with *Melaleuca sp.* *Acacia implexa*, Native Quince (*Alectryon cinereus*) present. Mid layer can include *Clerodendrum tomentosum*, *P. revolutum*. Typically abundant vine species will occur in Grey Myrtle dry rainforest (or Western Sydney Dry Rainforest) such as *Pandorea pandorana*, *Aphanopetalum resinosum*, *Cayratia clematidea* among many other vines).

PCT1181- -[SSTF] Smooth-barked Apple/ Red Bloodwood/ Sydney Peppermint Heath- Open Forest on Sandstone- represented by many sandstone loving species.

PCT1395- [SSTF] Narrow-leaved Ironbark/ Broad-leaved Ironbark- Grey Gum Open Forest (Open-forest with *E. fibrosa*, *E. moluccana*, *E. tereticornis*, *E. eugenioides*, *E. punctata* (where sandstone is of a higher influence. with occasional *Melaleuca decora* in mid layer. Heath plants such as *Daviesia ulicifolia*, *B. spinosa* and *Lissanthe strigosa* occur in the shrub layer.

Site Map -Endangered Ecological Communities

SSTF-Shale Sandstone Transition Forest

CPW- Cumberland Plain Woodland



Figure 15 Site Map- Endangered Ecological Communities

Plant List

The list below was gathered from the OEH SEED portal as an indicator of what flora species may be found in and around the Nangarin Landcare site. Plants sighted during the visit are indicated with an (*) in the adjacent column in the table.

Note: Many more species would be expected to be found in the area. The list is to be used as a baseline or added to existing lists.

Table 1 Plant List

GROUP/FAMILY	SPECIES	COMMON NAME	GROWTH FORM	MSW SPP FINAL DET	SSTF SSP FINAL DET	WSDR SPP FINAL DET	CPW SPP FINAL DET	SGTF SPP FINAL DET
ACANTHACEAE	<i>Brunoniella australis</i>	Blue Trumpet	Herb	◆	◆		◆	◆
	<i>Pseuderanthemum variabile</i>	Pastel Flower	Herb			◆		
APOCYNACEAE	<i>Parsonsia straminea</i>	Common Silkpod	Vine	◆				
ARALIACEAE	<i>Astrotricha latifolia</i>		Shrub		◆			
	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort	Herb	◆	◆			
ASPARAGACEAE	<i>Arthropodium milleflorum</i>	Pale Vanilla-lily	Herb	◆			◆	
ASPHODELACEAE	<i>Stypandra glauca</i>		Herb		◆			
	<i>Tricoryne elatior</i>	Yellow Rush-lily	Herb	◆	◆			◆
ASPLENIACEAE	<i>Asplenium flabellifolium</i>	Necklace Fern	Herb		◆			
ASTERACEAE	<i>Olearia viscidula</i>	Wallaby Weed	Shrub	◆	◆			
	<i>Senecio hispidulus</i>	Hill Fireweed	Herb				◆	
	<i>Senecio pinnatifolius</i>		Herb	◆			◆	◆
	<i>Sigesbeckia australiensis</i>		Herb	◆		◆		
CAMPANULACEAE	<i>Lobelia purpurascens</i>	whiteroot	Herb	◆	◆			◆
	<i>Wahlenbergia gracilis</i>	Sprawling Bluebell	Grass	◆			◆	◆
	<i>Wahlenbergia spp.</i>	Native Bluebell	Herb	□			◆	
CASUARINACEAE	<i>Allocasuarina littoralis</i>	Black She-Oak	Tree		◆			
CHENOPODIACEAE	<i>Einadia hastata</i>	Berry Saltbush	Herb	◆				
	<i>Einadia nutans</i>	Climbing Saltbush	Herb	◆			◆	
COMMELINACEAE	<i>Commelina cyanea</i>	Native Wandering Jew	Herb	◆				◆
CONVOLVULACEAE	<i>Dichondra repens</i>	Kidney Weed	Herb	◆		◆	◆	
CRASSULACEAE	<i>Crassula sieberiana</i>	Australian Stonecrop	Herb	◆			◆	
CUNONIACEAE	<i>Ceratopetalum gummiferum</i>	Christmas Bush	Tree		◆			
CYPERACEAE	<i>Cyperus gracilis</i>	Slender Flat-sedge	Sedge	◆			◆	
	<i>Lepidosperma laterale</i>	Variable Sword-sedge	Sedge		◆			◆

DILLENIAEAE	<i>Hibbertia aspera</i>	Rough Guinea Flower	Herb	◆				
ERICACEAE	<i>Astroloma humifusum</i>	Native Cranberry	Shrub	◆	◆		◆	
FABACEAE (FABOIDEAE)	<i>Desmodium varians</i>	Slender Tick-trefoil	Herb	◆	◆	◆	◆	◆
	<i>Glycine clandestina</i>	Twining glycine	Scrambler	◆	◆			
	<i>Glycine tabacina</i>	Variable Glycine	Scrambler	◆	◆		◆	
	<i>Indigofera australis</i>	Australian Indigo	Shrub				◆	◆
	<i>Zornia dyctiocarpa</i>		Herb	◆			◆	
	<i>Podolobium ilicifolium</i>	Prickly Shaggy Pea	Shrub		◆			
FABACEAE (MIMOSOIDEAE)	<i>Acacia binervia</i>	Coast Myall	Sml Tree		◆			
	<i>Acacia decurrens</i>	Black Wattle	Sml Tree		◆		◆	
	<i>Acacia elata</i>	Cedar Wattle	Tree		◆			
	<i>Acacia floribunda</i>	White Sally	Sml Tree	◆	◆		◆	
	<i>Acacia implexa</i>	Hickory Wattle	Sml Tree	◆	◆	◆	◆	
	<i>Acacia parramattensis</i>	Parramatta Wattle	Sml Tree	◆				◆
	<i>Acacia terminalis</i>	Sunshine Wattle	Shrub		◆			
	<i>Acacia ulicifolia</i>	Prickly Moses	Shrub		◆			
GERANIACEAE	<i>Geranium homeanum</i>		Herb			◆	◆	
LAMIACEAE	<i>Ajuga australis</i>	Austral Bugle	Herb	◆			◆	
	<i>Plectranthus parviflorus</i>		Herb	◆		◆	◆	
LUZURIAGACEAE	<i>Geitonoplesium cymosum</i>	Scrambling Lily	Herb			◆		
MALVACEAE	<i>Brachychiton populneus</i>	Kurrajong	Tree	◆		◆		
	<i>Sida corrugata</i>	Corrugated Sida	Herb				◆	◆
MONTIACEAE	<i>Calandrinia pickeringii</i>		Herb					
MYRTACEAE	<i>Backhousia myrtifolia</i>	Grey Myrtle	Tree	◆	◆	◆		
	<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark	Tree	◆	◆		◆	
	<i>Eucalyptus eugenioides</i>	Thin-leaved Stringybark	Tree	◆	◆		◆	◆
	<i>Eucalyptus moluccana</i>	Grey Box	Tree	◆	◆	◆	◆	◆
	<i>Eucalyptus punctata</i>	Grey Gum	Tree		◆			
	<i>Eucalyptus tereticornis</i>	Forest Red Gum	Tree	◆		◆	◆	◆
	<i>Tristaniopsis laurina</i>	Kanooka	Tree		◆			
OXALIDACEAE	<i>Oxalis perrenans</i>	Sorrel	Herb	◆	◆	◆	◆	◆
OLEACEAE	<i>Notelaea longifolia</i>	Large Mock-olive	Sml Tree		◆	◆		

PHYLLANTHACEAE	<i>Breynia oblongifolia</i>	Coffee Bush	Shrub	◆		◆		
	<i>Phyllanthus hirtellus</i>	Thyme Spurge	Shrub		◆			
	<i>Poranthera microphylla</i>		Herb		◆			◆
PITTIOSPORACEAE	<i>Bursaria spinosa</i>	Native Blackthorn	Shrub	◆	◆		◆	◆
	<i>Pittosporum revolutum</i>	Rough Fruit Pittosporum	Shrub			◆		
	<i>Pittosporum undulatum</i>	Sweet Pittosporum	Shrub					
PLANTAGINACEAE	<i>Veronica plebeia</i>	Trailing Speedwell	Herb	◆	◆			
POACEAE	<i>Aristida ramosa</i>	Purple Wiregrass	Grass	◆	◆		◆	◆
	<i>Austrostipa</i> sp.		Grass	◆	◆		◆	
	<i>Bothriochloa macra</i>	Red Grass	Grass	◆			◆	
	<i>Chloris truncata</i>	Windmill Grass	Grass	◆			◆	
	<i>Chloris ventricosa</i>	Tall Chloris	Grass	◆			◆	
	<i>Cymbopogon refractus</i>	Barbed Wire Grass	Grass	◆	◆			
	<i>Dichelachne</i> sp.	Shorthair Plumegrass	Grass	◆	◆		◆	◆
	<i>Echinopogon caespitosus</i>	Bushy Hedgehog-grass	Grass	□	◆			◆
	<i>Echinopogon ovatus</i>		Grass	◆		◆	◆	
	<i>Entolasia marginata</i>	Bordered Panic	Grass		◆			
	<i>Entolasia stricta</i>	Wiry Panic	Grass		◆			◆
	<i>Eragrostis leptostachya</i>	Paddock Lovegrass	Grass	◆			◆	
	<i>Eriochloa pseudoacrotricha</i>		Grass	◆			◆	
	<i>Oplismenus</i> sp.	Basket Grass	Grass	◆	◆	◆	◆	◆
	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass	Grass	◆	◆	◆	◆	
	<i>Poa labillardierei</i> var. <i>labillardierei</i>	Tussock	Grass	◆	◆		◆	
	<i>Rytidosperma tenuius</i>		Grass				◆	◆
	<i>Themeda triandra</i>		Grass	◆	◆		◆	◆
POLYPODIACEAE	<i>Pyrrosia rupestris</i>	Rock Felt Fern	Herb			◆		
PROTEACEAE	<i>Banksia spinulosa</i>	Hairpin Banksia	Shrub					
	<i>Persoonia linearis</i>	Narrow-leaved Geebung	Tree		◆			
PTERIDACEAE	<i>Adiantum aethiopicum</i>	Common Maidenhair	Fern	◆		◆		
	<i>Adiantum flabelliflorum</i>	Necklace Fern	Fern			◆		
	<i>Adiantum hispidulum</i>	Rough Maidenhair	Fern	◆		◆		
	<i>Cheilanthes sieberi</i>	Rock Fern	Fern		◆		◆	◆

	<i>Pellaea falcata</i>	Sickle Fern	Fern	◆	◆	
RANUNCULACEAE	<i>Clematis glycinoides</i> var. <i>glycinoides</i>		Vine	◆		
RUBIACEAE	<i>Asperula conferta</i>		Herb	◆		◆
	<i>Galium propinquum</i>	Maori Bedstraw	Herb	◆		◆
	<i>Opercularia diphylla</i>	Stinkweed	Herb	◆	◆	
RUTACEAE	<i>Zieria sp.</i>		Shrub		◆	
SAPINDACEAE	<i>Alectryon subcinereus</i>	Wild Quince	Tree			◆
	<i>Dodonaea triquetra</i>	Large-leaf Hop-bush	Shrub		◆	
SOLANACEAE	<i>Solanum prinophyllum</i>	Forest Nightshade	Herb	◆	◆	◆
THYMELAEACEAE	<i>Pimelea linifolia</i>	Slender Rice-flower	Herb		◆	
ULMACEAE	<i>Trema tomentosa</i>	Native Peach	Shrub	◆	◆	
VITACEAE	<i>Cayratia clematidea</i>		Scrambler			◆
XANTHORRHOEACEAE	<i>Xanthorrhoea sp.</i>		Shrub		◆	



Figure 16 *Pellaea falcata* (Sickle Fern) with sori

Fauna Lists

Table 2 Bird List

<i>Gymnorhina tibicen</i>	Australian Magpie
<i>Corvus coronoides</i>	Australian Raven
<i>Chenonetta jubata</i>	Australian Wood Duck
<i>Geopelia humeralis</i>	Bar-shouldered Dove
<i>Manorina melanophrys</i>	Bell Miner
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike
<i>Acanthiza pusilla</i>	Brown Thornbill
<i>Acridotheres tristis</i>	Common Myna #
<i>Sturnus vulgaris</i>	Common Starling #
<i>Ocyphaps lophotes</i>	Crested Pigeon
<i>Eurystomus orientalis</i>	Dollarbird
<i>Platycercus eximius</i>	Eastern Rosella
<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill
<i>Psophodes olivaceus</i>	Eastern Whipbird
<i>Eopsaltria australis</i>	Eastern Yellow Robin
<i>Turdus merula</i>	Eurasian Blackbird #
<i>Petrochelidon ariel</i>	Fairy Martin
<i>Eolophus roseicapilla</i>	Galah
<i>Cracticus torquatus</i>	Grey Butcherbird
<i>Rhipidura albiscapa</i>	Grey Fantail
<i>Colluricincla harmonica</i>	Grey Shrike-thrush
<i>Dacelo novaeguineae</i>	Laughing Kookaburra
<i>Cacatua tenuirostris</i>	Long-billed Corella
<i>Grallina cyanoleuca</i>	Magpie-lark
<i>Vanellus miles</i>	Masked Lapwing
<i>Manorina melanocephala</i>	Noisy Miner
<i>Trichoglossus haematodus</i>	Rainbow Lorikeet
<i>Neochmia temporalis</i>	Red-browed Finch
<i>Psephotus haematonotus</i>	Red-rumped Parrot
<i>Myiagra inquieta</i>	Restless Flycatcher

<i>Pachycephala rufiventris</i>	Rufous Whistler
<i>Ptilonorhynchus violaceus</i>	Satin Bowerbird
<i>Zosterops lateralis</i>	Silveryeye
<i>Pardalotus punctatus</i>	Spotted Pardalote
<i>Pardalotus striatus</i>	Striated Pardalote
<i>Acanthiza lineata</i>	Striated Thornbill
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo
<i>Malurus cyaneus</i>	Superb Fairy-wren
<i>Daphoenositta chrysoptera</i>	Varied Sittella (V)
<i>Malurus lamberti</i>	Variegated Fairy-wren
<i>Aquila audax</i>	Wedge-tailed Eagle
<i>Hirundo neoxena</i>	Welcome Swallow
<i>Gerygone olivacea</i>	White-throated Gerygone
<i>Rhipidura leucophrys</i>	Willie Wagtail
<i>Acanthiza nana</i>	Yellow Thornbill
<i>Alisterus scapularis</i>	Australian King-Parrot
<u>(V) Vulnerable Species NSW</u>	<u># Introduced</u>

Table 3 Insect List

<i>Hesperiinae subfamily</i>	Grass Skipper Butterfly (<i>Larval food plants- native grasses, Dianella sp. and Lomandra sp.</i>)
<i>Hemicordulia australiae</i>	Australian Emerald Dragonfly
<i>Eupoecila australasiae</i>	Fiddler Beetle
<i>Agarista agricola</i>	Josephs Coat Butterfly (<i>Larval food plants-Vitaceae family, e.g., Cayratia clematidea</i>)
<i>Zizina otis labradus</i>	Common Grass-blue (<i>Larval food plants- Fabaceae family, Indigofera australis</i>)
<i>Iridomyrmex purpureus</i>	Gravel Ant

Table 4 Snail List

<i>Cornu aspersum</i>	Garden Snail #
<i>Sauroconcha corneovirens</i>	Cumberland Plain Land Snail (E)
<u>(E) Endangered Species NSW</u>	<u># Introduced</u>

Table 5 Spider List

<i>Phonognatha sp. (possibly P. graeffei)</i>	Leaf-curling Spider
---	---------------------

