**Hewlett Hunter Ltd**

# Vegetation Survey

## Nocoleche Nature Reserve

## 2020

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# 1 Introduction

## 1.1 Background

The New South Wales Department of Primary Industries and Environment (DPIE) has only a small amount of information and survey data from Nocoleche Nature Reserve which does not meet DPIE vegetation classification and mapping standards. There have been no comprehensives surveys or vegetation mapping of the reserve in terms of Vegetation Class, Formation and Plant Community Type (PCT). A number of non-comprehensive surveys have previously been undertaken either within the reserve or within the adjoining travelling stock route (TSR) which include:

- One full floristic plot placed over a population of *Dysphania platycarpa* (WN-DP-A) in 2000.
- 15 rapid (dominant floristics only) sites conducted in 2014 as part of the western region mapping program within the TSR.
- Two full vascular floristic survey sites (20 x 20 m), surveyed twice (MER2043 & MER 2044) as part of the western Catchment Management Authority MER survey effort.
- A survey of 30 vascular floristic plots (20 x 20 m) conducted in 2016 and were permanently marked.
- An additional 38 vascular floristic plots (20 x 20 m) conducted in 2017 and permanently marked.
- 15 partial floristics (primarily understorey within nested plots) in 2017 for a Doctor of Philosophy research program on alternative grazing methodologies.

Apart from the surveys conducted during the doctoral research project flora survey plots have been largely restricted to the central portions of the reserve and the TSR that runs through the center of the reserve. The existing data and information is needed to be collated and synthesized with new data from vegetation surveys and mapping conducted by Hewlett Hunter Pty. Ltd. to inform reserve management. The key tools to inform management are vegetation community mapping, datasets and knowledge of communities developed through the research and fieldwork conducted by Hewlett Hunter Pty. Ltd. This information will inform fire, rehabilitation and weed management plans and strategies for the protection of life and property on the reserves and provide a valuable baseline for science and education.

## 1.2 Project Objectives

The study was designed to address the following objectives of NPWS:

- Collate and combine all available data on the vegetation of the study area
- Review existing vegetation information and identify information gaps
- Undertake field surveys to supplement existing floristic sampling via the use of full floristic (up to 80 plots) and rapid plots (up to 160).
- Finalise PCT descriptions and mapping based on floristic sampling
- Identify, map and provide profiles for species and ecological communities listed on Schedules of the Commonwealth Environmental Protection and Biodiversity Conservation (EPBC) Act and NSW Biodiversity Conservation (BC) Act
- Produce maps and detailed profiles of PCTs, threatened ecological communities and threatened species
- Identify and map significant and declared noxious weed species occurrences and a profile of each significant species including control/management prescriptions

- Collate and combine all available data on the vegetation of the study area
- Produce a report to professional standards describing the natural vegetation of Nocoleche Nature Reserve including: vegetation profiles for each community; conservation reserve management recommendations for fire, weed and threatened species/community issues.

## 1.3 Location & Description

Nocoleche Nature Reserve occurs approximately 20 km south of Wanaaring and incorporates 74,728 ha (Figure 1) falling within the Mulga Lands Bioregion (Figure 1). The reserve was gazetted during September of 1979. The Paroo River and Cuttaburra and Kulkyne creeks and associated floodplains occur within the reserve. Sandplains, sand ridges and stony hills along with numerous ephemeral wetlands of various types, including large playa lakes are also major landscape components found within the reserve.

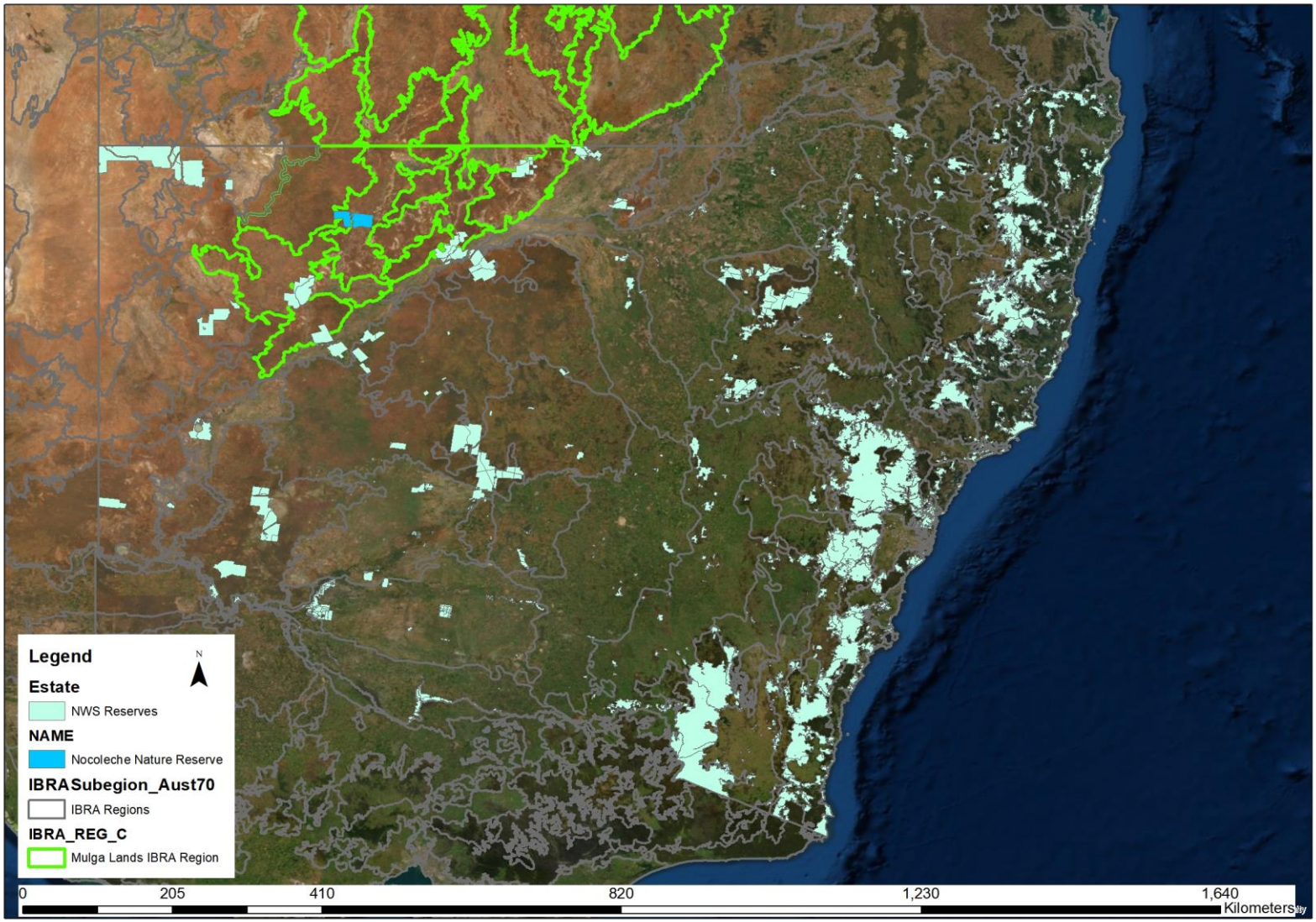


Figure 1: Study area of Nocoleche Nature Reserve

# 2 Methodology and Results

## 2.1 Survey Sites

A total of 78 full floristic and 189 rapid sites were surveyed during September of 2019. These sites largely were placed close to the trail network where access was available. Placement of sites was heavily constrained by the time available for the survey and areas that had reduced access. The survey period was also deemed least optimal for areas associated with floodplains which had wetted during the same year but other parts of the reserve in higher landscape positions were still largely drought affected. In addition, the reserve was found to have been heavily grazed by stock with all survey plots having been grazed and showing noticeable amounts of cattle dung. Cattle were seen roaming through the reserve at the time of survey. Thus, in some locations the ability to capture many ephemeral and seasonal species was reduced. Species may have been grazed; this was particularly the case with grass species with most having been heavily affected by grazing. With the incorporation of previous full and partial floristic plots a total of 371 vegetation survey sites were incorporated into the development of PCT identification and map production (Figure 2-5). As with current protocols for plot sampling techniques include the sampling of the height and diameter of trees within a 20x50 plot that extends beyond all the 20x20 floristic plots. Additional data collection includes the meter of logs on the ground and overstorey cover. This data is generally collected to assist in benchmarking and community health.

## 2.2 Mapping

Current methods for the circumscription of vegetation mapping units fall generally into two distinct camps; that of the mapping of pre-defined units (PCTs), and the analysis and creation of specific entities based on available data from within the study area. The former is not a scientific process but one that is often necessary as both landscape planning and management require a consistent set of units that can used by all in order to enable effective cross comparison. It is important that the purposes of the investigation dictate which form of community description and mapping is more relevant and if both may be required. There is utility in these broader formal descriptions (PCTs) for understanding landscape issues and for enabling others who are less familiar with the analysis methodology and results to understand contextually what the answers represent.

Within this investigation, mapping polygons were assigned community names and their boundaries delineated based on pre-defined PCTs. Land managers necessarily need to understand that both of the methodologies outlined are not interchangeable even though there can be overlap in the general description of units and their component floras and also in the fact that each method can inform on each other. However perceived overlap in the circumscription of units should not be confused with replaceability of one form over another. In general, non-quantitative methods rely on more arbitrary decisions, and are more often than not, used to assist us in delineating units that are thought to be present when statistical inference suggests otherwise.

The identity of each defined PCT was tagged to the full floristic and rapid survey sites within the database. The locations of the identified communities where then re-projected onto satellite imagery. These sites, notes taken on traverses and structural characteristics seen on satellite imagery along with physiographic information was used to assist in delineation of vegetation communities for mapping. This methodology follows the guidelines for vegetation mapping provided within the Native Vegetation Interim Type Standard (Sivertsen 2009) and considered by Benson (2004) to be the highest standard of technique for vegetation circumscription and mapping.

Not all PCTs are readily mappable as distinct individual units due to their lack of distinguishing structural, colour or textural differences on remote imagery. Furthermore, a number of PCT units are temporary in nature and within the study region dependent on wetting and drying cycles or the length of inundation. Thus, some PCTs are indistinguishable on imagery, some only exist temporarily and others can be divided into distinct structural types not recognised as different types within a PCT. Mapping vegetation is different from vegetation circumscription and while both processes can overlap to a degree, they are not interchangeable methodologies.

Mapping has been extended beyond the boundaries of the Nature Reserve within the adjoining Travelling Stock Reserve as from a management perspective this area is managed in concert with the Nature Reserve. Sample maps are given in Appendix 7.

Currently within NSW vegetation is classified within a hierarchy of three levels:

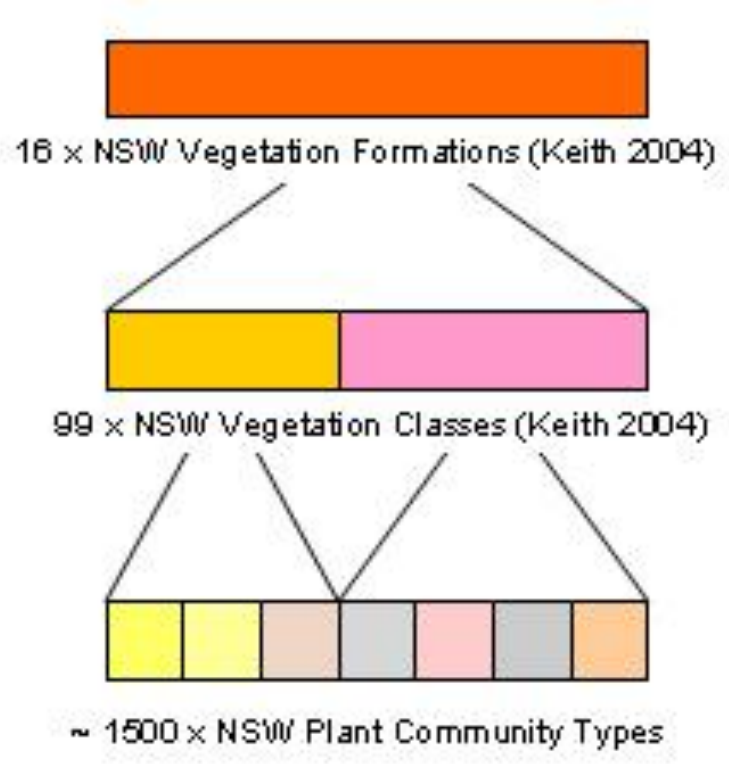


**Figure 2: NSW vegetation mapping hierarchy**

## 2.3 Mapping Caveats

It is impossible to assess all locations on-ground, consequently most of the landscape in any mapping program is remotely assessed, and even with high quality satellite mapping techniques delineation of boundaries is a subjective process, albeit much improved from previous mapping methodologies and poorer images.

Remote assessment is largely based on features visible on satellite imagery and on known landscape features to fill in gaps between on-ground survey sites. The ability to remotely assess is not only based on the amount of on-ground data collected, but on the quality of the remote information available. The resolution of the satellite imagery affects how well and accurately patterns in the landscape can be discerned. Furthermore, various aspects of on-ground change may hamper clear delineation of types, for example recency of flooding, drought, fire and other natural and human disturbances.

Mapping accuracy is based on what PCTs have been chosen to be recognised. Within the study area a considerable number of recognised PCTs shared the same overstorey species in different densities

which have been affected by past clearing activities. Thus, it was not clear when to differentiate the many types of communities that were dominant with various densities of the dominant overstorey species which may also have very similar understorey patterns. Due to extreme variation within some units, broad PCT delineation was chosen in favour of dividing these areas into many potential PCTs. This was done as not enough on ground survey sites were available to make clear distinctions between various types and the season of survey in some physiographic positions was also not fully conducive for a more thorough understanding of understorey taxa. In addition, communities within the far western division are highly variable and understoreys and mid-storeys can change considerably both seasonally and randomly due to which season a rain or flooding event occurs or how much rain or how long floods remain. Such patterns can within a single year almost completely change the understorey dominants and some mid-storey assemblages and stimulate mass germination or die off of overstorey species. In more remote areas mapping is highly speculative, even with the techniques used.

In general, it must be stressed that any remote sensing activities even those using the best imagery and techniques is a different process from community delineation via analysis of floristic data and cannot delineate all floristic types accurately as they are very different forms of recognition. This is particularly so in locations of gradual change and poor discordance in environmental gradients. Thus, any form of API is a model which can always be improved. It is also important to note that any imagery is but a snapshot in time and a number of land use changes may have occurred between the time the imagery was taken and the mapping. Also, delineation of some TECs requires an assessment of the ground cover at the most opportune time of the year, to assess if the cover is over 50% native species and/or whether tree seedlings are present and may also require a different size of sample plot or assessments of recruitment which are not covered within general survey methodologies. Similarly, some TECs include their derived forms which maybe significantly structurally different from the ideal and therefore not readily recognisable using remote sensing and can only be assessed on a site (patch) by site basis.

## 2.4 Floristic Analysis

The vegetation communities of Nocoleche were classified using information gathered from full floristic surveys conducted on each vegetation community type appearing throughout the reserve. These plots were analysed within *Primer7* using Bray-Curtis similarity and UPGMA clustering. The broad groupings along with designated PCT allocation are given in the appendices.

## 2.5 Plant Community Types and mapping

In total 38 Plant Community Types were perceived to potentially occur within Nocoleche Nature Reserve. These PCTs occurred within 12 Classes and 7 Formations. Within this program many ephemeral freshwater PCTs with no tree structure layer and which occur within the same vegetation Class were grouped for mapping purposes. This was necessary as these were not able to be distinguished independently with any accuracy. Some of these PCTs are also considered short- and long-term ephemeral and thus may change in dominance and type over seasons. Bastard Mulga and Mulga PCT types (120 and 121) are indistinguishable through remote imagery and have been combined as a single unit. However, PCT120 and 121 were able to be further divided into structural types based on density of the overstorey and/or dominance of the mid-stratum. PCT 143 Narrow-leaved Hopbush -Scrub Turpentine – Senna Shrubland has been broadly defined and mapped as a single unit though it varies distinctly across the reserve. PCT 143 is dominated by *Eremophila duttonii* in the west, *Eremophila sturtii* within the central areas and then *Dodonaea viscosa* within the east of the reserve. A number of PCTs such as PCT 144 Leopardwood Woodland, PCT59 Belah/Black Oak – Western Rosewood - Leopardwood, PCT 137 Whitewood – Western Rosewood may exist as larger distinct patches, however, the dominant taxa are also described as common components of other

more widespread PCTs and are likely to have been under-mapped as they are difficult to distinguish as individual types. Thought they occur within distinct Classes and Formations the delineation between PCT 120/121 and PCT 100 Desert Bloodwood – Mulga and PCT 109 Poplar Box – Mulga – Ironwood is not always clear and these types form mosaics within the landscape and share most of the same common dominants. Overall a number of PCTs have been included within the mapping though not all fit neatly within the floristics and variation found on-ground. It is suggested that the PCT units available may inadequately describe the vegetation of the reserve and in some instances are only vary broadly applicable.

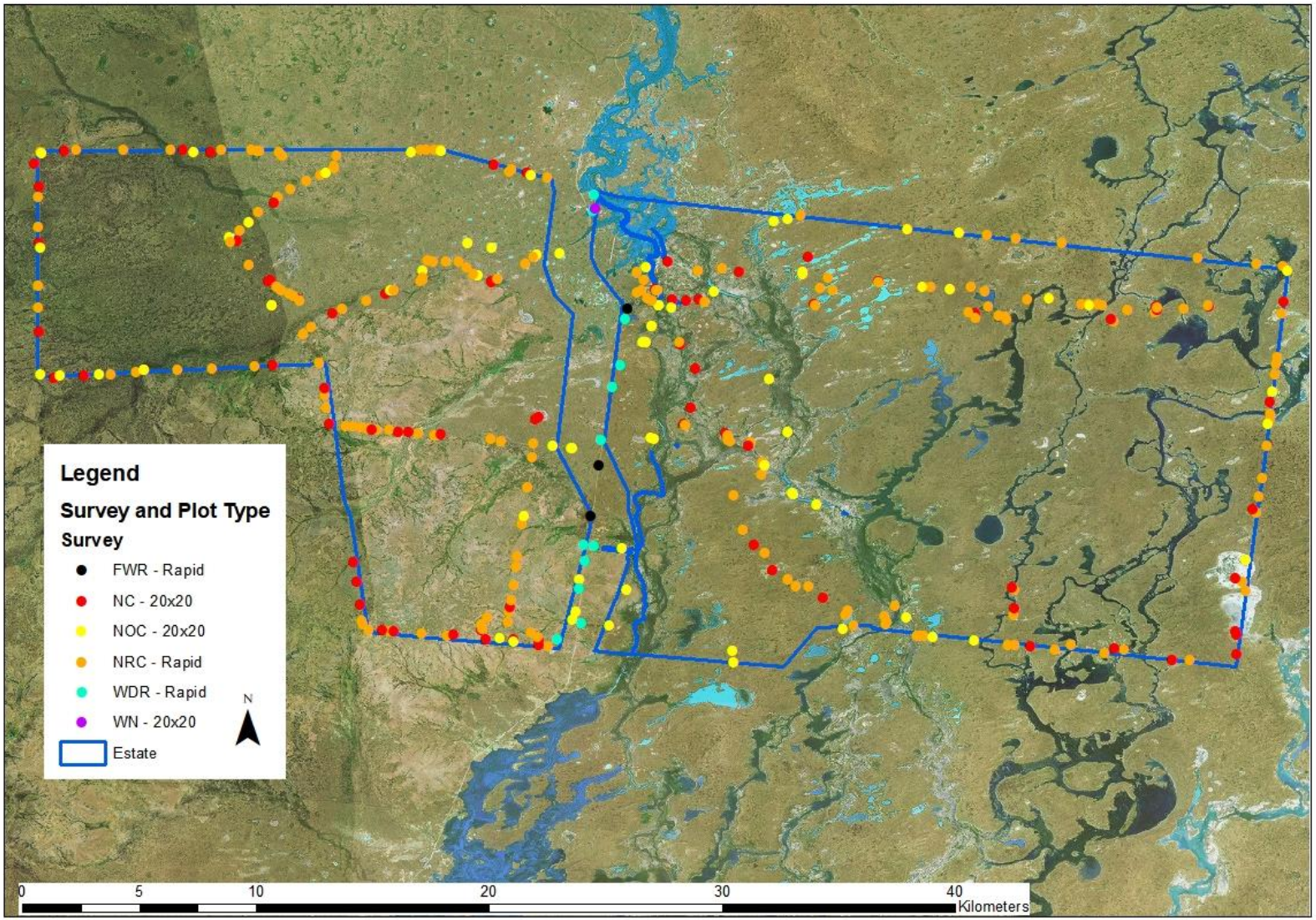


**Figure 3: Location of full and rapid floristic survey plots used to assist in mapping of Nocoleche Nature Reserve.**

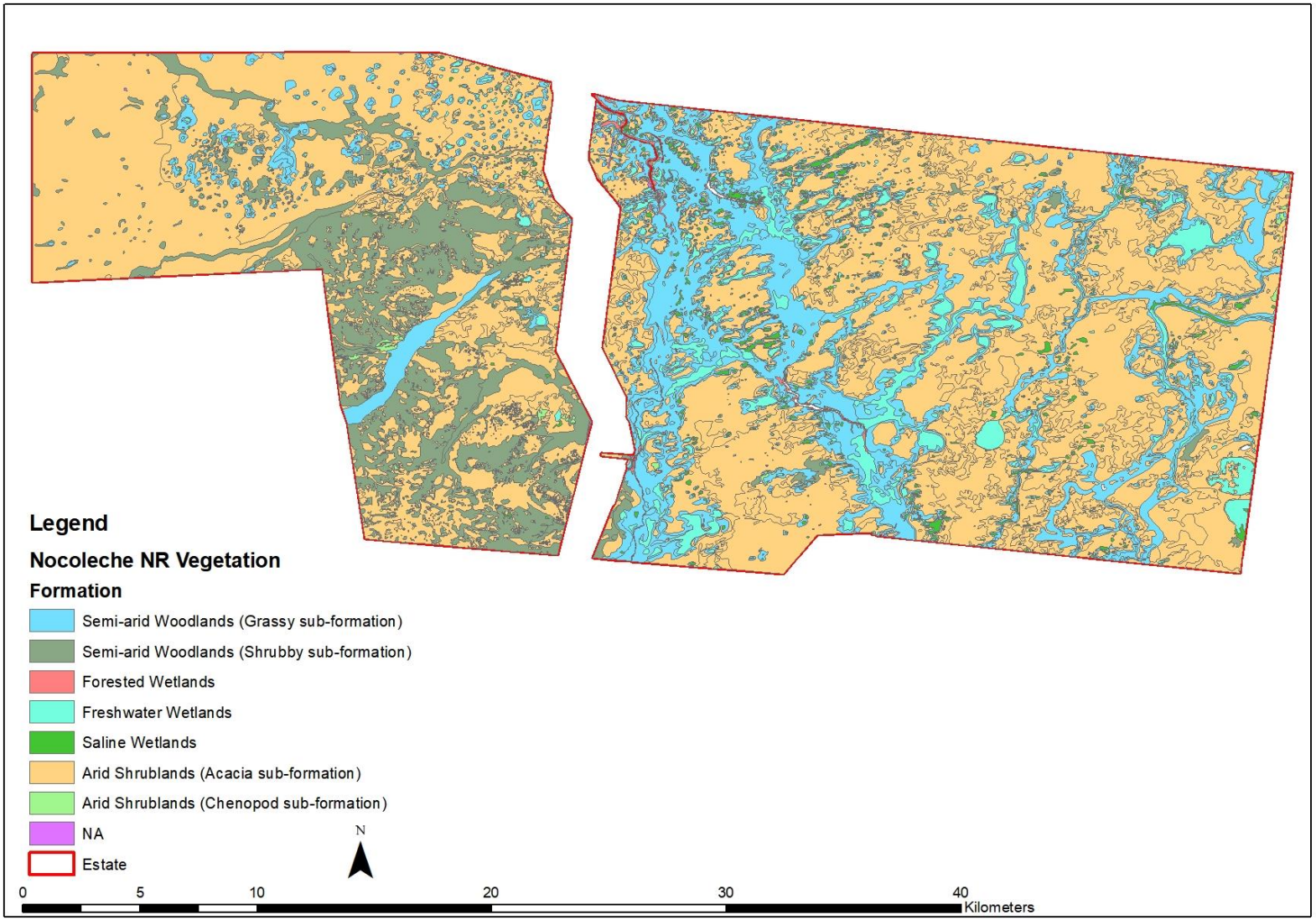


Figure 4: Vegetation Formations in Nocoleche Nature Reserve. See Figure 2 for mapping hierarchy.

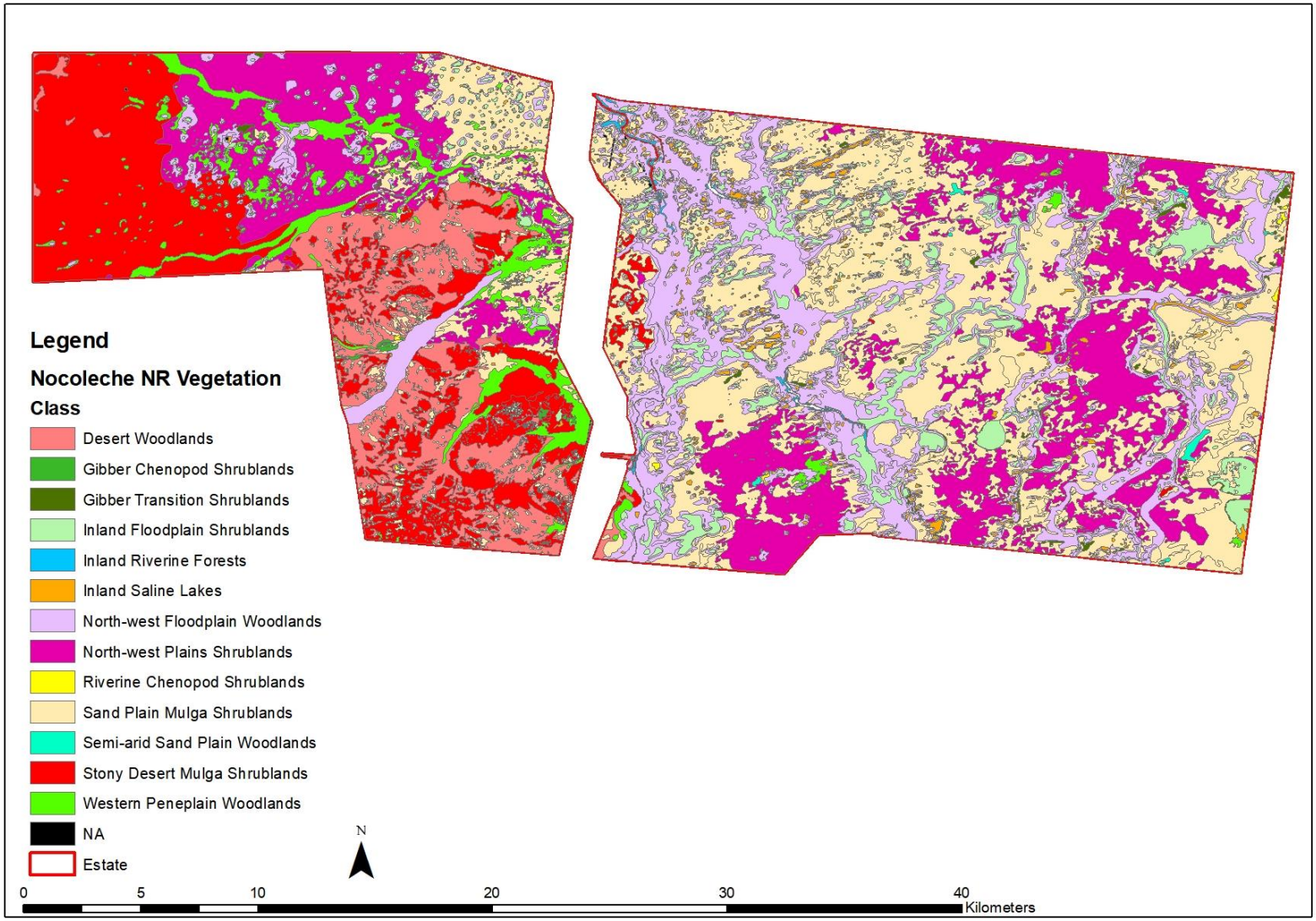


Figure 5: Vegetation Classes in Nocoleche Nature reserve. See Figure 2 for mapping hierarchy.

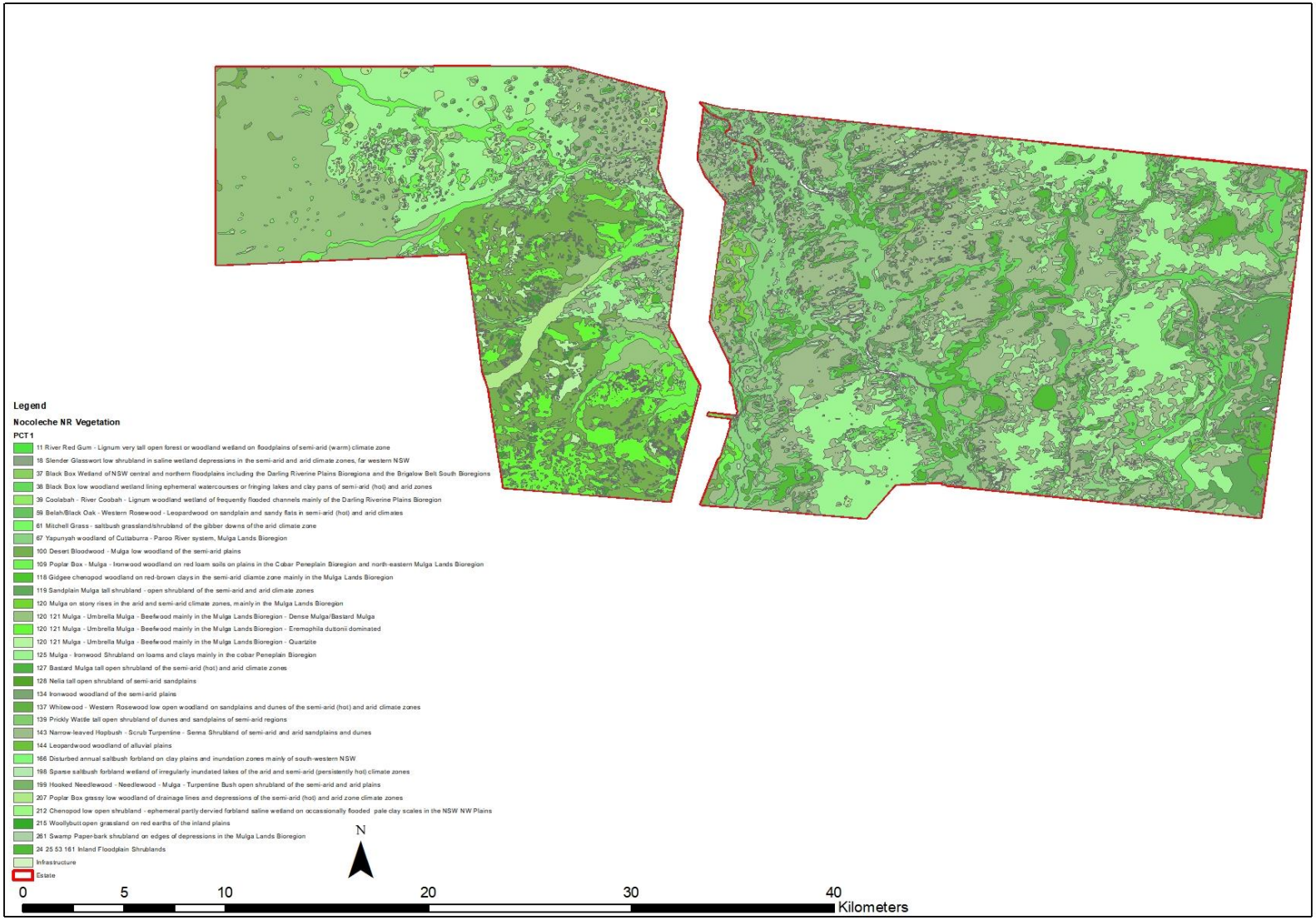


**Figure 6: Plant Community Types within Nocoleche Nature Reserve. See Figure 2 for mapping hierarchy.**

## 2.6 Vegetation and Plant Species of Conservation Significance

The threatened species found within the reserve are generally opportunistic and only available temporarily under specific conditions and thus searches for these species should be undertaken quickly and at appropriate times which in some instances maybe hard to predict. Unfortunately, the time at which many of these species may be present is also likely to be at a time that getting around the reserve is the most difficult. Thus, targeted surveys which are required for these taxa will be difficult to co-ordinate in terms of timing and accessibility. Only *Lepidium monoplocoides* was found during this current survey all other species have been noted opportunistically during previous investigations. As such location data is not directly available for where these taxa are within the reserve and based on their life history strategies most could occur almost anywhere during and after inundation within the wetland systems. Thus, mapping of even current locations is likely to be not reflective of the actual potential distributions.

### 2.6.1 Threatened Flora Species

*Aponogeton queenslandicus*

*BC Act* Endangered

Occurs in Qld, NT and in far western NSW. Currently Nocoleche NR is the only known location for this species within NSW. In Nocoleche it was found within inundated areas associated with *Duma florulenta* nearby *Eucalyptus ochrophloia* and *Eucalyptus largiflorens*.

Rooted, submerged and floating, perennial aquatic. Tubers 1-5 cm long, 1.8-2.6 cm wide, hairy. Leaves submersed and floating; submersed leaves uncommon, elliptic to lanceolate, green, 10-13(-70) cm long, 2.9-4.5 cm wide; margins flat; 7-9 veined; petiole to 15 cm long. Floating leaves ovate or elliptic, 2.8-14(-27) cm long, 0.6-4.3 cm wide; light green to green, 7-9 veined; petiole to 66 cm long. Peduncle to 30(-73) cm long; 1.8-2.5 mm wide at base often only slightly broadening or to 2-4.5 mm wide at base of inflorescence. Flowers yellow, emergent or floating, single, usually tightly-flowered. Flowers turned in all directions. Fruit 2.5-4.5 mm long, 2.3-3 mm wide, with a terminal, often curved, beak. Seeds narrowly elliptic, 4-13 per fruit, 1.7-3 mm long, 0.6-1 mm wide.

Not found during this current survey.


Photograph 1: *Aponogeton queenslandicus* image from http://www.heimbiotop.de/aponogeton.html

*Dentella minutissima*

*BC Act* Endangered

Occurs across the NT, SA and Qld with occurrences in north western NSW. The species has been recorded within Nocoleche NR, Toorale NP, Toorale SCA and Naree Station (Bush Heritage reserve). It is known to occur in sandy clay and clay riparian, floodplain and ephemeral lake beds.

The species is almost impossible to see unless it is flowering and the flowers are very small. The species forms a mat that resembles sand grains. Due to its cryptic and ephemeral nature this species is highly likely to be missed even if it is present. It is highly susceptible to trampling. The species is a succulent, mat-forming herb, covered in hyaline hairs; stems much branched, to 5 cm long often rooting at the nodes. The leaves are ovate to circular 0.5-1.5 mm long and about 1 mm wide, apex obtuse, petiole to 1 mm long, stipules inconspicuous, broad triangular. Flowers are sessile, solitary and in the axils of leaves 4-8 mm long. The corolla tube can be about 6 mm long.

The species is threatened by disturbance to wetland and riparian banks and is highly vulnerable to grazing by domestic stock and feral animals particularly trampling and pugging.

Not found during this current survey.

Photograph 2: *Dentella minutissima* (JT Hunter)

*Goodenia nocoleche*

*BC* Act Endangered

This species is only known from locations along the broader Paroo River system with the largest extant population being found within Nocoleche NR.

An ephemeral amphibious herb to 40 cm high. Basal leaves with floating lamina (extended portion) 20 - 40 mm long, 7 - 14 mm wide, thin, glossy green above, flat, lance-shaped, margins undulating and minutely toothed. Stalk of the leaves elongated to 60 cm long, much longer than lamina, lengthening with water depth. Leaves present at base of flowering stem 10 - 40mm long, 2 - 3mm wide. Flowers yellow, petals with lobe tips often tinged with pink or purple. Fruit is pale, 5 - 6.5 mm long, 2 - 3 mm wide and bristly with short simple and glandular hairs. Seed 1 mm long, 2.5 mm wide, light brown glossy, and winged. The species can germinate in standing water up to 0.6 m deep, and develops specialised floating leaves, attached by greatly extended stalks (up to 0.6 m). As water recedes, flowers emerge and grow rapidly.

Not found during this current survey.

Photograph 3: *Goodenia nocoleche* image sourced from https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10933#

*Lepidium monoplocoides* (Winged Peppercress)

*BC* Act Endangered

*EPBC* Act Endangered

Lepidium monoplocoides is a small annual herb growing to about 20 cm tall. Leaves are narrowly linear, pinnately lobed or entire, 5–10 cm long and 1–2 mm wide, and are arranged along and at the base of stems. The inflorescence is an elongating raceme with tiny green-brown flowers to 2 mm wide, with sepals 1 mm long and petals inconspicuous or absent. Fruits are broadly ovate to circular, 5 mm long and 4 mm wide, and borne on flattened pedicels to 3 mm long. The apex of the fruit is pointed, with a small notch and two smooth wings that are divided into halves that surround the entire fruiting body. Flowering occurs in the spring and summer. Little is known of the biology and ecology of the Winged Peppercress. Numbers of adult plants fluctuate from year to year and, like many annual species occurring in dry environments, some seed probably remains dormant in the soil for several years. Germination to flowering and fruiting and disappearance can be within a matter of weeks or a few months thus this species is often easily missed based on timing of surveys.

Though largely though to be an interior plant the species has been found on numerous occasions as far east as Gunnedah and large populations have been discovered within the Pilliga Outwash. In all instances though the species is restricted to ephemeral wetlands. During this current survey the species was found in a number of locations of different ephemeral wetland PCTs. It was found to be sporadic but abundant and captured within 5 full floristic survey plots.

Photograph 4: *Lepidium monoplocoides* (photo JT Hunter)

*Maireana cheelii*

*BC* Act Vulnerable

*EPBC* Act Vulnerable

Widely distributed in inland eastern Australia from Qld, NSW, and Victoria. The species is usually found in chenopod shrubland and grasslands on heavy clay soils associated with species such as Hairy Bluebush (*Maireana pentagona*), Bottle Bluebush (*Maireana excavata*), Nitre-bush (*Nitraria billardierei*), *Austrostipa nodosa, A. scabra, Erodium crinitum, Rhodanthe corymbiflorum, Hyalosperma semisterile* and *H. glutinosa*. In NSW the species appears to favour heavier grey clay soils that support Bladder Saltbush Atriplex vesicaria communities. It is usually found on low topographic often saline areas that become waterlogged.

Maireana cheelii is a small, tufted perennial shrub growing to 20 cm tall, from the saltbush family Chenopodiaceae. It has slender, woolly, erect branches arising from a swollen taproot and fleshy, linear, alternate leaves 5–9cm long. The Chariot Wheels flowers and fruits in the spring, producing tiny green flowers about 1 mm wide in the leaf axils. The distinctive fruit has five fan-shaped, spreading woolly wings arranged in a circular fashion, the fruiting perianth to 6 mm in diameter.

Not found during this current survey.

Photograph 5: *Maireana cheelii* (JT Hunter).

*Nitella partita*

*BC* Act Endangered

This species is an alga and is known from saline and freshwater lakes. The species is known from north western areas of NSW, particularly within the broader Paroo regoni but also likely to occur within adjacent areas of western Qld.

*Nitella partita* is a macroscopic green alga (charophyte) superficially similar to submerged flowering plants, with flexible stems and whorls of branch-like structures that carry the reproductive organs. The species is a rooted annual aquatic plant to 10cm high, dioecious.

Not found during this current survey.

Photograph 6: *Nitella partita* image sourced from
https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10941

### 2.6.2 Endangered Ecological Communities

- *Acacia loderi* Shrublands (*BC* Act – Endangered) were found at a single location along the southern boundary fence in the eastern portion of the reserve. The population had been heavily impacted by drought and many mature individuals were present as standing dead.
- Coolibah – Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregions (*BC* Act – Endangered; *EPBC* Act – Endangered) was found sporadically within the reserve in larger floodplain locations.

**Table 1: Endangered Ecological Communities identified in Nocoleche Nature Reserve**

| TECs | Extent and Distribution | PCT |
|---|---|---|
| *Acacia loderi* Shrublands | Ca. 0.4 ha though may be other occurrences | 128 |
| Coolibah – Black Box Woodlands | Ca. 67 ha though may be more extensive | 37 & 39 |

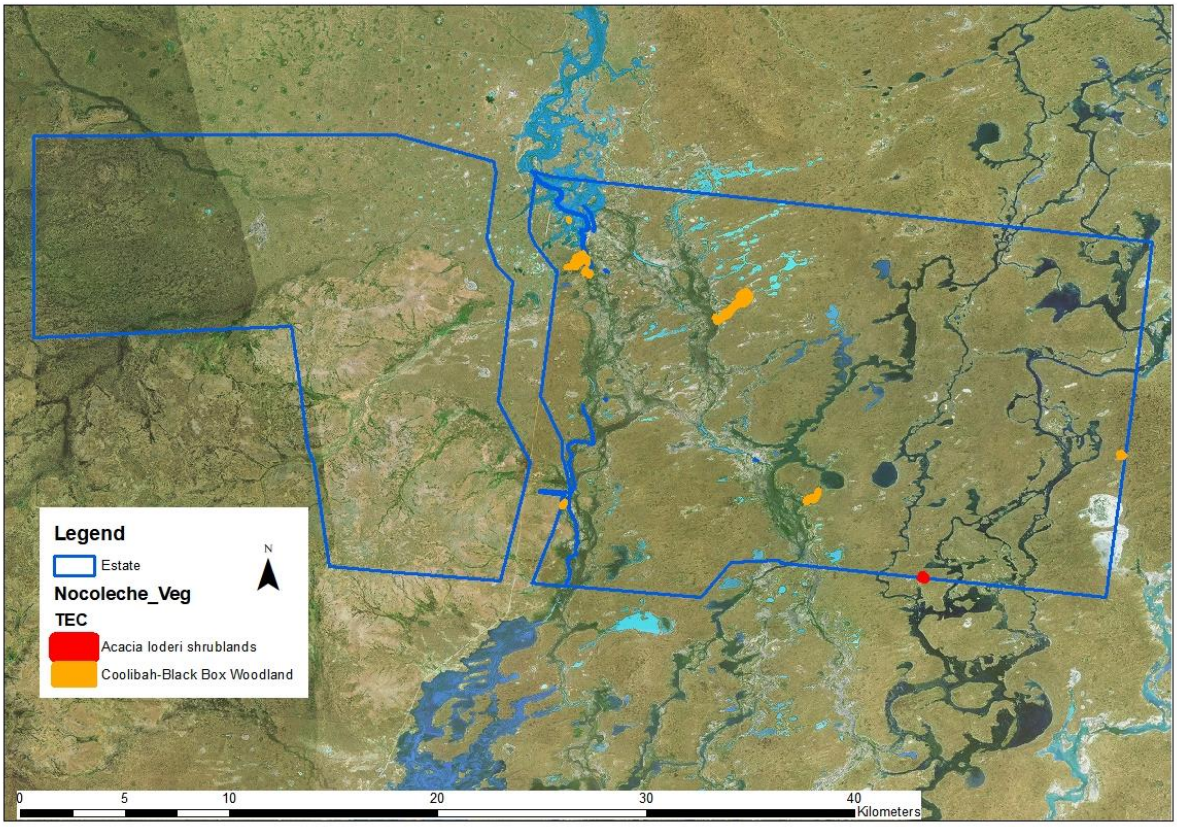


**Figure 7: Threatened Ecological Communities found within Nocoleche Nature Reserve**

## 2.7 Fire Ecology

Overall, the vegetation within Nocoleche Nature Reserve are types that are not adapted to frequent or in some instances fire at all. Many of the dominant taxa are killed by fire and recruit poorly afterwards. Thus, fire within Nocoleche is likely an infrequent occurrence and prescribed burning should be considered very carefully. In most years there is likely to be insufficient fuel loads to carry fires. In general, fires are more frequent with increasing rainfall and seasonality.

In general bushfire management strategies tend to create a homogeneous fire landscape. Whereas it is a heterogeneous fire landscape (i.e. patchy burns with frequently burnt areas intermixed with long unburnt sites) that helps promote diversity at a landscape scale. Careful consideration must therefore be given to the requirements of native vegetation remnants when looking at the implementation of a non-natural fire regime.

Grazing pressure from introduced rabbits, but also from native fauna such as Kangaroos, is accentuated in small burns if dry conditions follow in the post fire environment (Cohn & Bradstock 2000). There is a need to regulate feral animals such as rabbits if good seedling recruitment is to occur in the post fire environment (Cohn & Bradstock 2000).

Although biodiversity is shown to increase after fire one should not be misled by a too great an emphasis on diversity at the cost of considering which species are contributing to the diversity and to richness at the landscape scale (Gill 1977; Noble 1981). Rigid prescriptions for fires will inevitably lead to the development of vegetation communities adapted to an inflexible fire regime with the consequent loss of many plant species (Heislers et al. 1981). For example, while fires were shown to increase local richness at Yathong it decreased the richness between sites and while richness declined with greater inter-fire periods differences between sites (beta diversity) increased (Cohn et al. 2002). A variety and range of age classes of each vegetation type is the most desirable outcome, with most vegetation being in the older age classes (Heislers et al. 1981). Variability and adaptability in fire regimes is the goal suggested by recent research (Bradstock et al. 1995; Conroy 1996).

Changes are known to occur in the composition of algal and bryophyte crusts on soils after fire. These crusts help stabilise the soil surface against water erosion (Eldridge & Bradstock 1994). The condition of these crusts can be crucial to soil surface regenerates and nutrient cycling (Cheal 1981; Eldridge & Bradstock 1994; Eldridge & Tozer 1997). Continued frequent burning has been shown to completely destroy cryptogamic crusts (Greene et al. 1990). Eldridge and Bradstock (1994) showed that cryptogamic crusts were best developed about 16 years after fire and that they begin to decrease after this time. The increase in litter from the overstorey species causes this reduction. Increasing fire regularity is currently causing declines in reptile and mammal assemblages in northern Australia and a less prescriptive approach appears to be warranted (Russel-Smith et al. 2013; Lawes et al. 2015).

All the Plant Community Types found within Nocoleche Nature Reserve are types that do not require fire as part of their natural processes. Thus there is no requirement to propose burning in any of the areas and in fact many systems should be protected from wildfires if these occur.

In summary:

1. Frequent burning causes increase stress on vegetation, and if droughts occur between fire periods these stresses are exacerbated and may lead to premature death and/or extinction due to the depletion of regenerative resources.

2. Frequent burning has been shown to increase fuel loads in the short term, while long unburnt areas become stabilised and have been shown in some locations to significantly reduce fuel loads.

3. Frequent fire promotes a young and high regenerating woodland or forest.

4. Frequent fire removes essential habitat resources for fauna such as large logs on the ground, large trees with hollows, bark resources and the functional diversity of flora.

5. Long unburnt areas are essential within the landscape and are currently a rare and significant habitat type.

6. Long unburnt vegetation is disproportionately important for fauna habitat.

7. Recently burnt patches are likely to be more heavily grazed (green pick) and may require protection.

It is important that records are kept and mapping of fire occurrences occurs. It is recommended that the following occurs:

- Collation of fire records, verbal reports and evidence from aerial photographs.
- When fires occur, accurate boundary maps of the extent of fires should be made. This needs to include accurate ground truthing.
- Map opportunistic evidence of lightning strikes.
- Site specific research needs to be conducted in each of the communities within the reserve.
- Old age stands (absence of fire) of all community types should be maintained if possible.
- Feral animal control will need to precede and follow or accompany any management burns

## 2.8 Ecological Influences on Communities

The plants of the region have developed three major strategies to cope with the frequent periods of drought. They are either drought evaders (annual and perennial) or drought resisters Neldner (1991). Annual drought evaders or ephemerals complete their life cycle in periods of brief high soil moisture (e.g. *Tripogon loliiformis, Rhodanthe floribunda, Eriochlamys cupularis* all common in Nocoleche). They survive the intervening dry times by dormant seeds. Some short-lived perennials can act as ephemerals if droughts persist. As such, factors that affect flowering, seed set, germination and establishment are important for perpetuating the species. Perennial drought evaders have aerial parts that die during periods of drought (e.g. *Bulbine* sp., *Portulaca oleracea*). They recover by vegetative regrowth primarily from underground organs (Neldner 1991). The perennial drought resistant plants maintain above ground foliage during drought but do not grow (e.g. most trees and perennial shrubs). They resume growth when moisture returns (Neldner 1991). Such species often have morphological adaptations such as small and/or narrow leaves.

In arid and semi-arid communities, the composition and turnover of annual and short-lived perennial species varies from year to year (Porteners et al. 1997). The composition of the ground layer is largely determined by the amount and seasonal distribution of rainfall (Fox 1991) and/or flooding events. Different frequencies of flooding and its duration are known to significantly alter the dominant species of these systems. Grasslands can turn to shrublands and vice versa and trees such as *Eucalyptus largiflorens, Eucalyptus populnea* and *Eucalyptus coolabah* (common dominants at Nocoleche) can regeneration in large co-horts or suffer extensive die back. This is not to say that the communities described within this report are not ‘natural’ entities, but a general framework of the dominants and the common understorey species as derived here may have significant mosaic shifts in their ephemeral floras over the short term or long term encroachments and retractions some overstorey species in the long term.

Given this general picture some taxa appear to be changing little in their population dynamics across the semi-arid regions of Australia. These include many recognisable overstorey taxa such as *Alectryon oleifolius, Acacia aneura, Pittosporum angustifolium, Casuarina pauper, Acacia oswaldii, Hakea tephrosperma* & *Hakea leucoptera* which are common dominants in Nocoleche (Parsons 1989; Batty & Parsons 1992; Auld & Denham 2001). Many species in western New South Wales regenerate primarily by suckering, this can be seen readily in the many stands of Rosewood and Hakea which show obvious clumping and many exposed root systems. Recruitment via seed is considered a rare event for many western species. Since rabbit and goat populations have been in high numbers favourable events such as good rains are taken advantage of by these species which often decimate the few seed recruitment events (Auld & Denham 2001). Auld & Denham (2001) suggest that the western districts are on the verge of a major episode of decline and local extinction of plant species and communities. These same issues are of concern at Nocoleche.

*Acacia aneura* associations have a very wide range and groving is common within arid and semi-arid areas and rare along the eastern margin of the species distribution (Boyland 1984; Pickard & Norris 1994). Assemblages with similar overstorey taxa are widespread, particularly throughout the Mulga Lands Bioregion within which Nocoleche NR accurs. Soils are generally red earths and lithosols and can be sandy with subsurface layers of iron hydroxide or clay (Beadle 1981). Soils are usually acid to neutral and the presence of calcium carbonate will limit the density of Mulga. High soil temperatures have been shown to inhibit the germination of *Acacia aneura* seeds (Burrows 1973) and such Mulga Lands could be in a transition with expected climate change. There is also evidence suggesting that there is a need for a winter component of rainfall for *A. aneura* to survive (Preece 1971; Boyland 1984) and that both winter and summer rainfall events are necessary (Beadle 1981). Growth occurs after rain at any time of the year with flowering occurring throughout the year after rain but only late summer rain leads to seed formation (Beadle 1981). Preece (1971) estimated to successful establishment could only occur once in every six years. Populations are usually of single co-horts of age classes suggesting only periodic recruitment events. The taproots can be long and the root mass under *Acacia aneura* can be extensive in the subsurface soil (Beadle 1981). *Acacia aneura* is usually found in soils low in nitrogen (Aldis 1987). Beadle (1981) states that *Acacia aneura* probably has a lifespan of a few hundred years and may take up to 100 years to reach maturity. The conservation status of Mulga woodlands is poor across its range (Neldner 1984; Neldner 1991). Thinning of Acacia aneura may lead to sheet and wind soil erosion (Boyland 1984). Once thinned, these assemblages often rapidly deteriorate and are colonised by pioneering native shrubs ('woody weeds') such as *Dodonaea* and *Eremophila* (Boyland 1984). Clearing along trails should be kept to a minimum. Mulga areas are susceptible to natural erosion around their margins and therefore future regeneration efforts should be focused on scalds on the edge of patches. Acacia aneura communities have undergone considerable degeneration across their range (Boyland 1984) and old growth mature stands are rare even with conservation areas.

Although there appears to be a perception that Mulga landscape have thickening at a great rate, at least 1% per year being normal (Burrows et al. 2002), however actual measurements of thickening in some areas has shown that the rate of Mulga thickening over the last 50 years was around 0.072% per year (Witt et al. 2009).

Large areas of the reserve are dominated by shrubs often referred to as Woody Weeds. In some instances, the remnants of original tropical woodlands remain but it is also likely that dense shrublands of these types were also present in some form prior to agricultural intervention. These remnants are the southern distribution of many taxa derived originally from tropical monsoonal and or rainforest species left behind in the drying of the continent. These taxa become increasingly less common further south within temperate and winter dominant rainfall zones of New South Wales.

These shrub dominated assemblages have increased in distribution since clearing and grazing was introduced. 'Woody weeds' are generally accepted as a form of land degradation and anecdotal evidence has been reported that soil erosion is greater under these stands (Porteners et al. 1997). However, others have found little evidence for increased erosion and their presence is not thought to cause any problems with respect to biodiversity (Pickard & Norris 1994; West 2000). Woody encroachment is a worldwide phenomenon and may be a result of long-term fluctuations in rainfall and atmospheric CO2, combined with overgrazing and potential alteration of fire regimes (Archer 2010). While much speculation about the effects of this transition have centred on the process being a form of desertification or landscape degradation there has been little or no empirical support to suggest this is actually the case. If fact the body of evidence produced over the last two decades suggests that woody encroachment in western New South Wales is in fact largely a beneficial process that improves landscape health and soil functional on almost all measured variables and/or neutral on many (Elkins et al. 1986; Bhark & Small 2003; Eldridge & Fruedenberger 2005; Pintado et al. 2005; Maestre et al. 2009; Roth et al 2009; Collard & Fisher 2010; Eldridge et al. 2011; Smit & Ruifrok 2011; Smith 2012; Daryanto et al. 2012; Daryanto et al. 2013; Howard et al. 2012; Eldridge et al. 2013; Soliveres & Eldridge 2013; Eldridge & Soliveres 2014; Eldridge et al. 2014; Soliveres et al. 2014; Eldridge et al. 2015). In 35 study sites across western New South Wales no declines in plant, vertebrate and invertebrate richness was found with increasing woody encroachment (Ayres et al. 2001Woody species play a highly important role as refugia from grazing and harsh environmental conditions within arid environments and their removal should not be taken lighting in management practices which wish to promote biodiversity and ecosystem functioning (Howard et al. 2012). Eldridge et al. (2011) state clearly that shrub encroachment must be decoupled from the concept of degradation.

Below represents hypothesized mechanisms underlying known changes in landscape metrics associated with shrub encroachment as presented by Eldridge et al. (2005) with additions and modifications:

- Greater litter cover, depth and decomposition under shrubs (Daryanto et al. 2012).
- Shrubs enhance macroporisty of soil (Bhark & Small 2003; Eldridge & Freudenbergre 2005).
- Shrubs provide physical protection against trampling by herbivores; grazing induced trampling compacts soil surface, reducing macro-porosity; trampling reduces biocrust cover and composition, enhanced nutrient imputs by N-fixing and C-fixing lichens in biocrusts; grazing-induced surface disturbance reduces C and N levels (Laycock & Conrad 1981; Eldridge 1998; Barger et al. 2006; Daryanto et al. 2012; Eldridge et al. 2013; Smith & Ruifrok 2011; Dettwiler-Robinson et al. 2013).
- Shrubs are facilitators in arid environments and provide shelter and improved microclimate for understorey species during drought stress (Prider & Facelli 2004; Eldridge et al. 2015).
- Shrub canopies intercept rainfall funnelling it towards the base where litter accumulates and reduces the force impact on the soil surface, however this ability is reduced when shrubs are browsed (Mills et al. 2009).
- Plant diversity and ecosystem multifunctionality are highest at intermediate density/cover of shrubs in arid lands (Soliveres et al. 2014; Eldridge & Soliveres 2015)
- Denser soils have lower biological activity and reduced C and N concentrations (Smith et al. 2012).
- Litterfall and enhanced decomposition under shrubs enhance soil C and N levels (Daryanto et al. 2012).
- Shrub litter retards water flow (Daryanto et al. 2013) and high litter cover supports functional termite populations and macropore flow (Elkins et al. 1986).
- Shrub litter dissipates raindrop energy at the surface, thereby reducing the of soil to form a physical crust (Geddes & Dunkerley 1999).

- Shrub-litter dams increase surface detention and the area of which water can infiltrate (Eddy et al. 1999).
- Decomposition of shrub litter increases soil structure protecting it against erosion (Teague et al. 2011).
- Shrub leaf litter shown to be strong facilitators of grasses and forbs enhancing soil carbon (Han et al. 2008; Howard et al. 2012)
- Shrubs enhance total infiltration by increasing soil macropores (Bhark & Small 2003).
- Dung deposition beneath woody canopies (Macropods etc) enhances soil nutrients (Eldridge & Rath 2002).
- Closed woody canopies are more likely to support vulnerable and declining birds (Smallbone et al. 2014).
- Infiltration 20 times greater under shrubs than in adjacent bare interspaces, with soil moisture following rain events higher under vegetation. Shrubs likely modify the soil physical environment. Infiltration beneath canopies due to enhanced organic matter and litter recycling under canopy (Scholte 1989; Bhark & Small 2007; Katra et al. 2007; Wilcox et al. 2012; Eldridge et al. 2014).
- Shrub encroachment consistently associated with increases in above and below-ground carbon (Eldridge et al. 2011).
- Non-shrub interspace soils characterized by surfaces indicative of dysfunctional processes (Eldridge et al. 2015).
- Deep-rooted C3 shrubs may be more physiologically active in dry conditions than shallow-rooted C4 grasses (Throop et al. 2012).
- Shrubs may quicken recovery of degraded lands by facilitation due to their ability to modify the effects of drought, salinity and frost (Richmond & Chinnock 1994; Booth et al. 1996; Padilla & Pugnaire 2006).
- Sub encroachment promoted an increase in the richness of vascular plant species particularly under low rainfall conditions (Eldridge et al. 2011).
-

Leopardwood (*Flindersia maculosa*) occur sporadically throughout Nocoleche and generally occur on low elevated areas where the sandy surface soil overlies a clay subsoil with a high lime content (Beadle 1980). These soils are susceptible to erosion of the sandy layer which stimulates suckering. *Alectryon oleifolius* (Rosewood) requires disturbance such as fire to produce root suckers and rarely regenerates from seed (Wisniewski & Parsons 1986). Most stands of Rosewood within the properties are clumps of a single individual that has suckered from its roots. Rosewood suckers are highly palatable to sheep, rabbits and goats and suckers are often absent due to this. *Casuarina pauper* (Belah) woodlands have a relatively non-flammable understorey and sometimes do not burn even when nearby eucalypt woodlands will (Westbrooke et al. 1998). *Casuarina pauper* does not maintain a soil stored seed bank and relies on annual seed production and rainfall to promote germination and establishment (Auld 1995). It is likely that fires would be detrimental to this assemblage particularly if of high frequency and intensity. *Casuarina pauper* generally occurs on alkaline grey and brown clays which often crack on drying and/or are gilgated within north and central New South Wales (Beadle 1981). *Acacia excelsa* can be a small tree to 12 m tall. Its main area of occurrence is between Cobar and Bourke where the rainfall is around 280-350 mm per annum. When it occurs further east it is usually associated with *Eucalyptus populnea*. Soils where Ironwood occurs are usually of sandy soils or pans with or without lateritic gravel.

The species found within dryland floodplain landscapes are adapted to the unpredictable and variable nature of rainfall and flooding and possess adaptive traits that enable them to persist in seed banks or below ground storage organs and respond quickly to favourable environments (Capon & Broack 2006; Reid et al. 2011; Hunter 2015). The water regime determines which species germinate and the seed bank influences the abundance of emergent (Webb et al. 2006). It is the

duration, timing and frequency of inundation, antecedent conditions along with water quality including salinity and turbidy that are the selective forces that select which species may germinate and develop (Moore & Keddy 1988; Porter & Kingsford 2007) as most species are present across all zones but the abundance within seed banks is stratified based on zone (Webb et al. 2006). Species associated with higher flood frequencies are likely to be more palatable to vertebrates (e.g. *Sporobolus mitchellii*) as opposed to those from lower flood frequency areas (e.g. Sclerolaena), thus under extended declines in flood frequency and duration more palatable species may be depleted (Reid et al. 2011). In rarely flooded habitats greater spatial variation in floristics is likely due to factors additional to flooding such as mortality, granivory and secondary dispersal and frequently inundated areas may have more even distribution and homogeneity of propagule dispersal (James et al. 2015). Webb et al. (2006) found that waterlogged soils within the Narran Lake system produced the greatest germination richness as opposed to inundation. James et al. (2007) have shown that frequently flooded locations had the least species richness and were compositionally homogeneous presumably because few species could complete their life cycles under such conditions. Greatest species diversity was seen in intermediately flooded habitats as these were likely to contain a range of species adapted to different temporary habitats and species that responded to a larger range of conditions including rainfall events in dry periods (James et al. 2007).

Thus, within western floodplain systems it is not just the structural features that cause heterogeneity within the landscape but also the variability of presence and absence of water that generates functional vegetation heterogeneity (Parson & Thoms 2013). However, there is also a difference in how wetting is achieved as Reid et al. (2011) showed that wetting by rainfall did not produce as a substantial response as does flooding, presumably as the latter wets the profile to a greater degree. Parsons & Thoms (2013) suggest that flood inundation is the fundamental driver of productivity in large, semi-arid unconfined floodplains. Within unconfined wetlands the riparian zone responds in a similar way to the floodplain itself during flooding events but tends to extend productivity for longer periods than the larger floodplains (Parsons & Thoms 2013).

Thapa et al. (2015) have shown within the Narran floodplain that western floodplains may show a hysteretic pathway between wetting and drying phases. This is where the return path to the original state is different from the path taken during the initial entry a different state, thus the dry to wet phase is different from the wet to dry phase (Figure 3).

Major changes are likely to occur both seasonally and over much longer periods due to variation in rainfall and/or flooding events. The density of Duma florulenta (Lignum) for instance is due largely to the longevity of ponding. Duma florulenta is maintained by flooding every three to ten years with large dense lignum stands requiring the highest frequency (Beadle 1981a; Scott 1992; Smith 1993). Although requiring flooding, long periods of water logging will kill *Duma florulenta* and it will be replaced with ephemeral herbs until the next cohort of Duma florulenta grows (Pickard & Norris 1994). Lignum is maintained by flooding every three to ten years with the large dense lignum stands requiring the highest frequency (Beadle 1981a; Scott 1992; Smith 1993). Germination is inhibited by constant temperatures of 12 and 24°C (4.0–4.8% success) and continuous darkness (6.0–56.0% success), but increases on return to light. Seed viability is depressed by burial in soil over winter. Seeds don't persist for long on the mother plant or in the soil. The persistence of lignum in environments prone to erratic droughts and floods appears to depend mainly on its capacity to tolerate drought, maintain vegetative growth and respond quickly to watering (Chong & Walker 2005). Fire kills *Duma florulenta* but it is known to regenerate under favourable conditions and if fire is subsequently excluded. It is estimated that 40% of Lignum areas have been cleared in the last 20 years, with much of the remainder being grazed and disturbed by feral pigs (Scott 1992; Porteners 1993; Porteners et al. 1997).

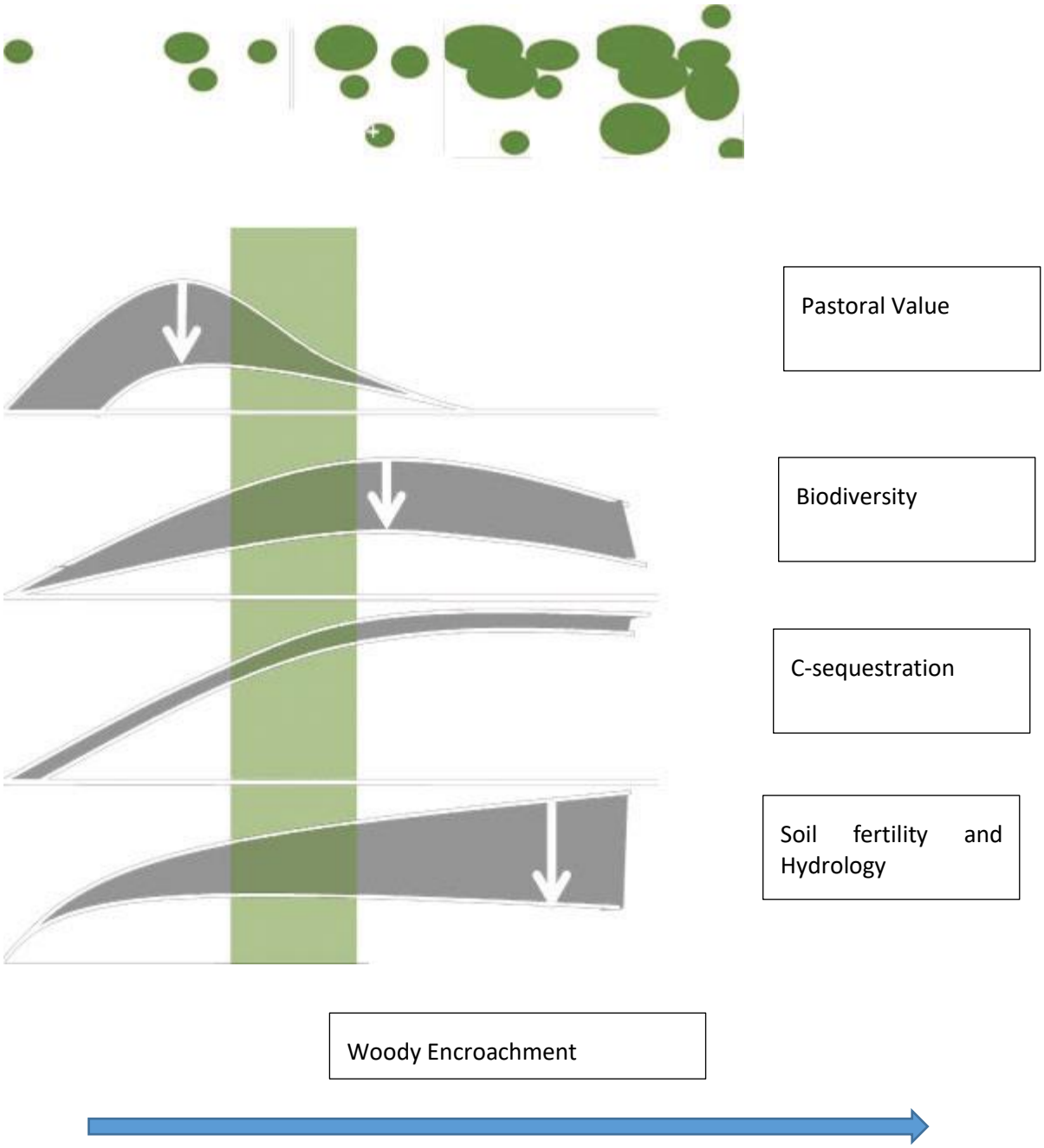


**Figure 8: Landscape level effects of woody plant encroachment taken from Eldridge et al. (2015). The downward pressure within the grey envelope represents the depressed range of values due to increased grazing pressure.**

*Eragrostis australasica* prefers heavy soils which can be slightly saline and which are waterlogged for several months. Although the species can withstand floods and drought it will die off after long periods of drought or if continuously flooded (Young 2001). Eucalyptus largiflorens grows on intermittently flooded areas of major river floodplains above the level of the more frequently flooded riverine forests that are usually dominated by Eucalyptus camaldulensis. Regeneration is subject to inundation with heavy recruitment occurring as floods subside. Germination is best if flooding occurs during winter months and two-month-old *Eucalyptus largiflorens* can withstand flooding for a month, but growth is reduced if flooding lasts longer. Most stands contain trees of a

similar size and may represent past establishment patterns (Fox 1991). Mature *Eucalyptus largiflorens* are less tolerant of flooding but more tolerant of prolonged dry conditions. These trees can use water from throughout the soil profile and can use saline water by removing salt (Young 2001). Eucalyptus largiflorens tends to be healthy where they are flooded for four to six months every four to five years. Where ponding occurs twice in an 18-month period the trees may die (Shepheard 1992).

*Acacia stenophylla* (River Cooba) requires flooding events every three to seven years and for durations of two to three months. River Cooba is often found on rivers creeks, intermittent water courses and swamps. It is often found on alkaline heavy cracking clay soils and saline clays often low in nitrogen. While it is salt tolerant growth and establishment is retarded. Acacia stenophylla can regenerate by suckering around older trees especially if roots are damaged near the surface. The species flowers mainly within Summer to Autumn and the pods mature around September to December. The seeds of *Acacia stenophylla* are some of the largest for *Acacia* in Australia and these are often attacked by insects reducing viability. *Acacia stenophylla* shrublands appear to be in decline across their range and although seedlings can be abundant after flooding events few survive to maturity.

Many remnants of these flood-dependent communities may be in protracted decline, as individuals of long-lived woody species may persist for many years, but may not be replaced by new plants when they eventually die. Weeds may dominate in spring in some areas. If flooding does not occur key species in floodplains may die back over time. Pigs are known to cause significant damage in floodplain communities (Porteners et al. 1997). Floodplain communities are in general at risk from high grazing pressure. After prolonged drought examples of these types of communities did not recovery after high grazing pressure and removal of stock and subsequently only recovered after a reduction in Kangaroo numbers (Westbrooke et al. 1998).

Long term monitoring studies by the author (JTH) within nearby Naree and Yantabulla Stations (Mulga Lands Bioregion) have highlighted the highly ephemeral natural of understorey dominants. Within the same locations the most prominent life forms may change considerably due to the amount and seasonal timing of rainfall. Rainfall in winter or spring will lead to vastly different outcomes as too will extended drought or a succession of good years. This is true for all PCTs described for this reserve. These long-term monitoring studies (unpublished) have shown major shifts from grass dominated systems (both in terms of richness and biomass) to chenopod dominated within the same PCTs to a loss of both and a change to ephemeral herb dominate understoreys. This all over a period of 6 years. Similarly, overstorey taxa can change dramatically. Ephemeral wetlands were shown to change from free floating taxa, to grasslands and then to shrublands which eventually dominated by the encroachment of *Myoporum montanum* and *Acacia victoriae* which under continued drought or floods would be reset. Thus, what PCTs are present can change dramatically, and even in more than once, within a decade. It is therefore important to understand these potential changes when evaluating the nature of some PCTs described and the areas in which they are mapped. The ephemerality of systems is (including those dominated by supposedly perennial taxa) is a major component of these far western systems. Mapped units are therefore often in flux and can cause both minor and major changes to determination of type even at the class and formation level. Within Nocoleche NR there is an extra dynamic of variability as conceptually there are two systems driven by water; the higher elevated sites driven by localised rainfall and the Paroo system driven by flooding often discordant from localised rainfall. The dynamics generated by these two types of events that at times coincide and at other times are disjunct further generates an unpredictability to the systems. For example, a boom in resources can occur within floodplain areas where as much of the reserve can still be within a deep bust but

grazing pressure may increase due to the boom within the floodplains putting extra pressure on drier parts of the landscape.

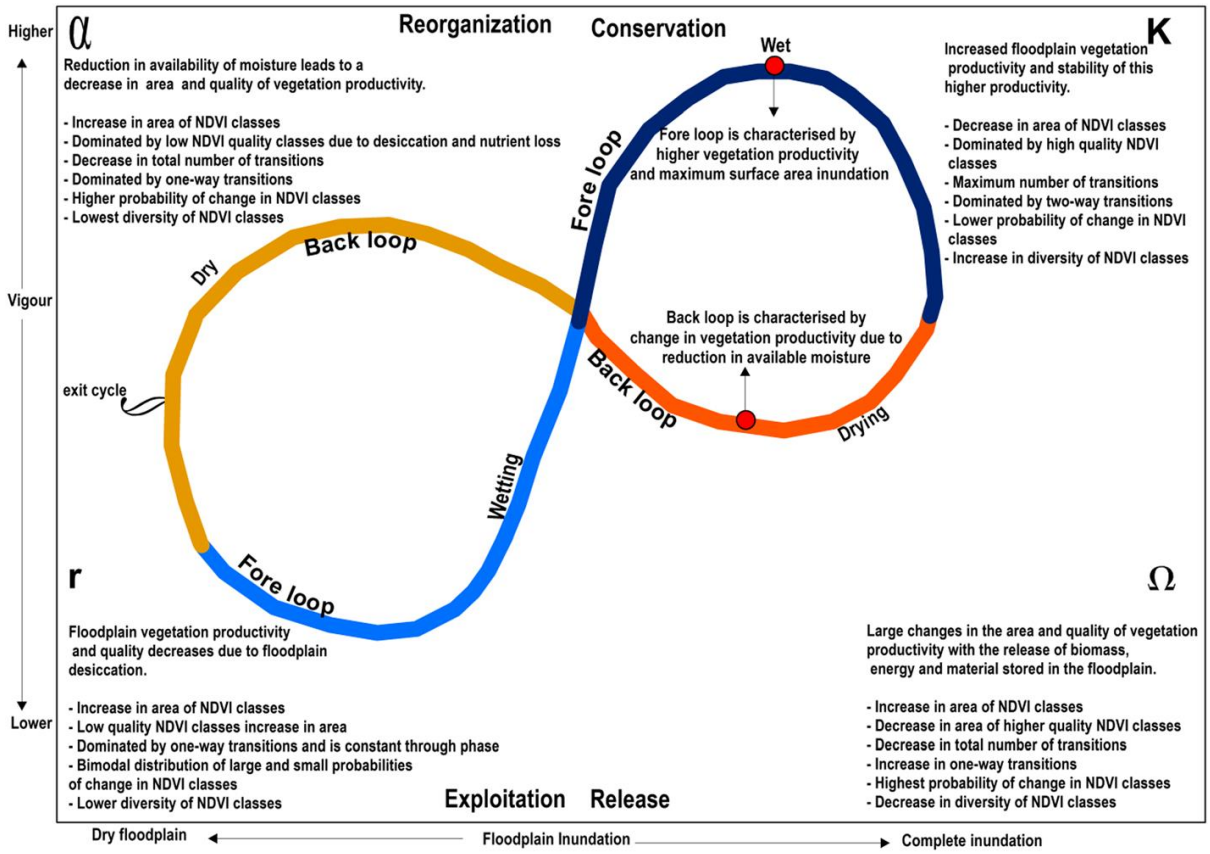


**Figure 9: Hypothesized adaptive cycle model for the more eastern Narran Floodplain based on hydrology and vegetation productivity (NDVI). Taken from Thapa et al. (2015).**

## 2.9 Introduced taxa

Of the 524 taxa known from the reserve 43 (8%) were found to be introduced in origin. A number of these pose little threat but many others may need to be controlled or monitored.

**Table 2:** Introduced species known to occur within Nocoleche NR

| Taxon | Infraspecific | Common Name | Type of weed |
|---|---|---|---|
| *Acetosa vesicaria* | | Bladder Dock | Generally found where water collects on the sides of roads or nearby waterways. Generally, not forming dense stands. |
| *Arctotheca calendula* | | | Often only an environmental weed, though can form a serious groundcover in highly disturbed and high light environments. |
| *Argemone ochroleuca* | *ochroleuca* | Mexican Poppy | Found more commonly in areas that have had high stock use particularly around dams and old yards. Often forming dense patches. Has a long-lived seed bank. |
| *Asphodelus fistulosus* | | Onion Weed Asphodel | Significant invasive weed difficult to control and can be similar to native species when young. Has bulb under the ground. |
| *Brassica tournefortii* | | | Very common weed in many communities particularly regularly disturbed roadsides. |
| *Carthamus lanatus* | | Saffron Thistle | A common thistle that can form dense stands seasonally. Generally, can be common around old cultivation areas or highly disturbed areas around stock yards. |
| *Cenchrus ciliaris* | | Buffel Grass | Widespread weed of sandier soils. Can be difficult to control and easily spread. Targeted removal and control necessary. Found during survey within PCT 109. |
| *Cenchrus setaceus* | | Fountain Grass | As per above, not currently as common an invasive species as *C. ciliaris*. |
| *Centaurea melitensis* | | Maltese Cockspur | A seasonal species that can form very dense stands. Often in areas of high disturbance or where stock have been concentrated. Easily spread by wind. Should be controlled where found. |
| *Cirsium vulgare* | | Spear Thistle | Common thistle generally doesn't form a serious threat except in highly disturbed areas. A widespread species that it is probably not worth extensive eradication efforts. |
| *Conyza bonariensis* | | Flaxleaf Fleabane | An easily spread and very widespread species. Can seasonally form very dense stands. Difficult to control as it is so widespread. |
| *Diplachne uninervia* | | Beetle Grass | Generally, a weed of roadsides and past cultivation areas, rarely found within undisturbed areas. |
| *Emex australis* | | Spiny Emex Doublegee | Spread commonly with vehicles as the spiny heads attach easily to tyres. Any stands known in and around areas used by vehicles should be controlled to help stop the spread of this species. |
| *Eragrostis cilianensis* | | Stinkgrass | An increasingly common weed often spread by graders and a regular dominant along roadsides but also spread along waterways. Often taking over from native Love grass species. Difficult to control s often difficult to distinguish from native species. Mainly washdown of vehicles and graders before entering new areas is needed. Found within PCT 121 but likely far more common. |
| *Erodium cicutarium* | | Common Storksbill/Crowfoot | Often only an environmental weed but can form dense patches if areas regularly disturbed and left uncontrolled. Often around more heavily stock used locations. Found within PCT 25 and 109. |
| *Gamochaeta coarctata* | | Spiked Cudweed | An environmental weed not of major concern. |
| *Gnaphalium polycaulon* | | Cudweed | An environmental weed not of major concern. Found within PCT 11. |
| *Heliotropium curassavicum* | | Smooth Heliotrope | Common weed of old cultivation areas and areas heavily disturbed in the past. Can spread with animals easily and often appears within drying out wetlands. |
| *Heliotropium supinum* | | Prostrate Heliotrope | Common weed of old cultivation areas and areas heavily disturbed in the past. Can spread with animals easily and often appears within drying out wetlands. |
| *Hypochaeris glabra* | | Smooth Catsear | An environmental weed not of major concern. |
| *Lactuca serriola* | *integrifolia* | Prickly Lettuce | An environmental weed not of major concern. |
| *Lepidium africanum* | | Peppercress | Ephemeral species that can form thick stands but there are a large number of native *Lepidium* and thus those that control this species need to be clear about identification. |

| Taxon | Infraspecific | Common Name | Type of weed |
|---|---|---|---|
| *Lysimachia arvensis* | | Scarlet or Blue Pimpernel | An environmental weed not of major concern. |
| *Lycium ferocissimum* | | African Boxthorn | Serious weed particularly around old cultivation areas. Fruits eaten by birds so often found under trees in dense stands. Often nearby waterways. A perennial species. |
| *Malva parviflora* | | Small-flowered Mallow | Common weed mainly forming dense patches in highly disturbed areas, particularly around watering points. Found within PCT 25 and 38. |
| *Malvastrum americanum* | | Spiked Malvastrum | Forming dense stands seasonally in areas of high disturbance but becoming more common in less disturbed areas likely spread by water. Found within PCTs 109, 134. 143. 212. |
| *Medicago laciniata* | | Cut-leaved Medic | Found throughout many communities and spread easily. Difficult to control as often self-sustaining and easily reintroduced by wind or water. Usually only seasonal in dominance. Found within PCT 120. |
| *Medicago minima* | | Woolly Burr Medic | Found throughout many communities and spread easily. Difficult to control as often self-sustaining and easily reintroduced by wind or water. Usually only seasonal in dominance. Found within PCT 25. |
| *Opuntia stricta* | *stricta* | Common Prickly Pear | Generally controlled by biological means. |
| *Panicum gilvum* | | Panic | A species usually associated with cultivation. Rarely found in less disturbed areas. |
| *Polygonum arenastrum* | | Fireweed | Very widespread weed within waterways and wetlands after drying. Difficult to control as it is so common and widespread. |
| *Salvia verbenaca* | | Wild Sage | Can form dense patches seasonally and dominate areas, generally in areas of higher disturbance and stock use but becoming more prevalent in many locations. |
| *Schismus barbatus* | | Arabian Grass | Generally found in sandier areas. |
| *Sisymbrium erysimoides* | | Smooth Mustard | Very common species generally requiring shade so found mostly under the shade of trees and shrubs. Ephemeral and growing quickly after rainfall but disappears completely between events. |
| *Solanum chenopdioides* | | Whitetip Nightshade | Very widespread and common weed found in many situations. Generally, prefers some shade and easily spread by birds and other animals that eat the fruit. Difficult to control due to its potential widespread occurrence. |
| *Solanum nigrum* | | Black-berry Nightshade | Very widespread and common weed found in many situations. Generally, prefers some shade and easily spread by birds and other animals that eat the fruit. Difficult to control due to its potential widespread occurrence. |
| *Sonchus oleraceus* | | Common Sowthistle | An environmental weed not of major concern. Found within PCTs 67, 100, 109. |
| *Spergularia diandra* | | Lesser Sandspurry | An environmental weed not of major concern. |
| *Tamarix aphylla* | | Athel Tree | Generally, only found around old houses and sheds. Easily removed by felling and painting of stumps. |
| *Verbena supina* | | Trailing Verbena | Common in highly disturbed areas not generally a problem in more natural systems. Considered naturalised in Victoria and South Australia. |
| *Veronica peregrina* | | Wandering Speedwell | Found primarily in wetland areas and swampy ground. Very common and widespread probably considered more of an environmental weed. |
| *Xanthium occidentale* | | Noogoora Burr  Cockle Burr | Very invasive weed often forming dense stands. Generally, spread by animals. Most common in areas of high stock use such as around dams and old yards. |
| *Xanthium spinosum* | | Bathurst Burr | Very invasive weed often forming dense stands. Generally, spread by animals. Most common in areas of high stock use such as around dams and old yards. |

# 3 Recommendations

It is important to continue monitoring of both threatened species, communities and weed species. Due to the nature of these environments such monitoring can only be opportunistic and conducted during favorable windows of opportunity in terms of rainfall and accessibility.

A greater understanding of the ephemerality of dominant flora is important and what changes occur during different seasonal rainfall events. The dynamics of these western PCTs are little understood and concepts of permeance of type is more applicable to more eastern high rainfall areas. Thus, it is considered of highest importance to continue monitoring of permanent plots as often as practical. Monitoring the differences associated with localized rainfall and flooding down the Paroo occurring during the same period or as disjunct processes will be important in understanding the dynamics occurring within this reserve.

Apart from *Maireana cheelii* all other threatened species known form the reserve are highly ephemeral. Species such as *Aponogeton queenslandicus, Goodenia nocoleche* and *Nitella partita* all require standing water to be present. Searches for these taxa will need to occur during wet phases. While *Dentella minutissima* and *Lepidium monoplocoides* occur as water recedes and are better searched for during drawdown periods but before areas completely dry out. Both of these species are only identifiable during a very short period, *Dentella* while flowering and *Lepidium* when fruiting. Thus, searches for these taxa should occur during different phases, be high targeted and may require use of amphibious style vehicles.

Due to the large size of the reserve and little vehicle access, particularly in the eastern sections many areas have not been surveyed with sufficient intensity. It is suggested that further targeted surveying within these more interior areas occurs, particularly in reference to looking for *Acacia loderi* shrublands and also the floristics and conditions of ephemeral wetlands.

Most weed taxa are associated with highly disturbed locations and roadsides. These areas should be targeted and vehicle hygiene procedures such as washdowns implemented.

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# 1 Appendices – Plant Community Type Descriptions

## *Formation:* Arid Shrublands (*Acacia* - sub-formation)

### *Class:* Aeolian Chenopod Shrublands

### PCT 153

| | |
|---|---|
| **Formation** | Arid Shrublands (Chenopod Sub-formation) |
| **Class** | Aeolian Chenopod Shrublands |
| **Plant Community Type** | Black Bluebush low open shrubland of the alluvial plains and sandplains of the arid and semi-arid zones |
| **Scientific Name** | *Maireana pyramidata, Rhagodia spinescens, Maireana georgei, Atriplex vesicaria / Sclerolaena obliquicuspis, Enchylaena tomentosa, Austrostipa nitida, Calotis hispidula* |
| **TEC Status** | NA |

**Photograph 7: Photo not within Nocoleche NR -- PCT 153. Taken within Parro Darling NP.**

#### Description

Mid-high open shrubland generally less than one meter high dominated by Black Bluebush (*Maireana pyramidata*) which may be dominant. Scattered low trees of Black Oak (*Casuarina*

*pauper*) or Western Rosewood (*Alectryon oleifolius* subsp. *canescens*) may be present. Tall shrubs are rare or absent and may include *Eremophila sturtii*. Other chenopod shrub species include Thorny Saltbush (*Rhagodia spinescens*), Bluebushes such as *Maireana georgei, Maireana sedifolia* and *Maireana appressa*, Bladder Saltbush (*Atriplex vesicaria* sens lat), *Atriplex lindleyi* and *Atriplex pumillio*, Cannonball (*Dissocarpus paradoxus*), Ruby Saltbush (*Enchylaena tomentosa*) and Copperburrs such as *Sclerolaena obliquicuspis, Sclerolaena patenticuspis, Sclerolaena brachyptera, Sclerolaena lanicuspis, Sclerolaena divaricata, Sclerolaena tricuspis* and *Sclerolaena diacantha*. Grass species include the Cork Screw grasses *Austrostipa nitida, Austrostipa scabra* and *Austrostipa nodosa* and Wallaby Grass *Rytidosperma caespitosa*. *Eragrostis dielsii* and *Enneapogon avenaceus* occur in northern areas. Forbs include *Calotis hispidula, Tetragonia tetragonioides, Goodenia pinnatifida, Plantago varia, Minuria integerrima, Senecio runcinifolius, Brachyscome lineariloba, Brachyscome ciliaris var. ciliaris, Calandrinia eremaea*. Bladder Saltbush may have been more common prior to stock grazing. Weeds include *Hordeum* spp., *Heliotropium europaeum, Salvia verbenaca, Medicago* spp. and *Salvia verbenacea*. Occurs on red-brown duplex soils with textures of clay loam, sandy-loam or light clay on low sandy rises, undulating sandplains, drainage depressions and prior stream levees in the semi-arid and arid zones of far western NSW extending into South Australia and northern Victoria. In NSW, Black Bluebush tends to be more common than Pearl Bluebush (ID154). It occurs on soils where the surface sandy layer is deep and contains medium to low levels of lime, whereas Pearl Bluebush tends to dominate areas with lime-rich soils. However, both species commonly co-exist. Black Bluebush is widespread on the transition zone between the eolian sandsheets and the riverine plain in far south-western NSW but also occurs to the north on sandplains and on the Darling River floodplain. While this community has been heavily grazed and degraded in places some large areas remain. This broadly classified community could be divided into several associations with more data.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Casuarina pauper; Alectryon oleifolius* subsp*. canescens* |
| **Mid** | *Maireana pyramidata; Rhagodia spinescens; Atriplex vesicaria; Maireana georgei; Maireana sedifolia; Maireana appressa; Nitraria billardierei; Eremophila sturtii* |
| **Ground** | *Sclerolaena brachyptera; Austrostipa scabra* subsp*. falcata; Enchylaena tomentosa; Calotis hispidula; Dissocarpus paradoxus; Sclerolaena obliquicuspis; Austrostipa nodosa; Tetragonia tetragonioides; Atriplex lindleyi; Atriplex pumilio; Tragus australianus; Roepera glauca; Plantago varia; Minuria integerrima; Senecio runcinifolius; Brachyscome lineariloba; Lavatera plebeia; Rhodanthe floribunda; Brachyscome ciliaris* var*. ciliaris; Calandrinia eremaea; Sclerolaena divaricata; Sclerolaena tricuspis; Sclerolaena diacantha; Sclerolaena patenticuspis; Sclerolaena lanicuspis; Atriplex conduplicata; Roepera confluens; Roepera iodocarpa; Bulbine semibarbata; Stemodia florulenta; Exocarpos aphyllus; Walwhalleya proluta; Eragrostis dielsii; Enneapogon avenaceus; Goodenia pinnatifida; Templetonia egena; Maireana triptera; Austrodanthonia caespitosa; Sclerolaena eriacantha; Atriplex holocarpa; Tetragonia tetragonioides; Phlegmatospermum cochlearinum; Plantago drummondii; Harmsiodoxa brevipes* var*. brevipes* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | Not found during current survey |
| **Environmental Relationships** | As per description above |
| **Species of Conservation Significance** | None apparent |
| **Introduced taxa** | None apparent |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR *Unknown* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | NA |
| **Total species** | NA |
| **Species per plot (average)** | NA |

## Notes

PCT 153 is described as occurring within the reserve by Benson *et al.* (2006) but was not recorded by any other surveys. As no identified areas could be found it is currently not mapped. Potentially miss-attributed to the reserve.

## *Class:* Gibber Transition Shrublands

# PCT 137

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* – sub-formation) |
| **Class** | Gibber Transition Woodlands |
| **Plant Community Type** | Whitewood – Western Rosewood low woodland on sandplains and dunes of the semi-arid (hot) and arid climate zones |
| **Scientific Name** | *Atalaya hemiglauca, Alectryon oleifolius subsp. canescens / Acacia aneura, Acacia aneura* s. lat. *, Eremophila duttonii , Eremophila deserti / Enneapogon avenaceus , Aristida contorta , Sclerolaena birchii* |
| **TEC Status** | NA |

**Photograph 8: Site 19 Nocoleche Nature Reserve – PCT 137**

## Description

Low open woodland with small trees to 10 m high dominated by clumps of Whitewood (*Atalaya hemiglauca*) often with Mulga (*Acacia anuera*), Western Rosewood (*Alectryon oleifolius* subsp. *canescens*), Needlewood (*Hakea leucoptera*) and Beefwood (*Grevillea striata*). Shrubs include Harlequin Fuchsia-bush (*Eremophila duttonii*), *Eremophila deserti* and Thorny Saltbush (*Rhagodia spinescens*). Narrow-leaved Hopbush (*Dodonaea viscosa* subsp. *angustissima*) may dominate in disturbed areas. Ground cover is sparse and includes perennial grass species such as Kerosene Grass (*Aristida contorta*) and Bottlewasher (*Enneapogon avenaceus*) along with Copperburrs (*Sclerolaena* spp.), annual saltbushes, Sida spp. and ephemeral daisies. Occurs on texture-contrast brown clays or earthy sand soils on sandplains or alluvial plains in far north western NSW in the semi-arid region. Tends to occur in small areas. Grades into Mulga, Brigalow, Belah - Western Rosewood and

| |
|---|
| chenopod shrublands. Threatened by lack of recruitment of key canopy species including Whitewood. |

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Atalaya hemiglauca; Alectryon oleifolius subsp. canescens; Owenia acidula; Grevillea striata; Pittosporum angustifolium.* |
| **Mid** | *Acacia aneura; Eremophila duttonii; Acacia tetragonophylla; Hakea leucoptera subsp. leucoptera; Senna form taxon 'filifolia'; Eremophila deserti; Dodonaea viscosa subsp. angustissima; Eremophila bowmanii subsp. bowmanii; Acacia ligulata; Myoporum montanum; Maireana brevifolia; Rhagodia spinescens; Eremophila sturtii.* |
| **Ground** | *Enneapogon avenaceus; Aristida contorta; Eragrostis eriopoda; Sclerolaena birchii; Monachather paradoxus; Dissocarpus paradoxus; Sida cunninghamii; Salsola tragus subsp. tragus; Chenopodium desertorum subsp. anidiophyllum; Einadia nutans subsp. nutans; Sclerolaena bicornis var. bicornis; Sclerolaena divaricata; Roepera ammophila; Chamaesyce drummondii; Bulbine alata; Goodenia fascicularis; Atriplex limbata; Einadia nutans subsp. nutans.* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Alectryon oleifolius, Dodonaea viscosa, Eremophila sturtii, Eragrostis eriopoda, Atalaya hemiglauca, Senna* sp. 'zygophylla', *Enchylaena tomentosa, Arabidella eremigena, Eremophila duttonii, Sclerolaena tricuspis, Ptilotus sessilifolius, Sclerolaena diacantha, Acacia aneura, Senna* sp. 'coriacea', *Olearia pimeloides, Chthonocephalus pseudovax, Chenopodium desertorum, Senna* sp. 'filifolia', *Senna phyllodinea, Rhodanthe floribunda, Grevillea striata, Actinobole uliginosum, Acacia tetragonophylla, Roepera similis, Rhagodia spinescens, Psydrax latifolium, Polycalymma stuartii, Millotia greevesii, Hakea tephrosperma, Eriochlamys cupularis, Enneapogon avenaceus, Causuarina pauper, Calotis dentex, Acacia victoriae.* |
| **Environmental Relationships** | Often found on deeper sands associated with lunettes surrounding ephemeral playa lakes. Also found sporadically within sand plains. |
| **Species of Conservation Significance** | None apparent. |
| **Introduced taxa** | None recorded at time of survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| Nocoleche NR | Nocoleche NR ca. 266 ha *likely under mapped*<br>TSR ca. 1 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 3 Full 22 Rapid |
| **Total species** | 59 |
| **Species per plot (average)** | 15 |

## Notes

Often found as small patches within more widespread PCTs. Likely under-mapped as it was difficult to distinguish at times with other PCTs and also the dominants are included as dominants within other PCTs.

## *Class:* North-west Plain Shrublands

# PCT 144

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* – sub-formation |
| **Class** | North-west Plain Shrublands |
| **Plant Community Type** | Leopardwood low woodland mainly on clayey soils in the semi-arid zone. |
| **Scientific Name** | *Flindersia maculosa, Atalaya hemiglauca, Alectryon oleifolius* subsp. *canescens / Geijera parviflora, Capparis mitchelli , Rhagodia spinescens, Apophyllum anomalum / Enchylaena tomentosa, Atriplex stipitata, Enteropogon acicularis, Tripogon loliiformis.* |
| **TEC Status** | NA |

**Photograph 9: Photo not taken in Nocoleche Nature Reserve– PCT 144**

## Description

Low open woodland dominated by Leopardwood (*Flindersia maculosa*) often with Whitewood (*Atalaya hemiglauca*), Poplar Box (*Eucalyptus populnea* subsp. *bimbil*) or Western Rosewood (*Alectryon oleifolius* subsp. *canescens*) co-dominating. Shrubs include Wilga (*Geijera parviflora*), Wild Orange (*Capparis mitchellii*), Thorny Saltbush (*Rhagodia spinescens*), Ruby Saltbush (*Enchylaena tomentosa*) and Turpentine Bush (*Eremophila sturtii*). Bladder Saltbush (*Atriplex*

*vesicaria*) may be abundant in areas that have been lightly grazed. Ground cover includes *Atriplex stipitata, Atriplex leptocarpa, Sclerolaena calcarata, Sclerolaena muricata, Sclerolaena stelligera, Sclerolaena tricuspis, Sclerolaena intricata, Goodenia pinnatifida* and grasses such as *Enteropogon acicularis* and *Austrostipa scabra*. The mistletoe *Lysiana subfalcata* commonly grows on Leopardwood. This community occurs as patches within broader vegetation types and is therefore often not mapped due to scale. It occurs on red texture contrast soils of sand over clay on floodplains, sandplains and on rises on peneplains. It mainly occurs in the Darling Riverine Plain Bioregion in the temperate (hot summer) and semi-arid (hot) climate zones but also occurs in the Mulga Lands Bioregion. In the northern wheatbelt it is relatively common in the Marra Creek and Macquarie River floodplains and north towards Walgett. It is threatened by clearing in the wheatbelt and by soil erosion in the Western Division. Overgrazing has caused soil erosion and this community is often found adjacent to scalds. Due to grazing pressure, Leopardwood suckers from rootstock and forms dense shrubby thickets until a single stem emerges and grows into a tree. In some areas Leopardwood may not be regenerating from seed and this may affect its long-term persistence.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Flindersia maculosa; Eucalyptus populnea* subsp*. bimbil; Atalaya hemiglauca; Alectryon oleifolius subsp. canescens; Casuarina cristata; Eucalyptus largiflorens.* |
| **Mid** | *Geijera parviflora; Rhagodia spinescens; Capparis mitchellii; Apophyllum anomalum; Eremophila sturtii; Atriplex vesicaria; Maireana pyramidata; Dodonaea viscosa* subsp*. spatulata; Citrus glauca; Eremophila deserti; Senna* sp. 'filifolia'*; Senna circinnata; Eremophila duttonii; Atriplex nummularia; Lasiopetalum baueri; Lysiana subfalcata; Amyema cambagei; Maireana aphylla; Parsonsia lanceolata; Senna* sp. 'zygophylla'. |
| **Ground** | *Enchylaena tomentosa; Atriplex stipitata; Tripogon loliiformis; Enteropogon acicularis; Sclerolaena calcarata; Austrostipa setacea; Austrostipa scabra subsp. scabra; Sclerolaena muricata; Sclerolaena diacantha; Sclerolaena intricata; Maireana ciliata; Einadia nutans subsp. nutans; Atriplex pseudocampanulata; Atriplex leptocarpa; Sclerolaena tricuspis; Sclerolaena bicornis* var*. horrida; Sclerolaena stelligera; Dissocarpus biflorus var. cephalocarpus; Atriplex leptocarpa; Portulaca oleracea; Sporobolus caroli; Rhodanthe floribunda; Goodenia pinnatifida; Chenopodium desertorum subsp. desertorum; Stenopetalum lineare; Gnephosis arachnoidea; Tetragonia eremaea; Salsola tragus subsp. tragus; Ptilotus obovatus var. obovatus; Abutilon leucopetalum; Chamaesyce drummondii; Glycine canescens; Aristida contorta.* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Flindersia maculosa, Eremophila sturtii, Alectryon oleifolius, Sclerolaena tricuspis, Rhagodia spinescens, Maireana triptera, Hakea tephrosperma, Eremophila duttonii, Dodonaea viscosa, Dissocarpus paradoxus, Casuarina pauper, Acacia excelsa, Senna* sp. 'zygophylla'*, Sclerolaena diacantha, Ptilotus exaltatus, Olearia pimeloides, Microcephalus pluriflorus, Enchylaena tomentosa, Atriplex stipitata, Acacia aneura.* |
| **Environmental Relationships** | Found generally lower laying topography within sand plain areas, particularly where some clay content can accumulate within sandy landscapes. |
| **Species of Conservation Significance** | None apparent. |
| **Introduced taxa** | None recorded at time of survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 21 ha *under mapped*<br>TSR – ca. 27 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 7 Rapid |
| **Total species** | 20 |
| **Species per plot (average)** | NA |

## Notes

Often found as small patches within more widespread PCTs. Likely under-mapped as it was difficult to distinguish at times with other PCTs and also the dominants are included as dominants within other PCTs.

# PCT 125

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* sub-formation) |
| **Class** | North-west Plain Shrublands |
| **Plant Community Type** | Mulga - Ironwood Shrubland on loams and clays mainly in the Cobar Peneplain Bioregion |
| **Scientific Name** | *Acacia aneura, Acacia excelsa, Geijera parviflora / Senna* sp. 'filifolia'*, Myoporum montanum / Eragrostis eriopoda, Austrostipa scabra* subsp*. scabra.* |
| **TEC Status** | NA |

**Photograph 10: Not taken within Nocoleche Nature Reserve – PCT 125. Photo taken at Naree Station near Yantabulla.**

## Description

Tall open to closed shrubland dominated by varieties of Mulga (*Acacia aneura*) often with Ironwood (*Acacia excelsa*). Scattered emergent trees of Gum Coolabah (*Eucalyptus intertexta*), Poplar Box (*Eucalyptus populnea* subsp. *bimbil*) or Kurrajong (*Brachychiton populneus*) may be present. Shrubs species include Wilga (*Geijera parviflora*), Punty Bush (*Senna* sp. 'filifolia'), Silver Senna (*Senna* sp. 'artemisioides'), Western Boobialla (*Myoporum montanum*), Narrow-leaved Hop-bush (*Dodonaea viscosa* subsp*. angustissima*), Emu Bush (*Eremophila longifolia*) and Spiny Fan Flower (*Scaevola spinescens*). The ground cover is sparse including grasses such as Woollybutt (*Eragrostis eriopoda*),

Purple Lovegrass (*Eragrostis lacunaria*), Speargrass (*Austrostipa scabra* subsp*. scabra*), Wallaby Grass (*Rytidosperma* spp.), Wire Grass (*Aristida* spp.) and Bandicoot Grass (*Monachather paradoxus*). Copperburrs may be common and include *Sclerolaena convexula, Sclerolaena birchii* and *Sclerolaena parviflora*. Other small shrubs include Ruby Saltbush (*Enchylaena tomentosa*) and Silky Bluebush (*Maireana villosa*). This community occurs on shallow often gravel clay or loam soils on the Cobar Peneplain and adjoining regions in central western NSW mainly north, south and west of Cobar. Extension of clearing into the Western Division threatens some areas and many areas have been thinned in the past. Grazing may affect Acacia regrowth. Woody native shrubs are increasing in abundance in some areas. The topsoil horizon has been eroded in most places.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Acacia aneura var. aneura; Acacia aneura* var*. intermedia; Acacia aneura* var*. major; Acacia excelsa* subsp*. angusta; Flindersia maculosa; Callitris glaucophylla; Eucalyptus intertexta; Eucalyptus populnea* subsp*. bimbil; Brachychiton populneus* subsp*. trilobus.* |
| **Mid** | *Geijera parviflora; Senna* sp. 'filifolia'*; Senna* sp. 'artemisioides'*; Myoporum montanum; Eremophila sturtii; Eremophila longifolia; Eremophila mitchellii; Sida cunninghamii; Dodonaea viscosa* subsp*. angustissima; Dodonaea viscosa* subsp*. angustifolia; Eremophila serrulata; Pimelea microcephala* subsp*. microcephala; Pimelea pauciflora; Eremophila glabra; Eremophila deserti; Alectryon oleifolius* subsp*. canescens; Amyema maidenii* subsp*. angustifolia; Acacia colletioides; Scaevola spinescens.* |
| **Ground** | *Eragrostis eriopoda; Austrostipa scabra subsp. scabra; Einadia nutans* subsp*. nutans; Rytidosperma setacea; Cheilanthes sieberi* subsp*. sieberi; Tripogon loliiformis; Eragrostis lacunaria; Monachather paradoxus; Calotis cuneifolia; Calotis cuneifolia; Calotis lappulacea; Rhodanthe floribunda; Sclerolaena convexula; Sclerolaena birchii; Sclerolaena parviflora; Enchylaena tomentosa; Maireana villosa; Ptilotus obovatus; Rytidosperma caespitosa; Cheilanthes austrotenuifolia; Rhodanthe floribunda; Erodium crinitum.* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Acacia aneura, Acacia excelsa, Dodonaea viscosa, Senna* sp. 'zygophylla'*, Eremophila sturtii, Eremophila longifolia, Enchylaena tomentosa, Alectryon oleifolius, Grevillea striata, Eremophila duttonii, Eragrostis eriopoda, Tripogon loliiformis, Tetragona moorei, Sclerolaena convexula, Salsola australis, Ptilotus sessilifolius, Maireana triptera, Lemooria burkittii, Flindersia maculosa, Einadia nutans, Chenopodium desertorum, Casuarina pauper, Capparis mitchellii, Atriplex stipitata, Atalaya hemiglauca, Aristida contorta, Acacia victoriae, Acacia siberica.* |
| **Environmental Relationships** | Very common throughout sand plain areas but not on dunal areas or gibber plains. |
| **Species of Conservation Significance** | None apparent. |

| | |
|---|---|
| **Introduced taxa** | None apparent at the time of survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 14,055 ha<br>TSR – ca. 196 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full; 14 Rapid |
| **Total species** | 28 |
| **Species per plot (average)** | 11 |

## Notes

This PCT is a generally poor fit for the Mulga – Ironwood systems that are common throughout the reserve. The PCT is dominated by species commonly associated with the Cobar Peneplain which do not occur within the reserve such as *Eucalyptus intertexta*, *Brachychiton populnea* and *Geijera parviflora*. However, there are no PCTs that describe these more western forms of Mulga – Ironwood.

## *Class:* Sand Plain Mulga Shrublands

# PCT 128

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* sub-formation) |
| **Class** | Sand Plain Mulga Shrublands |
| **Plant Community Type** | Nelia tall open shrubland of semi-arid sandplains |
| **Scientific Name** | *Acacia loderi, Casuarina pauper, Acacia aneura / Eremophila sturtii, Maireana pyramidata / Enchylaena tomentosa, Chloris truncata, Austrostipa scabra* subsp. *scabra* |
| **TEC Status** | *Acacia loderi* shrublands |

**Photograph 11: Site 57 Nocoleche Nature Reserve – PCT 128**

**Description**

Very tall, open shrubland, up to 8 m dominated by Neila (*Acacia loderi*) occurring with low trees of Black Oak (*Casuarina pauper*) with clumps of Western Rosewood (*Alectryon oleifolius*) and Leopardwood (*Flindersia maculata*). Other common shrub species include Mulga (*Acacia aneura*), Turpentine Bush (*Eremophila sturtii*), Punty Bush (*Senna* sp. 'filifolia'), other species if Senna and Narrow-leaved Hopbush (*Dodonaea viscosa* subsp*. angustissima*). Smaller shrubs include Black Bluebush (*Maireana pyramidata*), *Maireana brevifolia* and *Rhagodia spinescens*. Ground cover is sparse dominated by Windmill Grass (*Chloris truncata*), *Austrostipa nitida* and Wire Grasses such as *Aristida contorta*. Copperburrs (*Sclerolaena* spp.), saltbushes (*Atriplex* spp.) and ephemeral forbs are common including daisies such as *Calotis* spp. Occurs on solonized brown and duplex soils and calcareous, loamy sands on flats or undulating sandplains of far central and south western NSW in the semi-arid zone (hot summers). Most common in the northern part of the Murray-Darling Depression Bioregion south of the Barrier Highway extending as far south as Mungo National Park. Also, in the southern part of the Broken Hill Complex Bioregion. Although

| |
|---|
| widely distributed, it is threatened by lack of regeneration of palatable shrub species, including Acacia species, due to overgrazing by stock, rabbits and goats |

**Floristic Summary**

| Stratum | Typical Species |
|---|---|
| **Upper** | *Casuarina pauper; Alectryon oleifolius* subsp. *canescens; Flindersia maculosa; Grevillea striata; Eucalyptus populnea* subsp. *bimbil; Callitris gracilis* subsp. *murrayensis* |
| **Mid** | *Acacia loderi; Acacia aneura; Eremophila sturtii; Maireana pyramidata; Hakea tephrosperma; Senna* sp. 'filifolia'*; Senna* sp. 'coriacea'*; Senna* sp. *'oligophylla'; Senna phyllodinea; Dodonaea viscosa* subsp. *angustissima; Rhagodia spinescens; Eremophila maculata; Eremophila deserti; Grevillea huegelii; Teucrium racemosum; Acacia oswaldii; Acacia melvillei; Maireana brevifolia; Maireana georgei; Maireana sedifolia; Maireana lobiflora; Lysiana exocarpi* subsp. *exocarpi; Amyema quandang* var. *quandang;* |
| **Ground** | *Enchylaena tomentosa; Chloris truncata; Austrostipa nitida; Aristida contorta; Sclerolaena divaricata; Sclerolaena patenticuspis; Sclerolaena obliquicuspis; Ptilotus atriplicifolius* var. *atriplicifolius; Rhodanthe floribunda; Templetonia egena; Roepera similis; Atriplex angulata; Atriplex holocarpa; Atriplex limbata; Atriplex stipitata; Enneapogon avenaceus; Tetragonia tetragonioides; Haloragis glauca; Swainsona formosa; Sida fibulifera; Einadia nutans* subsp. *nutans; Dissocarpus paradoxus; Evolvulus alsinoides* var. *decumbens; Oxalis perennans; Chenopodium desertorum subsp. desertorum; Sclerolaena diacantha; Salsola australis; Rhodanthe floribunda;* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Acacia loderi, Sclerolaena diacantha, Roepera similis, Dodonaea viscosa, Alectryon oleifolius, Tetragonia moorei, Millotia greevesii, Enchylaena tomentosa, Arabidella eremigena, Polycalymma stuartii, Olearia pimeloides, Erodium crinitum, Eragrostis setifolia, Chenopodium desertorum.* |
| **Environmental Relationships** | Found within dune fields near the southern boundary fence in the far eastern section of the reserve. |
| **Species of Conservation Significance** | *Acacia loderi*. |
| **Introduced taxa** | None apparent at the time of survey. |

**Distribution and Extent**

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 0.4 ha *potential for other occurrences* |

**Species Richness**

| | |
|---|---|
| **No. of Sites** | 1 |
| **Total species** | 14 |
| **Species per plot (average)** | 14 |

**Notes**

This was the only stand found though it is very likely that other stands may occur within the more remote areas of the reserve. The overstorey of *Acacia loderi* was mature but with most individuals having died and little sign of recruitment occurring.

# PCT 119

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* sub-formation) |
| **Class** | Sand Plain Mulga Shrublands |
| **Plant Community Type** | Sandplain Mulga tall shrubland - open shrubland of the semi-arid and arid climate zones |
| **Scientific Name** | *Acacia aneura, Casuarina pauper / Senna* sp. 'artemisioides', *Acacia ligulata, Eremophila sturtii / Aristida jerichoensis* var. *subspinulifera, Aristida contorta, Eragrostis eriopoda* |
| **TEC Status** | NA |

**Photograph 12: Site 16 Nocoleche Nature Reserve – PCT 119**

**Description**

Very tall shrubland dominated my Mulga (*Acacia aneura*) often with Black Oak (*Casuarina pauper*), Sandhill Wattle (*Acacia ligulata*) and woody native regrowth species such as Turpentine Bush (*Eremophila sturtii*), Punty Bush (*Senna* sp. 'filifolia') and Hopbush (*Dodonaea viscosa* subsp. *angustissima*). Stands of Western Rosewood (*Alectryon oeliefolius*), Neila (*Acacia loderi*), Colane (*Owenia acidula*) or Whitewood (*Atalaya hemiglauca*) are occasionally present. Small shrubs include *Sclerolaena* spp., Black Bluebush (*Maireana pyramidata*), *Rhagodia spinescens* and *Enchylaena tomentosa*. Ground cover is very sparse composed of wiregrass (*Aristida contorta*), Woollybutt (*Eragrostis eriopoda*), Bottlewasher (*Enneaopogon avenaceus*), Bandicoot grass (*Monachather paradoxus*) and *Tragus australianus*. In creek lines or depressions stands of *Micromyrtus hexamera* may occur along with Kangaroo Grass (*Themeda australis*) and Lemon Grass (*Cymbopogon ambiguus*). Neverfail (*Eragrostis setifolia*) may dominated on flats in the north. In the south, *Austrostipa* spp. and *Rytidosperma* spp. may be common. Forb species include *Ptilotus*, *Calotis* and *Solanum* spp. Weeds may be common in highly disturbed sites. Occurs on calcareous red loams and deep red dune sands on undulating sandplains or swales in dunefields in the semi-arid zone of western NSW. One of the most widespread vegetation communities in NSW

extending from Lightning Ridge to Wilcannia with patches as far south as Mallee Cliffs National Park and near Wentworth. Mostly degraded by overgrazing, clearing or lopping for forage and fence posts but large areas remain in the north. Mulga is also damaged by intense fire - possibly leading to death of large stands in some places. Some areas have thickened with woody native shrubs.

**Floristic Summary**

| Stratum | Typical Species |
|---|---|
| **Upper** | *Acacia aneura; Casuarina pauper; Alectryon oleifolius* subsp*. canescens; Atalaya hemiglauca; Eucalyptus populnea* subsp*. bimbil; Santalum lanceolatum; Codonocarpus cotinifolius; Brachychiton populneus* subsp*. populneus; Owenia acidula.* |
| **Mid** | *Senna* sp. 'artemisioides'*; Acacia ligulata; Eremophila sturtii; Dodonaea viscosa* subsp*. angustissima; Eremophila longifolia; Maireana pyramidata; Acacia victoriae* subsp*. victoriae; Myoporum montanum; Rhagodia spinescens; Micromyrtus hexamera; Olearia pimeleoides; Eremophila duttonii; Hakea leucoptera* subsp*. leucoptera; Acacia brachystachya.* |
| **Ground** | *Enneapogon avenaceus; Aristida jerichoensis* var*. subspinulifera; Aristida contorta; Eragrostis eriopoda; Tragus australianus; Cymbopogon ambiguus; Themeda australis; Cheilanthes austrotenuifolia; Tetragonia tetragonioides; Einadia nutans* subsp*. nutans; Sclerolaena diacantha; Salsola australis; Boerhavia dominii; Portulaca oleracea; Calotis cuneifolia; Abutilon leucopetalum; Sida cunninghamii; Stuartina muelleri; Ptilotus obovatus; Ptilotus polystachyus* var*. polystachyus; Ptilotus atriplicifolius* var*. atriplicifolius; Bulbine alata; Thyridolepis mitchelliana; Solanum ellipticum; Maireana villosa; Sclerolaena eriacantha; Sclerolaena brachyptera; Sclerolaena tricuspis; Sclerolaena obliquicuspis; Solanum petrophilum; Solanum sturtianum; Roepera ammophila; Atriplex holocarpa; Harmsiodoxa brevipes* var*. brevipes; Gnephosis eriocarpa; Lepidium phlebopetalum.* |

| | |
|---|---|
| **Variations – description of PCT as found during the current survey** | *Acacia aneura, Casuarina pauper, Sclerolaena tricuspis, Enchylaena tomentosa, Roepera similis, Dissocarpus paradoxus, Tetragonia moorei, Arabidella eremigena, Eremophila sturtii, Dodonaea viscosa, Calotis plumulifera, Atriplex stipitata, Atriplex leptocarpa, Senna* sp. 'zygophylla'*, Maireana triptera, Hakea tephrosperma, Chenopodium desertorum, Rhagodia spinescens, Olearia pimeloides, Lepidium sagittulatum, Lepidium oxytrichum, Gnephosus eriocarpa, Enteropogon acicularis, Calandrinia eremaea, Alectryon oleifolius, Stenopetalum lineare, Solanum ellipticum, Sclerolaena lanicuspis, Salsola australis, Rhodanthe floribunda, Portulaca oleracea, Plantago turrifera, Myriocephalus pluriflorus, Lemooria burkittii, Eriochlamys cupularis, Einadia hastata, Dysphania cristata, Dactyloctenium radulans, Bulbine alata, Acacia excelsa.* |
| **Environmental Relationships** | Found primarily in the eastern portion of the reserve on within dunal landscapes. |

| | |
|---|---|
| **Species of Conservation Significance** | None apparent. |
| **Introduced taxa** | *Spergularia rubra.* |

**Distribution and Extent**

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | **Nocoleche NR** ca. 2,020 ha |

**Species Richness**

| | |
|---|---|
| **No. of Sites** | 1 Full; 5 Rapid |
| **Total species** | 41 |
| **Species per plot (average)** | 36 |

**Notes**

Grading into a number of PCTs found within the reserve. It is likely that a number of PCTs are somewhat synonymous and interchangeable, even though they may occur within different classes.

# PCT 139

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* sub-formation) |
| **Class** | Sand Plain Mulga Shrublands |
| **Plant Community Type** | Prickly Wattle tall open shrubland of dunes and sandplains of semi-arid regions |
| **Scientific Name** | *Acacia victoriae* subsp. *arida, Dodonaea viscosa* subsp. *angustissima, Maireana pyramidata, Senna* sp. 'artemisioides' / *Enchylaena tomentosa, Sclerolaena bicornis* var. *bicornis, Sclerolaena diacantha, Dissocarpus paradoxus / Einadia nutans* subsp. *nutans, Austrostipa nitida, Rhodanthe corymbiflora, Plantago turrifera.* |
| **TEC Status** | NA |

**Photograph 13: Not taken within Nocoleche Nature Reserve – PCT 139. Photo taken at Naree Station near Yantabulla.**

## Description

Tall open shrubland dominated by Prickly Wattle (*Acacia victoriae*), Narrow-leaved Hopbush (*Dodonaea viscosa* subsp. *angustissima*), rarely with relic stands of *Hakea leucoptera*, *Hakea tephrosperma* or *Callitris glaucophylla*. Understorey sparse with Ruby Saltbush (*Enchylaena*

| |
|---|
| *tomentosa*), *Maireana* spp., *Sclerolaena diacantha, Sclerolaena bicornis* var. *bicornis*, *Dissocarpus paradoxus* and annual daisies such as *Polycalymma stuartii, Rhodanthe corymbiflora* and *Brachyscome lineariloba*. Occurs on sandy loams and sands on dunes in the semi-arid zone of far south western plains of NSW mainly in the Murray-Darling Depression Bioregion. May be derived from a previous Callitris or Mulga woodland - the Callitris having been cut out in the past. Restricted in area but has some affinities to ID143 - the more widespread Hopbush-Turpentine community and with the common mixed shrubland ID229 on the Cobar Peneplain. |

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Callitris glaucophylla; Callitris gracilis* subsp*. murrayensis.* |
| **Mid** | *Acacia victoriae* subsp*. arida; Maireana pyramidata; Dodonaea viscosa* subsp*. angustissima; Senna* sp. 'artemisioides'*; Enchylaena tomentosa; Sclerolaena bicornis var. bicornis; Sclerolaena diacantha; Eremophila sturtii; Myoporum platycarpum* subsp*. platycarpum; Hakea leucoptera subsp. leucoptera; Hakea tephrosperma; Acacia ligulata; Dissocarpus paradoxus.* |
| **Ground** | *Einadia nutans* subsp*. nutans; Austrostipa nitida; Rhodanthe corymbiflora; Plantago turrifera; Calotis erinacea; Vittadinia cuneata; Crinum flaccidum; Daucus glochidiatus; Polycalymma stuartii; Brachyscome lineariloba; Plantago drummondii; Pycnosorus pleiocephalus; Sida intricata.* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Acacia victoriae, Eremophila duttonii, Atalaya hemiglauca, Rhodanthe floribunda, Sclerolaena diacantha, Roepera similis, Ptilotus sessilifolius, Millotia greevesii, Lepidium monoplocoides, Flindersia maculosa, Eriochlamys cupularis, Calotis hispidula, Solanum ellipticum, Sida cunninghamii, Senna* sp. 'zygophylla'*, Senna* sp. 'artemisioides', *Sclerolaena tricuspis, Sclerolaena lanicuspis, Marsdenia viridiflora, Lepidium oxytrichum, Goodenia fascicularis, Enneapogon avenaceus, Dodonaea viscosa, Dissocarpus paradoxus, Chenopodium paradoxus, Chenopodium desertorum.* |
| **Environmental Relationships** | Generally found in areas of water accumulation within sandplains or drainage areas within gibber areas. Generally associated with run on locations. |
| **Species of Conservation Significance** | *Lepidium monoplocoides.* |
| **Introduced taxa** | None at the time of survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 293 ha<br>TSR – ca. 4 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full; 1 Rapid |
| **Total species** | 25 |
| **Species per plot (average)** | 22 |

## Notes

Scattered with generally limited occurrences and not a unit easily mapped from imagery.

# PCT 143

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* sub-formation) |
| **Class** | Sand Plain Mulga Shrublands |
| **Plant Community Type** | Narrow-leaved Hopbush - Scrub Turpentine - Senna Shrubland of semi-arid and arid sandplains and dunes |
| **Scientific Name** | *Dodonaea viscosa* subsp*. angustissima, Eremophila sturtii, Senna* sp. 'filifolia' */ Enchylaena tomentosa, Rhagodia spinescens, Maireana pentatropis / Dissocarpus paradoxus, Enneapogon avenaceus* |
| **TEC Status** | NA |

**Photograph 14: Site 12 Nocoleche Nature Reserve – PCT 143**

## Description

Tall open shrubland to 4 m high dominated by Narrow-leaved Hopbush (*Dodonaea viscosa* subsp. *angustissima*), Turpentine (*Eremophila sturtii*) and various sub-species of Senna artemisioides often with Mulga (*Acacia aneura*), *Olearia pimeleoides*, Black Bluebush (*Maireana pyramidata*), Thorny Saltbush (*Rhagodia spinescens*) and a number of other Eremophila species. The ground cover includes small shrubs such as the Copperburrs *Sclerolaena obliquicuspis, Sclerolaena diacantha* and *Sclerolaena decurrens*, *Salsola australis*, Cannonball Burr (*Dissocarpus paradoxus*), Ruby Saltbush (*Enchylaena tomentosa*), *Atriplex limbata*, Mallee Saltbush (*Atriplex stipitata*) and *Maireana pentatropis*. Common grass species include Kerosene Grass (*Aristida contorta*), Bottlewasher (*Enneapogon avenaceus*), *Austrostipa nitida, Austrostipa scabra*, Button Grass (*Dactyloctenium radulans*) and Woollybutt (*Eragrostis eriopoda*). Common forbs include *Rhodanthe floribunda, Rutidosis helichrysoides, Tetragonia eremaea* and *Portulaca oleracea*. Weeds may be abundant including Wild Sage (*Salvia verbenaca*), Onion Weed (*Asphodelus fistulosus*) and Paddy Melon (*Cucumis myriocarpus* subsp. *leptodermis*). The ground species vary over the range of the

community and with different management regimes. Occurs on red-brown, sandy loamy soils on sandplains and low sandy rises of dunefields in the semi-arid and arid zones. Occurs in places that have been highly disturbed by grazing or localised clearing such as around artesian water bores. Parts of this community may be derived from original communities such as Black Oak - Western Rosewood, Callitris woodland, Mallee shrubland/woodland or Acacia-dominated shrublands that have been cleared or over-grazed and where previous dominant species have become locally extinct. This community is distributed over a large area. It could be described as several separate communities but throughout its range it is dominated by Narrow-leaved Hopbush, Turpentine and Senna species. Not of conservation concern unless a species of significance occurs in a particular area.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Casuarina pauper; Alectryon oleifolius* subsp*. canescens.* |
| **Mid** | *Dodonaea viscosa* subsp*. angustissima; Eremophila sturtii; Senna* sp. 'petiolaris'*; Senna* sp. 'filifolia'*; Rhagodia spinescens; Maireana pyramidata; Maireana pentatropis; Maireana astrotricha; Olearia pimeleoides; Eremophila longifolia; Eremophila glabra; Senna* sp. *'zygophylla'; Acacia colletioides; Acacia ligulata; Acacia victoriae* subsp*. arida; Acacia aneura; Chenopodium curvispicatum; Eremophila duttonii.* |
| **Ground** | *Enchylaena tomentosa; Dissocarpus paradoxus; Enneapogon avenaceus; Austrostipa nitida; Dactyloctenium radulans; Salsola australis; Sclerolaena obliquicuspis; Sclerolaena diacantha; Sclerolaena tricuspis; Sclerolaena decurrens; Sclerolaena bicornis* var*. bicornis; Atriplex stipitata; Atriplex limbata; Podolepis capillaris; Aristida contorta; Eragrostis eriopoda; Ptilotus obovatus var. obovatus; Sida cunninghamii; Rutidosis helichrysoides; Rhodanthe floribunda; Rhodanthe moschata; Wahlenbergia stricta* subsp*. stricta; Brachyscome lineariloba; Gnephosis arachnoidea; Stenopetalum lineare; Harmsiodoxa blennodioides; Solanum esuriale; Daucus glochidiatus; Einadia nutans subsp. eremaea; Convolvulus erubescens; Boerhavia dominii; Vittadinia sulcata; Tetragonia eremaea; Plantago drummondii; Pycnosorus pleiocephalus; Goodenia pinnatifida.* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Eremophila sturtii, Dodonaea viscosa, Senna* sp. 'zygophylla', *Eremophila duttonii Millotia greevesii, Enchylaena tomentosa, Atalaya hemiglauca, Alectryon oleifolius, Tetragonia moorei, Arabidella eremigena, Gnephosis eriocarpa, Chenopodium desertorum, Eragrostis eriopoda, Calotis hispidula, Olearia pimeloides, Rhagodia spinescens, Chthonocephalus pseudovax, Dactyloctenium radulans, Actinobole uliginosum, Calandrinia eremaea, Sclerolaena diacantha, Podolepis capillaris, Enneapogon avenaceus, Roepera similis, Erodium crinitum, Bulbine alata, Triraphis mollis, Salsola australis, Rhodanthe floribunda, Polycalymma stuartii, Plantago turrifera, Atriplex limbata, Sida trichopoda, Sclerolaena lanicuspis, Ptilotus sessilifolius, Pseudognaphalium luteoalbum, Portulaca oleracea, Pimelea trichostachya,* |

| | |
|---|---|
| | *Myriocephalus pluriflorus, Goodenia lunata, Fimbristylis dichotoma, Eriochlamys cupularis, Enteropogon acicularis, Acacia ligulata.* |
| **Environmental Relationships** | Found in sandplain and dunal areas. Widespread and common throughout the reserve. |
| **Species of Conservation Significance** | None apparent. |
| **Introduced taxa** | None apparent at time of survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 18,565 ha<br>TSR – ca. 1,810 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 5 Full; 4 Rapid |
| **Total species** | 64 |
| **Species per plot (average)** | 24 |

## Notes

Noticeable variation occurs from west to east within this PCT. In the western areas the community is largely dominated by *Eremophila duttonii*, within the central areas *Eremophila sturtii* and *Dodonaea viscosa* in more eastern areas. Similarly, *Chenopodium desertorum* is more prevalent in western parts being replaced by *Rhagodia spinescens* in the east. This community is both likely natural and of a derived nature by the removal of the overstorey and thus the distinction between natural and more derived is difficult to assess and the community blends into many of the adjoining PCTs accordingly.

# PCT 199

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* sub-formation) |
| **Class** | Sand Plain Mulga Shrublands |
| **Plant Community Type** | Hooked Needlewood - Needlewood - Mulga - Turpentine Bush open shrubland of the semi-arid and arid plains |
| **Scientific Name** | *Hakea tephrosperma, Hakea leucoptera, Acacia aneura / Dodonaea viscosa* subsp*. angustissima, Eremophila sturtii / Austrostipa scabra* subsp*. scabra, Rhodanthe floribunda, Osteocarpum acropterum* var*. acropterum, Plantago cunninghamii.* |
| **TEC Status** | NA |

**Photograph 15: Site 71 Nocoleche Nature Reserve – PCT 199**

## Description

Tall open shrubland dominated by Hooked Needlewood (*Hakea tephrosperma*) or Needlewood (*Hakea leucoptera*) that may dominate the stand or be present with Mulga (*Acacia aneura*) with a sparse shrub layer composed of Narrow-leaved Hopbush (*Dodonaea viscosa* subsp. *angustissima*) and Turpentine Bush (*Eremophila sturtii*). Scattered Black Oak (*Casuarina pauper*) may be present. The ground cover is usually sparse and includes blue bush shrubs such as *Maireana triptera*, grasses such as *Austrostipa scabra* subsp. *scabra* and forbs such as *Rhodanthe floribunda, Osteocarpum acropterum* var. *acropterum*, *Plantago cunninghamii, Gnephosis arachnoidea, Solanum ellipticum* and *Tetragonia eremaea*. Occurs as small patches in the broader Mulga shrubland community (ID119) on red-brown sandy soil on sandplains and old low dunes in far western plains of NSW. Much of this scrub has been degraded by grazing and this community is restricted and potentially vulnerable to long term decline.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Casuarina pauper; Atalaya hemiglauca.* |
| **Mid** | *Hakea tephrosperma; Hakea leucoptera; Acacia aneura; Dodonaea viscosa subsp. angustissima; Eremophila sturtii; Salsola tragus* subsp*. tragus; Maireana triptera; Sclerolaena bicornis* var*. bicornis; Atriplex stipitata; Atriplex limbata; Lysiana murrayi; Sclerolaena intricata;* |
| **Ground** | *Austrostipa scabra* subsp*. scabra; Rhodanthe floribunda; Osteocarpum acropterum* var*. acropterum; Plantago cunninghamii; Gnephosis arachnoidea; Solanum ellipticum; Tetragonia eremaea; Pycnosorus pleiocephalus; Brachyscome lineariloba; Stenopetalum lineare; Teucrium racemosum; Sida intricata.* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Hakea tephrosperma, Eremophila sturtii, Dodonaea viscosa, Eragrostis eriopoda, Enchylaena tomentosa, Arabidella eremigena, Senna* sp. 'zygophylla', *Acacia excelsa, Tetragonia moorei, Sclerolaena diacantha, Salsola australis, Rhodanthe floribunda, Maireana coronata, Eremophila longifolia, Calotis hispidula, Sclerolaena lanicuspis, Ptilotus sessilifolius, Olearia pimeloides, Myriocepahlus pluriflorus, Millotia greevesii, Erodium crinitum, Eriochlamys cupularis, Enteropogon acicularis, Chenopodium desertorum, Calotis plumulifera, Atriplex stipitata, Acacia aneura.* |
| **Environmental Relationships** | Found within areas of run on within sand plains. Also found associated with lake beds. |
| **Species of Conservation Significance** | None apparent. |
| **Introduced taxa** | None recorded during survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 74 ha *likely under mapped* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full; 2 Rapid |
| **Total species** | 27 |
| **Species per plot (average)** | 24 |

## Notes

Found as small patches within more broadly occurring PCTs but generally found in slight run on areas or within and around lake beds. Unable to be separated on imagery and thus very under-mapped.

# PCT 215

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* sub-formation) |
| **Class** | Sand Plain Mulga Shrublands |
| **Plant Community Type** | Woollybutt open grassland on red earths of the inland plains |
| **Scientific Name** | *Acacia aneura, Acacia victoriae* subsp. *arida / Eragrostis eriopoda, Enneapogon intermedius, Austrostipa nitida* |
| **TEC Status** | NA |

**Photograph 16: Site 24 Nocoleche Nature Reserve – PCT 215**

## Description

Mid-high open tussock grassland or forbland dominated by Woollybutt (*Eragrostis eriopoda*) with bottlewasher (*Enneapogon intermedius*), Curly Mitchell Grass (*Astrebla lappacea*), *Eriochloa australiensis* and Speargrass (*Austrostipa nitida*). Scattered shrubs of Mulga (*Acacia aneura*), Prickly Wattle (*Acacia victoriae* subsp. *arida*) and Narrow-leaved Hopbush (*Dodonaea viscosa* subsp. *angustissima*) may be present. The ground cover is composed of small shrubs such as the Copperburrs *Sclerolaena patenticuspis, Sclerolaena calcarata, Sclerolaena decurrens* and *Sclerolaena bicornis* var. *bicornis*, other chenopods such as *Salsola australis*, *Dissocarpus paradoxus, Chenopodium desertorum* subsp. *desertorum*, *Atriplex angulata* and *Maireana pentatropis* and forbs such as *Solanum esuriale, Sida cunninghamii, Sida ammophila, Hibiscus trionum, Einadia nutans* subsp. *nutans*, *Pimelea trichostachya, Vittadinia eremaea* and *Rhodanthe floribunda*. Other grass species include *Eragrostis laniflora, Dactyloctenium radulans, Astrebla pectinata* and *Aristida latifolia*. Occurs on red-brown and red earth soils mainly on sandplains on low lying country on floodplains or on the margins of depressions or lakes. Forms patches in more widespread Mulga shrublands (ID119). Occurs in the semi-arid (hot summer) climate zone of north western NSW across several bioregions. May be a largely derived community as a result of clearing or dieback of

| |
|---|
| Mulga, however, it is possible that areas of this grassland occurred naturally before European settlement. |

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Grevillea striata* |
| **Mid** | *Acacia aneura; Acacia victoriae* subsp. *arida; Dodonaea viscosa* subsp. *angustissima* |
| **Ground** | *Eragrostis eriopoda; Enneapogon intermedius; Austrostipa nitida; Astrebla lappacea; Solanum esuriale; Sida cunninghamii; Sclerolaena patenticuspis; Sclerolaena calcarata; Sclerolaena decurrens; Chenopodium desertorum* subsp. *desertorum; Atriplex angulata; Maireana pentatropis; Hibiscus trionum; Einadia nutans* subsp. *nutans; Pimelea trichostachya; Vittadinia eremaea; Eragrostis laniflora; Elachanthus pusillus; Cynoglossum australe; Anacampseros australiana; Tribulus eichlerianus; Sauropus trachyspermus; Goodenia glabra; Dactyloctenium radulans; Chthonocephalus pseudevax; Chenopodium cristatum; Chamaesyce drummondii; Astrebla pectinata; Aristida latifolia* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Eragrostis eriopoda, Calotis inermis, Acacia aneura, Calotis hispidula, Streptoglossa adscendens, Rhodanthe floribunda, Calandrinia eremaea, Solanum ellipticum, Sida trichopoda, Rhodanthe moschata, Phlegmatospermum cochlearinum, Goodenia fascicularis, Euphorbia dallachyana, Eriochlamys cupularis, Cheilanthes sieberi, Brachyscome ciliaris.* |
| **Environmental Relationships** | Found commonly as patches within Mulga and *Corymbia tumescens* communities on red soils. |
| **Species of Conservation Significance** | None noted during survey. |
| **Introduced taxa** | None apparent during survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 679 ha<br>TSR – ca. 88 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full |
| **Total species** | 16 |
| **Species per plot (average)** | 16 |

## Notes

Found as patches within cleared Mulga and *Corymbia tumescens* communities but also of natural occurrence. The mapped areas should be taken as indicative as knowledge of on ground dominants in a herbaceous system is not able to be achieved through remote imagery. These areas are often heavily grazed during drought conditions and the *Eragrostis eriopoda* and other dominant herbs are often only known from rhizomes which under better conditions can change the visibility and detectability of this PCT considerably.

## *Class:* Stony Desert Mulga Shrublands

# PCT 120

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* sub-formation) |
| **Class** | Stony Desert Mulga Shrublands |
| **Plant Community Type** | Mulga on stony rises in the arid and semi-arid climate zones, mainly the Mulga Lands Bioregion. |
| **Scientific Name** | *Acacia aneura / Eremophila latrobei* subsp*. latrobei, Eremophila duttonii, Dodonaea viscosa* subsp*. angustissima, Acacia tetragonophylla / Eragrostis parviflora, Enneapogon avenaceus, Aristida jerichoensis* |
| **TEC Status** | NA |

**Photograph 17: Site 68 Nocoleche Nature Reserve – PCT 120**

### Description

Tall open shrubland dominated by Mulga (*Acacia aneura*) often with Black Oak (*Casuarina pauper*), Leopardwood (*Flindersia maculata*), *Callitris glaucophylla* or Whitewood (*Atalaya hemiglauca*). The taller tree species *Eucalyptus populnea* subsp. *bimbil* and *Eucalyptus melanophloia* occur in eastern distributions. Small shrubs include *Eremophila latrobei, Eremophila duttonii*, Dead Finish (*Acacia tetragonophylla*), *Maireana* spp. and *Sclerolaena* spp. Grasses are sparse and include *Aristida jerichoensis, Aristida contorta, Eragrostis parviflora, Austrostipa* spp. and *Thyriodolepis mitchelliana*. Weeds include *Centaurea melitensis* and *Sisymbrium erysimoides*. This community occurs on red loam soils often owith stony or gibber lag on rises, mesas and scarps underlain most often by sedimentary rocks. Mainly distributed in far north western NSW in the triangle Bourke-White Cliffs to Hamilton Gate on the Qld border, i.e. west of the Darling River north of Tilpa, but also east of there on rises around Lightning Ridge. Widespread and not threatened overall.

However, Mulga has been cut in the past and in some locations and it is not regenerating due to overgrazing or other factors. Increased temperatures with climate change may affect Mulga in the long term. Grades into the very widespread Sandplain Mulga (ID119) on flat sandplains and into Heathbush - Mulga shrubland ID194 near Enngonia.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Acacia aneura; Atalaya hemiglauca; Flindersia maculosa; Grevillea striata; Casuarina pauper; Eucalyptus populnea* subsp*. bimbil; Eucalyptus melanophloia; Callitris glaucophylla; Corymbia tumescens* |
| **Mid** | *Sida trichopoda; Sida cunninghamii; Abutilon cryptopetalum; Hibiscus sturtii; Eremophila latrobei subsp. latrobei; Eremophila duttonii; Maireana villosa; Sclerolaena convexula; Sclerolaena birchii; Sclerolaena diacantha; Sclerolaena bicornis var. bicornis; Atriplex vesicaria; Atriplex limbata; Atriplex stipitata; Dodonaea viscosa* subsp*. angustissima; Acacia tetragonophylla; Prostanthera striatiflora; Eremophila longifolia; Eremophila sturtii; Maireana pyramidata; Maireana triptera; Maireana tomentosa* subsp*. urceolata; Pittosporum angustifolium; Senna* sp. 'artemisioides'*; Acacia oswaldii; Acacia homalophylla* |
| **Ground** | *Aristida jerichoensis; Thyridolepis mitchelliana; Ptilotus polystachyus* var*. polystachyus; Eragrostis parviflora; Enneapogon avenaceus; Aristida contorta; Eragrostis lacunaria; Astrebla lappacea; Austrostipa nitida; Tripogon loliiformis; Tragus australianus; Eragrostis eriopoda; Eriachne mucronata; Rhodanthe floribunda; Convolvulus erubescens; Oxalis corniculata; Stenopetalum lineare; Tetragonia eremaea; Chenopodium cristatum; Rhodanthe floribunda; Gnephosis arachnoidea; Salsola australis; Harmsiodoxa blennodioides; Rutidosis helichrysoides; Einadia nutans* subsp*. eremaea; Sida corrugata; Calandrinia eremaea; Roepera eremaea; Erodium crinitum; Convolvulus remotus; Ptilotus gaudichaudii* var*. parviflorus; Goodenia glauca; Solanum ferocissimum; Goodenia hederacea* subsp*. hederacea; Trachymene ochracea; Angianthus brachypappus; Panicum effusum; Chamaesyce drummondii; Cymbopogon obtectus* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Acacia aneura, Eremophila duttonii, Rhodanthe floribunda, Eremophila sturtii, Senna* sp. 'zygophylla'*, Eremophila longifolia, Eriochlamys cupularis, Eragrostis eriopoda, Tripogon loliiformis, Dodonaea viscosa, Tetragonia moorei, Sclerolaena diacantha, Sclerolaena convexula, Senna* sp. 'filifolia'*, Calotis hispidula, Actinobole uliginosum, Grevilia striata, Calotis plumulifera, Acacia tetragonophylla, Solanum ellipticum, Sclerolaena tricuspis, Gnephosis arachnoidea, Monachather paradoxa, Enchylaena tomentosa, Aristida contorta, Thyridolepis mitchelliana, Senna* sp. 'coriacea'*, Ptilotus sessilifolius, Lepidium oxytrichum, Senna phyllodinea, Portulaca oleracea, Microcephalus pluriflorus, Lemooria burkittii, Digitaria hystrichoides, Acacia victoriae, Acacia* |

| | |
|---|---|
| | *excelsa, Acacia brachystachya, Atalaya hemiglauca, Corymbia tumescens, Acacia oswaldii.* |
| **Environmental Relationships** | Widespread on red soils and gibber areas. |
| **Species of Conservation Significance** | None apparent at time of survey. |
| **Introduced taxa** | None apparent during survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 6,907 ha *speculative area*<br>TSR – ca. 220 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 19 Full; 13 Rapid |
| **Total species** | 88 |
| **Species per plot (average)** | 12 |

## Notes

Widespread particularly in the western parts of the reserve. Difficult to distinguish from both areas of PCT 121 and PCT 100 through imagery. All three PCTs share the same dominant overstorey. Due to these difficulties both PCT 120 and 121 have been combined as a single mapping unit. This mapping unit (120 and 121) however has been mapped differentially depending on the density of the overstorey. In many areas patches largely dominated with *Eremophila duttonii* on stony desert areas have been included under this mapping unit though it may have infrequent occurrences of Mulga or Umbrella Mulga. *Eremophila duttonii* patches in gibber areas may in part be natural but also likely derived from past clearing of Mulga and are distinct from the sand plain areas that are also dominated by *Eremophila duttonii*. No stony desert *Eremophila duttonii* PCT units exist so were though best to place within this unit. *Corymbia tumescens* was found to occur as a mixed dominant within this community in a similar fashion to areas mapped as PCT 100, however, this overstorey was conspicuously absent from areas of outcropping quartzite rocks and so it has been mapped as a distinct sub-unit. Similarly *Eucalyptus populnea* can occur sporadically within this unit in a similar fashion to that of PCT 109 thus the distinction between these units is not always clear from a mapping perspective.

# PCT 121

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* sub-formation) |
| **Class** | Stony Desert Mulga Shrublands |
| **Plant Community Type** | Umbrella Mulga - Beefwood open shrubland on Peery Hills, Mulga Lands Bioregion |
| **Scientific Name** | *Grevillea striata / Acacia brachystachya / Eragrostis parviflora, Solanum ellipticum* |
| **TEC Status** | NA |

**Photograph 18: Site 22 Nocoleche Nature Reserve – PCT 121**

## Description

Mid-high open shrubland dominated by Umbrella Mulga (*Acacia brachystachya*) with occasional small trees of Beefwood (*Grevillea striata*). Grasses and forbs occurring in rock crevices or on stony, shallow soils. Occurs on skeletal stony sandy soil on rocky mesas often containing rock flats in the Peery Hills 30 Km east of White Cliffs. It may also occur elsewhere within the Mulga Lands Bioregion.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Grevillea striata* |
| **Mid** | *Acacia brachystachya; Senna sp. 'artemisioides'* |
| **Ground** | *Eragrostis parviflora; Solanum ellipticum; Gnephosis arachnoidea; Calotis cuneifolia; Cheilanthes austrotenuifolia; Cheilanthes lasiophylla; Calocephalus platycephalus; Sida cunninghamii* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Acacia brachystachya, Arabidella eremigena, Calotis hispidula, Grevillea striata, Calotis inermis, Rhodanthe floribunda, Acacia aneura, Eragrostis setifolia, Dodonaea viscosa, Eragrostis eriopoda, Goodenia fascicularis, Phlegmatospermum cochlearinum, Lepidium oxytrichum, Chthonocephalus pseudovax, Acacia tetragonophylla, Myriocephalus pluriflorus, Actinobole uliginosum, Tripogon loliiformis, Tetragonia moorei, Solanum ellipticum, Ptilotus sessilifolius, Eriochlamys cupularis, Corymbia tumescens, Sclerolaena diacantha, Gnephosis arachnoidea, Erodium crinitum, Calandrinia eremaea, Aristida holathera, Stuartina muelleri, Senna* sp. 'zygophylla'*, Sclerolaena lanicuspis, Ptilotus gaudichaudii, Millotia greevesii, Mariana coronata, Lemooria burkittii, Goodenia glabra, Enneapogon avenaceus, Centrolepis eremica.* |
| **Environmental Relationships** | Found mainly within stony desert areas, ridges and higher elevation locations. |
| **Species of Conservation Significance** | None noted during survey. |
| **Introduced taxa** | None apparent during survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 2,960 ha *speculative area*<br>TSR – ca. 1 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 10 Full; 11 Rapid |
| **Total species** | 80 |
| **Species per plot (average)** | 17 |

## Notes

See notes above for PCT 120. Below is an image of juvenile *Acacia brachystachya* on the left and *Acacia aneura* on the right. These two taxa are often difficult to distinguish as adults but more easily as juveniles. They occur often sympatrically and narrow forms of *Acacia aneura* can be very similar to *Acacia brachystachya* in adult form. *Acacia brachystachya* is generally shorter and more 'umbrella shaped' (broader and flatter at the top), branchlets tend to be more angular. Phyllodes are generally longer with a mucro and somewhat less glaucous. Flowers are generally shorter and often 2 per axil and pods are

longer and narrower than *Acacia aneura.*

**Photograph 19: Comparison of Juveniles of *Acacia brachystachya* (left) and *Acacia aneura* (right).**

# PCT 127

| | |
|---|---|
| **Formation** | Arid Shrublands (*Acacia* sub-formation) |
| **Class** | Stony Desert Mulga Shrublands |
| **Plant Community Type** | Bastard Mulga tall open shrubland of the semi-arid (hot) and arid climate zones |
| **Scientific Name** | *Acacia sibirica, Acacia aneura, Eremophila latrobei* subsp. *latrobei, Philotheca linearis / Ptilotus obovatus* var. *obovatus, Sclerolaena convexula, Portulaca oleracea, Enneapogon avenaceus* |
| **TEC Status** | NA |

**Photograph 20: Site 48 Nocoleche Nature Reserve – PCT 127**

## Description

Tall open to sparse shrubland dominated by Bastard Mulga (*Acacia sibirica*) and Mulga (*Acacia aneura*) with a sparse associated shrub layer of Crimson Turkey-Bush (*Eremophila latrobei*), Streaked Mintbush (*Prostanthera striatifolia*), *Eremophila duttonii*, Black Bluebush (*Maireana pyramidata*), Thorny Saltbush (*Rhagodia spinescens*) and Rock Sida (*Sida petrophila*). The ground cover is sparse or very sparse and stones of rocks may cover most of the area. Ground cover forbs include *Ptilotus obovatus* var. *obovatus*, *Portulaca oleracea, Leiocarpa semicalva, Calotis hispidula, Calotis cuneifolia* and *Chenopodium melanocarpum*. Grass species include common Bottlewasher (*Enneapogon avenaceus*), Neverfail (*Eragrostis setifolia*), Wire Grasses (*Aristida* spp.) and Mulga Grass (*Thyridolepis mitchelliana*). The rock fern *Cheilanthes lasiophylla* is often present. Occurs on shallow, stony red-brown loamy or lithosol soils often on the upper slopes of rocky or silcrete gibber hills or scarps and on rolling stony downs. Distributed on the Cootaurandee Range west of White Cliffs where it occurs on sandstone ranges and mesas. Other patches occur on the silcrete, rocky upper slopes and scarps near the NSW-Queensland border north-west of Urisino. Also occurs on the Grey Range in Qld. Mainly confined to the arid climate zone of the Mulga Lands, Channel

| |
|---|
| Country and Broken Hill Complex Bioregions. The main threat is due to grazing by goats and stock that may prevent recruitment of Acacia and other species. Severe drought may kill shrubs and recruitment may take many decades to occur. Shares some floristic similarity with Mulga-Dead Finish shrubland (ID123) but ID127 contains more Acacia sibirica and some different understorey species |

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Callitris glaucophylla* |
| **Mid** | *Acacia sibirica; Acacia aneura; Eremophila latrobei* subsp. *latrobei; Philotheca linearis; Sida petrophila; Maireana pyramidata; Acacia brachystachya; Senna* sp. 'artemisioides'*; Eremophila duttonii; Eremophila goodwinii; Acacia ramulosa* var. *ramulosa; Maireana trichoptera; Maireana triptera; Acacia tetragonophylla; Scaevola spinescens; Prostanthera striatiflora; Rhagodia spinescens* |
| **Ground** | *Ptilotus obovatus* var. *obovatus; Sclerolaena convexula; Portulaca oleracea; Enneapogon avenaceus; Leiocarpa semicalva; Enchylaena tomentosa; Sclerolaena divaricata; Thyridolepis mitchelliana; Eragrostis setifolia; Digitaria brownii; Aristida contorta; Tetragonia eremaea; Euphorbia eremophila; Bulbine alata; Erodium crinitum; Solanum quadriloculatum; Goodenia heteromera; Nicotiana simulans; Chamaesyce drummondii; Calotis hispidula; Calotis cuneifolia; Chenopodium melanocarpum; Cheilanthes lasiophylla* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Acacia siberica, Calotis inermis, Eragrostis eriopoda, Tripogon loliiformis, Rhodanthe floribunda, Phlegmatospermum cochlearinum, Myriocephalus pluriflorus, Maireana coronata, Enneapogon avenaceus.* |
| **Environmental Relationships** | Restricted to gibber areas. |
| **Species of Conservation Significance** | None apparent during survey. |
| **Introduced taxa** | None apparent during survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca.8 ha *potential other occurrences* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full |
| **Total species** | 9 |
| **Species per plot (average)** | 9 |

## Notes

Found only in the north western corner of the reserve, it is likely that other occurrences may be found in more inaccessible locations not searched. The PCT is not easily distinguished from other Mulga stands and therefore is only indicative. *Acacia sibirica* was also found to occur sporadically in nearby PCTs as a sub-component.

# *Formation:* Arid Shrublands (Chenopod sub-formation)

## *Class:* Gibber Chenopod Shrublands

### PCT 61

| | |
|---|---|
| **Formation** | Arid Shrublands (Chenopod sub-formation) |
| **Class** | Gibber Chenopod Shrublands |
| **Plant Community Type** | Mitchell Grass - saltbush grassland/shrubland of the gibber downs of the arid climate zone |
| **Scientific Name** | *Astrebla pectinata, Sclerolaena longicuspis, Atriplex angulata, Leiocarpa leptolepis* |
| **TEC Status** | NA |

**Photograph 21: Not taken in Nocoleche Nature Reserve – PCT 61. Photo taken between Wanaaring and Tibooburra.**

#### Description

Tussock or open tussock grassland or low open chenopod shrubland, depending on the seasons. After rain the community is dominated by grass species including Barley Mitchell Grass (*Astrebla pectinata*) sometimes with other Mitchell grasses including *Astrebla lappacea, Astrebla squarrosa* and *Astrebla elymoides*. Other grass species include *Sporobolus actinocladus*, Common Bottlewasher Grass (*Enneapogan avenaceus*), patches of Queensland Bluegrass (*Dichanthium sericeum*) and Neverfail (*Eragrostis setifolia*) in low lying areas. Scattered among the grassland are

chenopod shrubs including Bladder Saltbush (*Atriplex vesicaria*) and *Atriplex holocarpa*, short-lived saltbushes such as *Atriplex angulata* and *Atriplex leptocarpa*, Cotton Bush (*Maireana aphylla*) and Black Bluebush (*Maireana pyramidata*). Many species of Copperburrs are present including *Sclerolaena longicuspis, Sclerolaena divaricata, Sclerolaena lanicuspis* and *Sclerolaena brachyptera*. Forbs include the short lived succulent *Osteocarpum acropterum, Abutilon halophilum, Sida trichopoda, Zygophyllum ovatum* several species of the paper daisy Rhodanthe along with *Leiocarpa leptolepis*. These vary in abundance depending on rainfall. The abundance of Mitchell grass varies with the timing of rainfall. Astrebla pectinata is a short-lived perennial so can die back quickly to leave a landscape dominated by chenopod shrubs. Heavy grazing may reduce the abundance of Mitchell Grass and Bladder Saltbush and favour of Copperburrs. Occurs on slightly saline cracking clays, red-brown sand loams or brown clay soils often that are sometime gilgaied and cracking, and are often subject to periodic inundation on floodouts of major creeks and low sloping down country. These soils are derived from sedimentary rocks and gibbers are often present. Distributed from north and west of White Cliffs to Tibooburra with large areas in Sturt National Park, in the arid climate zone of far north western NSW extending into South Australia. The floristic composition varies with the seasons and due to grazing pressures. Well conserved in Sturt National Park but overgrazing remains a threat in some places. Some areas invaded by Ruby Dock (*Acetosa vesicaria*) and other weed specie

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | NA |
| **Mid** | *Maireana aphylla; Atriplex vesicaria; Maireana pyramidata; Maireana astrotricha; Nitraria billardierei; Chenopodium auricomum* |
| **Ground** | *Astrebla pectinata; Sclerolaena longicuspis; Atriplex angulata; Leiocarpa leptolepis; Astrebla squarrosa; Astrebla lappacea; Astrebla elymoides; Sporobolus actinocladus; Enneapogon avenaceus; Sclerolaena bicornis var. bicornis; Sclerolaena lanicuspis; Sclerolaena brachyptera; Sclerolaena eriacantha; Sclerolaena divaricata; Atriplex leptocarpa; Atriplex holocarpa; Atriplex conduplicata; Osteocarpum acropterum var. acropterum; Osteocarpum acropterum var. deminuta; Enneapogon cylindricus; Eragrostis setifolia; Dichanthium sericeum subsp. sericeum; Aristida anthoxanthoides; Chloris truncata; Swainsona phacoides; Convolvulus erubescens; Plantago drummondii; Calotis hispidula; Ptilotus obovatus; Goodenia fascicularis; Dactyloctenium radulans; Rhodanthe floribunda; Rhodanthe uniflora; Rhodanthe microglossa; Salsola tragus subsp. tragus; Sida trichopoda; Chamaesyce drummondii; Ptilotus obovatus var. obovatus; Brachyscome ciliaris* var. *ciliaris; Gnephosis arachnoidea; Bulbine alata; Abutilon halophilum; Zygophyllum ovatum; Erodium crinitum; Arabidella nasturtium; Goodenia fascicularis; Convolvulus remotus; Senecio gregorii;* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | Not formally sampled. |
| **Environmental Relationships** | Areas of gilgai like ephemeral wetlands within gibber landscapes. |

| | |
|---|---|
| **Species of Conservation Significance** | None apparent during survey. |
| **Introduced taxa** | None apparent during survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 60 ha *speculative* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | NA |
| **Total species** | NA |
| **Species per plot (average)** | NA |

## Notes

Not formally sampled but mapped for run-on small gilgai like ephemeral wetlands within the gibber landscapes.

## *Class:* Riverine Chenopod Shrublands

# PCT 212

| | |
|---|---|
| **Formation** | Arid Shrublands (Chenopod sub-formation) |
| **Class** | Riverine Chenopod Shrublands |
| **Plant Community Type** | Chenopod low open shrubland - ephermal partly derived forbland saline wetland on occassionally flooded pale clay scalds in the NSW North Western Plains |
| **Scientific Name** | *Sclerolaena bicornis* var. *horrida, Sclerolaena eriacantha, Atriplex holocarpa, Salsola australis / Calocephalus sonderi, Chloris truncata, Portulaca oleracea, Sporobolus actinocladus.* |
| **TEC Status** | NA |

**Photograph 22: Site 38 Nocoleche Nature Reserve – PCT 212**

## Description

Low open chenopod shrubland / sparse forbland with low shrubs 10-30 cm high dominated by Copperburrs such as *Sclerolaena eriacantha, Sclerolaena divaricata, Sclerolaena calcarata, Sclerolaena bicornis* var. *horrida* and *Sclerolaena stelligera* with other chenopods such as *Osteocarpum dipterocarpum*, *Salsola australis* and low saltbushes such as *Atriplex holocarpa, Atriplex limbata, Atriplex muelleri* and *Atriplex semibaccata*. Scattered tall shrubs such as *Hakea leucoptera, Eremophila bignoniiflora* or *Apophyllum anomalum* may be present. Forbs may be common and dominate some areas and include *Portulaca oleracea, Goodenia glauca, Rhodanthe floribunda, Eriochlamys cupularis, Podolepis longipedata*, *Alternanthera denticulata, Boerhavia diffusa, Bulbine semibarbata, Calotis hispidula, Daucus glochidiatus* s. lat. and *Calandrinia pumila*. Grasses include Windmill Grass (*Chloris truncata*), *Sporobolus actinocladus, Eragrostis* spp. and *Tripogon loliiformis* and Mitchell grass (*Astrebla lappacea, Astrebla pectinata*). Occurs on non-

cracking, pale clay soils on slighly elevated rises on floodplains that are occasionally flooded where scalding is commonplace. Scalding has probably increased due to grazing and trampling by stock. Little has been cropped due to the erodable soils. Species composition changes with rainfall and the scalded areas are threatened by erosion and over-grazing.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Hakea leucoptera* subsp. *leucoptera; Eremophila bignoniiflora; Apophyllum anomalum* |
| **Mid** | *Sclerolaena bicornis* var. *horrida; Sclerolaena eriacantha; Atriplex holocarpa; Salsola australis; Osteocarpum dipterocarpum; Sclerolaena divaricata; Osteocarpum acropterum* var. *acropterum; Sclerolaena calcarata; Atriplex spongiosa; Atriplex vesicaria; Atriplex limbata; Atriplex muelleri; Atriplex semibaccata; Maireana coronata; Maireana appressa; Sclerolaena muricata* var. *villosa; Acacia victoriae; Sclerolaena stelligera; Dissocarpus biflorus* var. *biflorus; Sida trichopoda; Chenopodium curvispicatum; Apophyllum anomalum; Abutilon cryptopetalum; Chenopodium desertorum subsp. microphyllum* |
| **Ground** | *Calocephalus sonderi; Chloris truncata; Portulaca oleracea; Sporobolus actinocladus; Eragrostis leptocarpa; Eragrostis lacunaria; Eriochlamys cupularis; Eragrostis setifolia; Astrebla lappacea; Astrebla pectinata; Rhodanthe floribunda; Ptilotus semilanatus; Boerhavia diffusa; Bulbine semibarbata; Calotis hispidula; Daucus glochidiatus; Calandrinia pumila; Rhodanthe diffusa* subsp. *diffusa; Leiocarpa brevicompta; Leiocarpa leptolepis; Pimelea simplex; Plantago cunninghamii; Podolepis longipedata; Cullen tenax; Senecio quadridentatus; Sida trichopoda; Sida phaeotricha; Vittadinia cuneata; Solanum esuriale; Alternanthera denticulata; Brachyscome ciliaris* var. *ciliaris; Pimelea trichostachya; Lemooria burkittii; Portulaca filifolia; Glinus lotoides* |

| | |
|---|---|
| **Variations** – description of PCT as found during the current survey | *Gnephosis eriocarpa, Sclerolaena tricuspis, Arabidella eremigena, Xerocrhysum bracteatum, Teucrium racemosum, Rhodanthe floribunda, Eriochlamys cupularis, Bulbine alata, Brachyscome ciliaris, Atriplex holocarpa, Salsola australis, Atriplex limbata, Sclerolaena muricata, Sclerolaena bicornis.* |
| **Environmental Relationships** | Found in scald areas associated that have been disturbed. |
| **Species of Conservation Significance** | None apparent during survey. |
| **Introduced taxa** | *Malva parviflora*. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 96 ha |

| TSR – ca. 7 ha |
|---|

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full; 1 Rapid |
| **Total species** | 14 |
| **Species per plot (average)** | 6 |

## Notes

Likely under-mapped and may occur in many locations currently mapped as PCT 198. Highly variable in floristics depending on season, amount and timing of rainfall and duration of inundation of site.

## *Formation:* Forested Wetlands

### *Class:* Inland Riverine Forests

# PCT 11

| | |
|---|---|
| **Formation** | Forested Wetlands |
| **Class** | Inland Riverine Forests |
| **Plant Community Type** | River Red Gum - Lignum very tall open forest or woodland wetland on floodplains of semi-arid (warm) climate zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion) |
| **Scientific Name** | *Eucalyptus camaldulensis* subsp. *camaldulensis* / *Acacia stenophylla, Duma florulenta* / *Paspalidium jubiflorum, Cyperus gymnocaulos, Einadia nutans* subsp. *nutans* |
| **TEC Status** | NA |

**Photograph 23: Nocoleche Nature Reserve – PCT 11**

## Description

Tall open forest or woodland with trees to about 20 m high, dominated by River Red Gum (*Eucalyptus camaldulensis*) to 20 m high with patches of River Cooba (*Acacia stenophylla*), Lignum (*Duma florulenta*) and Nitre Goosefoot (*Chenopodium nitrariaceum*) as a shrub understorey. Black Box (*Eucalyptus largiflorens*) is sometimes present. Ground cover is usually mid-dense or sparse and is dominated by Warrego Grass (*Paspalidium jubiflorum*) and forb species such as *Pratia concolor, Alternanthera denticulata, Wahlenbergia fluminalis, Chenopodium pumilio, Brachyscome basaltica var. gracilis, Eclipta platyglossa, Senecio quadridentatus, Asperula gemella, Euchiton sphaericus, Minuria integerrima, Rorippa laciniata, Centipeda minima* var. *minima*, *Rumex tenax,*

*Damasonium minus* and *Ranunculus undosus*. The sedge *Cyperus gymnocaulos* is commonly present. Occurs on heavy grey clay soil in drainage depressions and flood-outs of major water courses on the floodplains along western sections of Murray, Murrumbidgee and Lachlan Rivers and extending up the Darling River to Wilcannia. Mainly in the Riverina and Murray-Darling Depression Bioregions of the semi-arid (warm) climate zone. Reasonable stands remain and the greatest threat is over-grazing, changed flooding regimes and extended drought.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus camaldulensis* subsp. *camaldulensis* |
| **Mid** | *Duma florulenta; Acacia stenophylla; Chenopodium nitrariaceum; Senecio cunninghamii* var. *cunninghamii; Enchylaena tomentosa* |
| **Ground** | *Paspalidium jubiflorum; Cyperus gymnocaulos; Einadia nutans* subsp. *nutans; Wahlenbergia fluminalis; Pratia concolor; Alternanthera denticulata; Chenopodium pumilio; Brachyscome basaltica* var. *gracilis; Eclipta platyglossa; Sonchus hydrophilus; Picris squarrosa; Senecio quadridentatus; Asperula gemella; Euchiton sphaericus; Minuria integerrima; Rorippa laciniata; Centipeda minima var. minima; Marsilea drummondii; Rumex tenax; Damasonium minus; Cyperus bifax; Ranunculus undosus; Glinus lotoides; Ludwigia peploides* subsp. *montevidensis; Poa fordeana; Euphorbia stevenii; Vittadinia dissecta; Vittadinia cuneata; Senecio pinnatifolius; Austrostipa scabra* subsp. *falcata* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Eucalyptus camaldulensis, Duma florulenta, Acacia stenophylla, Roepera similis, Nicotiana simulans, Lepidium sagittulatum, Enchylaena tomentosa, Einadia nutans, Arabidella eremigena.* |
| **Environmental Relationships** | Restricted to the margins of near permanent water. Main river channels. |
| **Species of Conservation Significance** | None apparent at time of survey. |
| **Introduced taxa** | None apparent at time of survey. Though weedy taxa are generally common in this PCT. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 146 ha *potentially over mapped*<br>TSR – ca. 50 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 2 Rapid |
| **Total species** | 9 |
| **Species per plot (average)** | NA |

## Notes

Under-sampled in general. A highly linear community, generally only one to a few crowns in width.

## *Formation:* Freshwater Wetlands

### *Class:* Inland Floodplain Shrublands

# PCT 24

| | |
|---|---|
| **Formation** | Freshwater Wetlands |
| **Class** | Inland Floodplain Shrublands |
| **Plant Community Type** | Canegrass swamp of drainage depressions, lakes and pans of the inland plains |
| **Scientific Name** | *Eragrostis australasica, Duma florulenta, Sclerostegia tenuis / Chloris truncata, Disphyma crassifolium* subsp. *clavellatum, Eragrostis setifolia, Marsilea drummondii* |
| **TEC Status** | NA |

**Photograph 24: Not taken in Nocoleche Nature Reserve – PCT 24**

## Description

Tall, tussock grassland dominated by Canegrass (*Eragrostis australasica*) growing to over 2 m high ranging in cover from dense to isolated plants. Sometimes growing with Glasswort (*Sclerostegia tenuis*) or Samphire *Halosarcia pergranulata*. Depending which part of NSW a range of grass species may be present including Windmill Grass (*Chloris truncata*), Blown Grass (*Lachnagrostis filiformis*), Plains grass (*Austrostipa aristiglumis*), Neverfail (*Eragrostis setifolia*) and *Eragrostis parviflora*. A range of low shrubs occur including *Sclerolaena* spp., *Atriplex* spp. and *Teucrium racemosum*.

Sedges such as *Eleocharis acuta, Eleocharis pusilla* and *Eleocharis pallens* may be common along with rushes (*Juncus* spp.). The aquatic *Marsilea drummondii, M. costulifera, Azolla filiculoides* and *Myriophyllum* spp. May be present but die off in dry times. Highly salt tolerant plant species are more common in western-most areas and include *Disphyma crassifolium* subsp. *clavellatum*, *Frankenia serpyllifolia* and *Osteocarpum acropterum*. There is considerable floristic variation across its range and this sub-formation could be divided into a number of communities but several dominant species tend to be consistently present. Occurs on heavy non-cracking clay and silty clay soils in periodically flooded depressions on floodplains, alluvial plains, claypans in sand dune and sandplain areas, and floodouts of watercourses. Soils are red-grey compact clay or sandy clay that crack very little. These soils form claypans that pond from local runoff after rain. Widespread. Distributed in throughout western NSW in the arid and semi-arid zones. Not threatened overall but most areas have been subjected to grazing and trampling by stock and feral animals. Some eastern occurrences are more threatened due to surrounding clearing and changed flooding regimes on floodplains

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus largiflorens* |
| **Mid** | *Eragrostis australasica; Duma florulenta; Sclerostegia tenuis; Chenopodium nitrariaceum; Atriplex holocarpa; Sclerolaena muricata* var. *muricata; Eremophila bignoniiflora; Eremophila polyclada; Teucrium racemosum; Halosarcia pergranulata* subsp. *pergranulata* |
| **Ground** | *Chloris truncata; Disphyma crassifolium* subsp. *clavellatum; Marsilea costulifera; Marsilea drummondii; Diplachne fusca; Eragrostis setifolia; Lachnagrostis filiformis; Austrostipa aristiglumis; Amphibromus nervosus; Eragrostis eriopoda; Eragrostis parviflora; Eleocharis pallens; Eleocharis acuta; Cyperus gymnocaulos; Centipeda cunninghamii; Juncus aridicola; Juncus flavidus; Disphyma crassifolium* subsp. *clavellatum; Sclerolaena divaricata; Sclerolaena tricuspis; Sclerolaena intricata; Sclerolaena divaricata; Trianthema triquetra; Osteocarpum acropterum var. acropterum; Osteocarpum acropterum* var. *deminuta; Atriplex semibaccata; Atriplex spongiosa; Atriplex spinibractea; Atriplex lindleyi; Swainsona swainsonioides; Plantago drummondii; Daucus glochidiatus; Portulaca oleracea; Frankenia serpyllifolia; Minuria integerrima; Minuria cunninghamii; Pycnosorus globosus; Calotis hispidula; Brachyscome lineariloba; Gnephosis arachnoidea; Epaltes cunninghamii; Calotis latiuscula; Stemodia florulenta; Azolla filiculoides; Calocephalus sonderi; Ranunculus sessiliflorus var. sessiliflorus; Rumex tenax; Myriocephalus rhizocephalus; Brachyscome lineariloba; Tetragonia eremaea; Myriophyllum crispatum; Myriophyllum verrucosum; Pratia darlingensis; Senecio runcinifolius* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Eragrostis australasica, Thyridia repens, Tetragonia moorei, Marsilea drummondii, Maireana integra, Gnephosis arachnoidea, Atriplex leptocarpa, Marsilea costulifera, Centipeda thespidioides, Atriplex elachophylla, Tecticornia lylei, Sclerolaena tricuspis, Roepera similis, Rhodanthe floribunda, Pseudognaphalium luteoalbum, Lepidium* |

| | |
|---|---|
| | *oxytrichum, Lachnagrostis filiformis, Haloragis glauca, Eucalyptus largiflorens, Eryngium paludosum, Erodium crinitum, Eriochloa procera, Eragrostis lacunaria, Eleocharis pusilla, Calotis hispidula, Brachyscome dentata, Atriplex intermedia, Atriplex holocarpa, Alternanthera nodiflora.* |
| **Environmental Relationships** | Found within ephemeral wetland areas and washouts. |
| **Species of Conservation Significance** | None apparent during survey. |
| **Introduced taxa** | *Spergularia rubra* |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 657 ha *highly speculative*<br>TSR – ca. 50 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full; 3 Rapid |
| **Total species** | 30 |
| **Species per plot (average)** | 26 |

## Notes

Forms part of a complex of ephemeral wetland types that could not be mapped as individual PCTs. PCTS 24, 25, 161 and 53 have all been combined into a single map unit. PCT 198 was also indistinguishable from imagery from these 5 PCTs however since it occurs as a separate Formation mapping of PCT 198 was kept separate. However, many areas mapped as PCT 24, 24, 161 and 53 may in fact be PCT 198 and vice versa. Thus, the area of these two map units should only be considered indicative.

# PCT 25

| | |
|---|---|
| **Formation** | Freshwater Wetlands |
| **Class** | Inland Floodplain Shrublands |
| **Plant Community Type** | Lignum shrubland wetland on floodplains and depressions of the Mulga Lands, Channel Country Bioregions in the arid and semi-arid (hot) climate zones |
| **Scientific Name** | *Duma florulenta / Enchylaena tomentosa / Eragrostis setifolia, Alternanthera nodiflora, Centipeda cunninghamii, Marsilea drummondii* |
| **TEC Status** | NA |

**Photograph 25: Site 62 Nocoleche Nature Reserve – PCT 25**

## Description

Tall shrubland to 2 m high dominated by Lignum (*Duma florulenta*) sometimes with Canegrass (*Eragrostis australasica*), Nitre Goosefoot (*Chenopodium nitrariaceum*), Dillon Bush (*Nitraria billardierei*), various species of Atriplex and River Cooba (*Acacia stenophylla*) along channels. Scattered trees of Black Box (*Eucalyptus largiflorens*) or Coolabah (*Eucalyptus coolabah*) may be present. Low shrubs include Copperburrs such as *Sclerolaena tricuspis, Sclerolaena divaricata, Sclerolaena stelligera* and *Sclerolaena birchii*. The ground cover may be sparse with large bare patches. Forb species include *Alternanthera nodiflora, Centipeda cunninghamii, Chamaesyce drummondii, M. costulifera, Pluchea dentex, Calotis scabiosifolia* var. *scabiosifolia*, *Calotis hispidula, Minimus repens, Epaltes cunninghamii, Rutidosis helichrysoides, Brachyscome lineariloba, Tetragonia moorei, Ammannia multiflora* and *Brachyscome lineariloba*. Grass species include Neverfail (*Eragrostis setifolia*), Warrego Grass (*Paspalidium jubiflorum*), Native Millet (*Panicum decompositum*), Blown Grass (*Lachnagrostis filiformis*), Windmill Grass (*Chloris truncata*) and *Eragrostis lacunaria*. The rush *Juncus aridicola*, the sedges *Fimbristylis dichotoma, Eleocharis plana,*

*Eleocharis acuta, Eleocharis pallens* and Nardoo ferns *Marsilea angustifolia* and *Marsilea drummondii* are often present. Includes arid zone or saline forbs such as *Osteocarpum acropterum* var. *acropterum*, *Mimulus repens, Glinus lotoides, Tetragonia eremaea* and *Aeschynomene indica*. Occurs on clay soils often forming potholes and often lining channels in regularly flooded depressions on floodplains, alluvial plains, sandplains in the semi-arid (hot summer) and arid climate zones of north-western NSW. Grades into and often mixes with Canegrass (*Eragrostis australasica*) (ID24) on clay pans or into Golden Goosefoot (*Chenopodium auricomum*) shrublands in arid sand dune landscapes including in Sturt National Park. Widespread and not threatened but changes in flooding regimes in some river systems and damage from pigs are threats.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus coolabah* subsp*. coolabah; Eucalyptus largiflorens; Eucalyptus populnea* subsp*. bimbil* |
| **Mid** | *Duma florulenta; Chenopodium nitrariaceum; Eragrostis australasica; Atriplex holocarpa; Nitraria billardierei; Sclerolaena tricuspis; Acacia stenophylla; Acacia salicina; Acacia oswaldii; Myoporum montanum; Atriplex vesicaria* subsp*. vesicaria; Sclerolaena intricata; Enchylaena tomentosa; Salsola tragus subsp. tragus; Sclerolaena divaricata; Sclerolaena stelligera; Atriplex angulata; Atriplex leptocarpa; Atriplex pseudocampanulata; Maireana coronata; Sclerolaena muricata* |
| **Ground** | *Eragrostis setifolia; Alternanthera nodiflora; Centipeda cunninghamii; Marsilea drummondii; Marsilea costulifera; Eleocharis pallens; Eleocharis acuta; Fimbristylis dichotoma; Juncus aridicola; Lachnagrostis filiformis; Paspalidium jubiflorum; Leptochloa digitata; Panicum decompositum; Echinochloa inundata; Sporobolus mitchellii; Chloris truncata; Eragrostis lacunaria; Panicum decompositum; Verbena supina; Chamaesyce drummondii; Frankenia angustipetala; Centipeda thespidioides; Osteocarpum acropterum var. acropterum; Glinus lotoides; Calotis hispidula; Mimulus repens; Epaltes cunninghamii; Rutidosis helichrysoides; Brachyscome lineariloba; Tetragonia moorei; Ammannia multiflora; Aeschynomene indica; Lemna disperma; Myriophyllum verrucosum; Senecio glossanthus; Calandrinia eremaea; Craspedia haplorrhiza; Scleroblitum atriplicinum; Senecio runcinifolius* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Duma florulenta, Tetragonia moorei, Calotis hispidula, Trigonella suavissima, Hakea tephrosperma, Eragrostis lacunaria, Haloragis glauca, Centipeda thespidioides, Lepidium oxytrichum, Lachnagrostis filiformis, Isolepis congrua, Calotis plumulifera, Brachyscome dentata, Minuria integerrima, Eryngium paludosum, Atriplex eardleyae, Wahlenbergia tumidifructa, Teucrium racemosum, Senecio lacustrinus, Sclerolaena muricata, Roepera similis, Rhodanthe floribunda, Lepidium sagittulatum, Enchylaena tomentosa, Atriplex leptocarpa, Senecio runcinifolius, Rumex crystallinus, Pseudognaphalium luteoalbum, Polygonum plebeium, Plantago turrifera, Lepidium muelleri-ferdinandi, Leiocarpa* |

| | |
|---|---|
| | *penaetioides, Goodenia glabra, Calotis dentex, Bulbine alata, Brachyscome ciliaris, Arabidella eremigena.* |
| **Environmental Relationships** | Found in floodplain areas, braided stream and lake beds. |
| **Species of Conservation Significance** | None apparent during survey. |
| **Introduced taxa** | *Erodium cicutarium, Spergularia rubra, Medicago minima, Malva parviflora.* |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 1,642 ha *highly speculative*<br>TSR – ca. 150 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 4 Full |
| **Total species** | 67 |
| **Species per plot (average)** | 26 |

## Notes

See notes above for PCT 24. This PCT grades into adjacent stands of PCT 37, 38, 39 and 207.

# PCT 161

| | |
|---|---|
| **Formation** | Freshwater Wetlands |
| **Class** | Inland Floodplain Wetlands |
| **Plant Community Type** | Golden Goosefoot shrubland wetland in swamps of the arid and semi-arid (hot summer) zones |
| **Scientific Name** | *Chenopodium auricomum, Duma florulenta, Eragrostis australasica / Eragrostis setifolia, Astrebla lappacea, Atriplex holocarpa, Salsola australis* |
| **TEC Status** | NA |

**Photograph 26: Site 51 Nocoleche Nature Reserve – PCT 161**

## Description

Mid-high open chenopod shrubland usually about 1 m high dominated by Golden Goosefoot (*Chenopodium auricomum*) often growing with Lignum (*Muehlenbeckia florulenta*) and Canegrass (*Eragrostis australasica*). The ground cover may be dense after rain or sparse in dry periods and contains grasses such as Neverfail (*Eragrostis setifolia*), Mitchell grasses (*Astrebla* spp.) and *Triraphis mollis*; forbs such as *Tetragonia eremaea, Bulbine alata, Calotis cymbacantha, Podolepis capillaris* and *Roepera simile* and small shrubs of Copperburrs (*Sclerolaena* spp.). Sometimes extends into Eucalyptus coolabah woodlands. Occurs on grey cracking clay and compact clay soils on floodouts that are periodically inundated but not where water ponds for lengthy periods. In NSW, this community mainly occurs in far north western regions including Sturt National Park. Eastern outliers occur in the Angledool, Collarenebri and Barren Junction regions of the Darling Riverine Plains Bioregion. Golden goosefoot, the species, extends to south-western NSW but tends not to be a dominant there. Similar communities occur in northern Australia on the Barkly Tableland among Mitchell Grass grasslands. Restricted in extent in NSW but not threatened, except perhaps at its eastern range. Important seasonal habitat for waterbirds.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus coolabah* subsp. *arida* |
| **Mid** | *Chenopodium auricomum; Duma florulenta; Eragrostis australasica; Chenopodium nitrariaceum; Eremophila sturtii* |
| **Ground** | *Eragrostis setifolia; Astrebla lappacea; Atriplex holocarpa; Salsola australis; Atriplex limbata; Eragrostis dielsii; Eriochloa crebra; Panicum decompositum; Triraphis mollis; Sclerolaena ventricosa; Tetragonia eremaea; Bulbine alata; Roepera simile; Astrebla pectinata; Astrebla elymoides; Alternanthera denticulata; Chenopodium melanocarpum; Calandrinia eremaea; Rhodanthe floribunda; Calotis hispidula; Sclerolaena muricata; Senecio pinnatifolius; Trigonella suavissima; Crinum flaccidum; Harmsiodoxa puberula; Tetragonia eremaea; Podolepis capillaris; Calotis cymbacantha; Centipeda cunninghamii; Daucus glochidiatus; Chenopodium cristatum; Sporobolus caroli* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Chenopodium auricomum, Atriplex holocarpa, Calocephalus sonderi, Calotis hispidula, Frankenia connata, Wahlenbergia tumidifructa, Plantago turrifera, Eryngium paludosum, Brachyscome dentata, Arabidella eremigena, Sclerolaena lanicuspis, Ranunculus pentandrus, Plagiobothrys plurisepaleus, Myosurus minimus, Maireana coronata, Eriochloa procera, Eragrostis lacunaria, Eragrostis australasica, Centipeda thespidioides, Atriplex angulata.* |
| **Environmental Relationships** | In wetland areas, generally floodplains adjacent to drainage channels. |
| **Species of Conservation Significance** | None apparent at time of survey |
| **Introduced taxa** | *Spergularia rubra.* |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR 328 ha *highly speculative*<br>TSR – ca. 25 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full |
| **Total species** | 21 |
| **Species per plot (average)** | 21 |

## Notes

| |
|---|
| As per PCT 24 above. |

## PCT 261

| | |
|---|---|
| **Formation** | Freshwater Wetlands |
| **Class** | Inland Floodplain Wetlands |
| **Plant Community Type** | Swamp Paper-bark shrubland on edges of depressions in the Mulga Lands Bioregion |
| **Scientific Name** | *Melaleuca densispicata / Eragrostis setifolia* |
| **TEC Status** | NA |

**Photograph 27: Site 51 Nocoleche Nature Reserve – PCT 261**

### Description

Mid-high open or sparse shrubland dominated by Swamp Paper-bark (*Melaleuca densispicata*). Other shrubs may include Lignum (*Duma florulenta*), Narrow-leaved Hopbush (*Dodonaea viscosa* subsp. *angustissima*) and Hooked Needlewood (*Hakea tephrosperma*). The ground cover is bare or contains species such as the grass Neverfail (*Eragrostis setifolia*) the sedge *Eleocharis pusilla* and the wetland fern *Marsilea costulifera*. Occurs on loam-sand soils on the edges of depressions - that often contain Lignum shrubland. Also occurs along stream channels and occasional on sand dunes. A very restricted community of the Mulga Lands Bioregion from the Queensland border in the north to south of Wanaaring in the south.

### Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | |

| | |
|---|---|
| **Mid** | *Melaleuca densispicata; Duma florulenta; Dodonaea viscosa* subsp. *angustissima; Hakea tephrosperma; Hakea ivoryi* |
| **Ground** | *Eragrostis setifolia; Eleocharis pusilla; Marsilea costulifera* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Melaleuca densispicata, Gnephosis eriocarpa, Roepera similis, Tetragonia moorei, Dodonaea viscosa, Arabidella eremigena, Enchylaena tomentosa, Teucrium racemosum, Sclerolaena diacantha, Eremophila longifolia, Eragrostis eriopoda, Einadia nutans, Calotis hispidula, Atalaya hemiglauca, Tripogon loliiformis, Solanum ellipticum, Senna* sp. 'zygophylla', *Sclerolaena tricuspis, Salsola australis, Rhagodia spinescens, Portulaca oleracea, Podolepis capillaris, Myriocephalus pluriflorus, Maireana triptera, Lepidium oxytrichum, Eucalyptus largiflorens, Eremophila sturtii, Eragrostis lacunaria, Enteropogon acicularis, Duma florulenta, Dissocarpus paradoxus, Atriplex stipitata, Atriplex leptocarpa, Actinobole uliginosa.* |
| **Environmental Relationships** | Restricted to margins of ephemeral wetlands |
| **Species of Conservation Significance** | None apparent during survey |
| **Introduced taxa** | None apparent during survey |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 5 ha *other occurrences likely* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 2 Full; 1 Rapid |
| **Total species** | 34 |
| **Species per plot (average)** | 21 |

## Notes

Found in disjunct locations, highly likely that other occurrences occur throughout the reserve around ephemeral wetlands. Not readily visible in imagery so likely under mapped.

## *Class:* Inland Floodplain Swamps

# PCT 53

| | |
|---|---|
| **Formation** | Freshwater Wetlands |
| **Class** | Inland Floodplain Swamps |
| **Plant Community Type** | Shallow freshwater sedge swamp on inland floodplains and depressions |
| **Scientific Name** | *Duma florulenta, Acacia stenophylla / Panicum decompositum, Paspalidium jubiflorum, Juncus aridicola/ Eleocharis pallens, Eleocharis plana, Marsilea drummondii, Alternanthera denticulata* |
| **TEC Status** | NA |

**Photograph 28: Site 17 Nocoleche Nature Reserve – PCT 53**

### Description

Low to mid-high sedgeland/grassland dominated by spike rushes including *Eleocharis pallens, Eleocharis acuta, Eleocharis plana* and *Cyperus* spp., along with ferns Nardoo (*Marsilea drummondii*) and *Marsilea costulifera*, the rushes *Juncus subsecundus, Juncus aridicola*, the grasses Native Millet (*Panicum decompositum*), Warrego Grass (*Paspalidium jubiflorum*), Umbrella Canegrass (*Leptochloa digitata*) and Rats Tail Grass (*Sporobolus mitchellii*). Forb species include *Rumex* spp., *Alternanthera* spp., *Haloragis aspera, Mimulus gracilis, Lobelia concolor*, *Boerhavia dominii* and *Ranunculus* spp. A taller sedge/shrub layer may be present composed of the tall sedge *Cyperus exaltatus*, and the shrubs Lignum (*Duma florulenta*), *Eremophila bignoniifolia* and River Cooba (*Acacia stenophylla*). Weed species include Lippia (*Phyla canescens*) and Bathurst Burr (*Xanthium spinosum*). Scattered trees of River Red Gum (*Eucalyptus camaldulensis*) and Belah (*Casuarina cristata*) occur in some locations. Occurs on grey and brown clays including gilgais on low lying flats or depressions on floodplains or on sandplains that regularly flood or fill from local

runoff after rain. Distributed throughout the floodplains of the inland plains, particularly in the Darling Riverine Plains Bioregion with small areas in other bioregions. Grades into box woodlands on the plains and River Red Gum along the rivers. Similar to ID241 which has a dominant cover of Acacia stenophylla. Threatened by drainage, less frequent flooding regimes, clearing for crops and invasion of Lippia (*Phyla canescens*).

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus camaldulensis; Casuarina cristata* |
| **Mid** | *Duma florulenta; Acacia stenophylla; Eremophila bignoniiflora* |
| **Ground** | *Eleocharis pallens; Eleocharis acuta; Eleocharis plana; Marsilea drummondii; Marsilea costulifera; Alternanthera denticulata; Panicum decompositum; Paspalidium jubiflorum; Cynodon dactylon; Eriochloa crebra; Panicum effusum; Chloris truncata; Paspalum distichum; Sporobolus mitchellii; Lachnagrostis filiformis; Leptochloa digitata; Eragrostis elongata; Alternanthera nodiflora; Alternanthera* sp. A*; Stellaria angustifolia; Ranunculus undosus; Verbena gaudichaudii; Rumex crystallinus; Rumex brownii; Stackhousia muricata; Myriophyllum verrucosum; Damasonium minus; Rorippa eustylis; Juncus aridicola; Juncus subsecundus; Cyperus bifax; Cyperus exaltatus; Fimbristylis dichotoma; Damasonium minus; Diplachne muelleri; Haloragis aspera; Mimulus gracilis; Boerhavia dominii; Pratia concolor; Portulaca oleracea; Ranunculus sessiliflorus var. sessiliflorus; Oxalis exilis; Eclipta platyglossa;* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Duma florulenta, Acacia stenophylla, Enchylaena tomentosa, Tetragonia moorei, Sclerolaena eriacantha, Chenopodium auricomum, Calotis hispidula, Streptoglossa adscendens, Plantago turrifera, Marsilea costulifera, Lachnagrostis filiformis, Frankenia connata, Eragrostis australasica, Chenopodium desertorum, Centipeda cunninghamii, Calocephalus sonderi, Atriplex limbata, Atriplex holocarpa.* |
| **Environmental Relationships** | Food in within broad old river channels and floodplains adjacent to extant channels. |
| **Species of Conservation Significance** | None apparent at time of survey. |
| **Introduced taxa** | None apparent at time of survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 657 ha *speculative*<br>TSR – c. 18 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full; 5 Rapid |
| **Total species** | 18 |
| **Species per plot (average)** | 9 |

## Notes

Although of a different Class than the previous three PCTs, this PCT was included with PCT 24, 25, 161 as a single map unit. See PCT 24 above for further notes. Grades into PCT 137 and 207.

## *Formation:* Saline Wetlands

### *Class:* Inland Saline Lakes

# PCT 18

| | |
|---|---|
| **Formation** | Saline Wetlands |
| **Class** | Inland Saline Lakes |
| **Plant Community Type** | Slender Glasswort low shrubland in saline wetland depressions in the semi-arid and arid climate zones, far western NSW |
| **Scientific Name** | *Tecticornia tenuis, Atriplex vesicaria / Sclerolaena divaricata, Sclerolaena brachyptera, Disphyma crassifolium* subsp. *clavellatum, Malacocera tricornis* |
| **TEC Status** | NA |

**Photograph 29: Site 62 Nocoleche Nature Reserve – PCT 18**

## Description

Low open shrubland usually about 0.5 m high dominated by Slender Glasswort (*Tecticronia tenuis*) often with Bladder Saltbush (*Atriplex vesicaria*). The ground cover is sparse and dominated by Copperburrs such as *Sclerolaena divaricata, Sclerolaena brachyptera, Sclerolaena intricata* and *Sclerolaena tricuspis*. Soft Horns (*Malacocera tricornis*) and short-lived saltbush species such as *Atriplex lindleyi* are often present along with Desert glasswort (*Pachycornia triandra*). The succulent forb Round Pig Face (*Disphyma clavellatum*) is common along with Sea Heath (*Osteocarpus acropterum* var. *deminuta*). Scattered trees of Black Box (*Eucalyptus largiflorens*) may be present. Annual species may dominate this community in Spring. Occurs on brown or pale grey cracking clay on saline flats near drainage lines on Murray and Darling River floodplains and adjoining alluvial

plains. Mainly distributed in the Murray-Darling Depression Bioregion. The community is most common in the far south western corner of NSW extending into South Australia with the largest areas being in the Great Darling Ana-Branch sub-region but patches with also occurring in the Willandra Lakes system. Over-grazing and trampling have led to a decline in Round Pig Face and palatable chenopods such as saltbushes. Dieback affects some occurrences and large areas have become a derived shrubland dominated by copperburrs (Sclerolaena spp.). Often grades into Bladder Saltbush (ID157) and shares some species with the Samphire communities of salt lakes (IDs 63, 64 and 65). This community remains under some threat due to its poor condition, dieback of key species in some places and lack of adequate protection in reserves.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus largiflorens* |
| **Mid** | *Tecticornia tenuis; Atriplex vesicaria; Maireana appressa; Eragrostis australasica* |
| **Ground** | *Sclerolaena divaricata; Sclerolaena brachyptera; Malacocera tricornis; Disphyma crassifolium* subsp*. clavellatum; Atriplex lindleyi; Sclerolaena tricuspis; Sclerolaena intricata; Pachycornia triandra; Sclerolaena muricata* var*. muricata; Brachyscome lineariloba; Pogonolepis muelleriana; Pachycornia triandra; Crassula colorata* var*. colorata; Portulaca oleracea; Minuria cunninghamii; Senecio cunninghamii var. serratus; Lotus cruentus; Goodenia pinnatifida; Bulbine alata; Leiocarpa leptolepis* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Tecticornia tenuis, Eragrostis australasica, Sclerolaena muricata, Maireana coronata, Centipeda thespidioides, Sclerolaena tricuspis, Sclerolaena diacantha, Salsola australis, Rhodanthe floribunda, Lepidium oxytrichum, Frankenia connata, Eriochlamys cupularis, Calotis hispidula, Atriplex holocarpa.* |
| **Environmental Relationships** | Found in saline lake beds. |
| **Species of Conservation Significance** | None at time of survey. |
| **Introduced taxa** | None apparent at time of survey |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 21 ha *other occurrences likely* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full |
| **Total species** | 14 |
| **Species per plot (average)** | 14 |

## Notes

Likely to be more widespread than currently mapped. May occur sporadically within a number of salt lakes within areas distant from accessible locations. Not a community that can be distinguished easily from imagery and thus generally requires knowledge of actual occurrences.

# PCT 149

| | |
|---|---|
| **Formation** | Saline Wetlands |
| **Class** | Inland Saline Lakes |
| **Plant Community Type** | Neverfail Grass - ephemeral herbaceous forbland of interdune claypans mainly in the arid climate zone |
| **Scientific Name** | *Eragrostis setifolia, Sclerolaena bicornis* var. *bicornis, Atriplex spongiosa, Osteocarpum acropterum* var. *acropterum / Marsilea drummondii, Rhodanthe floribunda* |
| **TEC Status** | NA |

**Photograph 30: Site 55 Nocoleche Nature Reserve – PCT 149**

## Description

Low sparse tussock grassland and ephemeral forbland to 30 cm high, often dominated by Neverfail (*Eragrostis setifolia*). Low shrubs of *Sclerolaena bicornis, Sclerolaena convexula, Atriplex spongiosa* and may be present along with *Osteocarpum acropterum* var. *acropterum*. Nardoo (*Marsilea drummondii*) may occur after rain along with a range or ephemeral forbs including Sunrays (*Rhodanthe* spp.). Other grasses such as corkscrew grass (*Austrostipa* spp.), Mitchell grass *Astrebla* spp., *Chloris truncata* and *Panicum decompositum* may be present. Bottlewashers may be ephemeral and die back in dry times leaving Corkscrew Grass (*Austrostipa* spp.) and other perennial species. Occurs on brown-grey cracking clays in swales and pans mainly in dunefields. Present as small patches mainly in swales in dune fields in the Simpson-Strzelecki Dunefields Bioregion in the arid climate zone of far north-western NSW extending into South Australia.

## Floristic Summary

| Stratum | Typical Species |
|---|---|

| | |
|---|---|
| **Upper** | |
| **Mid** | *Acacia ligulata; Acacia aneura* |
| **Ground** | *Eragrostis setifolia; Sclerolaena bicornis* var. *bicornis; Atriplex spongiosa; Osteocarpum acropterum* var. *acropterum; Sclerolaena convexula; Salsola australis; Atriplex spongiosa; Dissocarpus paradoxus; Marsilea drummondii; Rhodanthe uniflora; Astrebla pectinata; Chloris truncata; Dichanthium sericeum subsp. sericeum; Panicum decompositum; Astrebla lappacea; Austrostipa nitida; Bulbine alata; Rhodanthe floribunda; Tetragonia eremaea; Streptoglossa adscendens; Eriochloa australiensis; Nicotiana simulans; Senecio gregorii; Sida ammophila; Plantago turrifera; Cullen cinereum; Harmsiodoxa brevipes* var. *brevipes; Glycine canescens; Neobassia proceriflora;* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Osteocarpum acropterum, Atriplex holocarpa, Atriplex elachophylla, Arabidella eremigena, Teucrium racemosum, Sclerolaena muricata, Portulaca oleracea, Goodenia glabra, Eragrostis lacunaria, Calotis hispidula.* |
| **Environmental Relationships** | Found in interdunal ephemeral wetland areas and floodplain channels in dunal landscapes. |
| **Species of Conservation Significance** | None apparent at time of survey. |
| **Introduced taxa** | None apparent at time of survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR *unknown difficult to map. Sporadic often temporal occurrences* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full |
| **Total species** | 10 |
| **Species per plot (average)** | 10 |

## Notes

Likely to be under-mapped. This PCT cannot be distinguished from imagery and requires knowledge of known locations. The community is also somewhat temporal and may not always be at known locations depending on time, season and duration of inundation. Though generally described for inter-dunal locations this community was also found within ephemeral wetland channels of braided temporary streams within dunal areas. Sampled within Plot NC55 Zone 55 237038 6680965.

# Appendix 2: – PCT 166

| | |
|---|---|
| **Formation** | Saline Wetlands |
| **Class** | Inland Saline Lakes |
| **Plant Community Type** | Disturbed annual saltbush forbland on clay plains and inundation zones mainly of south-western NSW |
| **Scientific Name** | *Atriplex lindleyi, Atriplex holocarpa, Osteocarpum acropterum* var. *deminuta / Sclerolaena divaricata, Sclerolaena intricata, Maireana aphylla* |
| **TEC Status** | NA |

**Photograph 31: Nocoleche Nature Reserve – PCT 166**

## Description

A disturbed and probably derived open chenopod, herbland or grassland dominated by annual saltbushes such as Baldoo (*Atriplex lindleyi*), *Atriplex eardleyae* and *Atriplex angulata* along with and Babbagia (*Osteocarpum acropterum* var. *deminuta*). *Atriplex holocarpa* is often present. Many species of Copperburr may be present including *Sclerolaena divaricata, Sclerolaena intricata, Sclerolaena brachyptera, Sclerolaena decurrens, Sclerolaena diacantha, Sclerolaena stelligera, Sclerolaena ventricosa* and *Sclerolaena bicornis*. Cottonbush (*Maireana aphylla*) common in places. Other *Maireana* species include *Maireana ciliata, Maireana coronata* and *Maireana turbinata*. Forbs include daisies such as *Rhodanthe floribunda* and *Brachyscome ciliaris*. *Swainsona* peas - *Swainsona affinis* and *Swainsona campylantha* may be present after rain. Neverfail grass (*Eragrostis setifolia*) is common in northern areas. The main weeds species are the grasses *Hordeum marinum* and *Hordeum leporinum* along with Capeweed (*Arctotheca calendula*) and Ward's Weed (*Carrichtera annua*). This community occurs on clay and loam clay soils on dry lake-beds and alluvial floodplains in the semi-arid and arid zones - mainly in south-western NSW but also to the north.

| |
|---|
| This is probably a derived community from previous perennial chenopod shrublands, although some areas may be similar to a natural state where regular flooding is a feature. |

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | |
| **Mid** | |
| **Ground** | *Atriplex lindleyi; Atriplex holocarpa; Osteocarpum acropterum* var. *deminuta; Sclerolaena divaricata; Sclerolaena intricata; Maireana aphylla; Disphyma crassifolium* subsp. *clavellatum; Rhodanthe floribunda; Rhodanthe corymbiflora; Podolepis muelleri; Cotula bipinnata; Atriplex eardleyae; Atriplex angulata; Dissocarpus paradoxus; Sclerolaena brachyptera; Sclerolaena decurrens; Sclerolaena diacantha; Sclerolaena stelligera; Sclerolaena bicornis; Plantago drummondii; Plantago cunninghamii; Brachyscome lineariloba; Brachyscome ciliaris* var. *ciliaris; Maireana ciliata; Maireana coronata; Maireana turbinata; Tetragonia eremaea; Swainsona affinis; Swainsona campylantha; Eragrostis setifolia* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | 1 Full. |
| **Environmental Relationships** | Community of ephemeral saline wetlands. |
| **Species of Conservation Significance** | None apparent at time of survey. |
| **Introduced taxa** | None apparent at time of survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 7 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | NA |
| **Total species** | NA |
| **Species per plot (average)** | NA |

## Notes

| |
|---|
| Not currently mapped but likely to occur based on previous surveys. This PCT cannot be distinguished from imagery and requires knowledge of known locations. The community is also somewhat temporal and may not always be at known locations depending on time, season and duration of inundation. This community is ephemeral, however, at the time of survey it was found within plot NC33 – Zone 55 GDA 94 218352 6679698. |

# PCT 189

| | |
|---|---|
| **Formation** | Saline Wetlands |
| **Class** | Inland Saline Wetlands |
| **Plant Community Type** | Ephemeral forbland wetland of low-saline lake-beds of the arid and semi-arid (warm) climate zones |
| **Scientific Name** | *Lavatera plebeia, Salsola australis, Epaltes australis, Glinus lotoides* |
| **TEC Status** | NA |

## Description

Mid-high open to sparse forbland dominated by ephemeral plant species such as Australian Hollyhock (*Lavatera plebeia*), Spreading Nut-heads (*Epaltes australis*) along with *Salsola australis*, Roly Poly (*Sclerolaena muricata*) and Couch Grass (*Cynodon dactylon*). Sedges such as *Cyperus gymnocaulos* occur on the edges of the lakes. The restricted nightshade species, *Solanum karsense*, is common on some lakebeds after floods recede. If water is present species such as Red-water Milfoil (*Myriophyllum verrucosum*) and Austral Mudwort (*Limosella australis*) may be present. The lakebeds are composed of fine, silty, light grey, cracking clay. The lakes are periodically inundated but may remain dry for many years between inundations. The species composition changes as inundation levels change and due to the time since the last inundation. Weed species are common and they may include *Bromus rubens, Hordeum leporinum, Conyza bonariensis* and *Xanthium occidentale*. Distributed in the far south western NSW in the Murray Darling Depression Bioregion in lake beds of the Darling River Ana-Branch, Darling River (e.g.Menindee Lakes) and some lakes along the Murray River in the arid and semi-arid (warm) climate zones. Many lake-beds have been cropped - generally after floods. as of 2005 this community was poorly reserved considering the number of dry lake beds in the region

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | |
| **Mid** | *Sclerolaena muricata; Teucrium racemosum* |
| **Ground** | *Lavatera plebeia; Salsola australis; Epaltes australis; Cynodon dactylon; Glinus lotoides; Solanum karsense; Myriophyllum verrucosum; Limosella australis; Glycyrrhiza acanthocarpa; Nicotiana velutina; Sporobolus mitchellii; Cyperus gymnocaulos* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | No plots placed during this current survey. |
| **Environmental Relationships** | Found in ephemeral saline wetlands. |
| **Species of Conservation Significance** | None found during current survey. |

| | |
|---|---|
| **Introduced taxa** | None found during current survey. |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR *unknown, temporal community* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | No sites placed. |
| **Total species** | NA |
| **Species per plot (average)** | NA |

## Notes

Not currently mapped but likely to occur based on previous surveys. This PCT cannot be distinguished from imagery and requires knowledge of known locations. The community is also somewhat temporal and may not always be at known locations depending on time, season and duration of inundation.

# PCT 198

| | |
|---|---|
| **Formation** | Saline Wetlands |
| **Class** | Inland Saline Wetlands |
| **Plant Community Type** | Sparse saltbush forbland wetland of the irregularly inundated lakes of the arid and semi-arid (persistently hot) climate zones |
| **Scientific Name** | *Atriplex holocarpa, Atriplex spongiosa, Sclerolaena intricata / Sporobolus mitchellii, Eragrostis lacunaria, Spergularia rubra, Osteocarpum acropterum* var. *acropterum* |
| **TEC Status** | NA |

**Photograph 32: Site 64 Nocoleche Nature Reserve – PCT 198**

## Description

Low or mid-high sparse forbland dominated by low saltbushes such as *Atriplex holocarpa, Atriplex spongiosa, Atriplex angulata, Atriplex limbata* or *Atriplex lindleyi* along with several species of Copperburr including Tangled Poverty-bush (*Sclerolaena intricata*), *Sclerolaena diacantha, Sclerolaena tricuspis* and *Sclerolaena decurrens*. Grass species include Purple Lovegrass (*Eragrostis lacunaria*), *Sporobolus mitchellii, Lachnagrostis filiformis* and *Austrostipa scabra*. Forb species may dominate after inundation or rain and include *Centipeda minima* var. *minima*, *Osteocarpum acropterum* var. *acropterum*, *Heliotropium curassavicum, Senecio pinnatifolius, Heliotropium curassavicum, Dysphania simulans, Plantago turrifera, Pycnosorus pleiocephalus, Plantago drummondii, Myosurus minimus* var. *australis, Stemodia florulenta* and *Goodenia pinnatifida*. The wetland fern *Marsilea drummondii* and water plant *Myriophyllum verrucosum* are common after inundation. Scattered Lignum (*Duma florulenta*) or Canegrass (*Eragrostis australasica*) may be present. Cropped areas may be weedy while less disturbed areas have low weed numbers. Occurs on light coloured saline clay soils in ephemeral lakes or pans along river systems mainly in the Mulga

| |
|---|
| Lands and Channel Country Bioregions in the semi-arid (persistently hot) and arid climate zones. The main threats are lake bed cropping and altered flooding regimes. |

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | |
| **Mid** | *Atriplex holocarpa; Atriplex spongiosa; Sclerolaena intricata; Sclerolaena diacantha; Sclerolaena patenticuspis; Sclerolaena tricuspis; Sclerolaena decurrens; Teucrium racemosum; Duma florulenta; Eragrostis australasica; Halosarcia pergranulata subsp. pergranulata* |
| **Ground** | *Centipeda minima* var. *minima; Sporobolus mitchellii; Eragrostis lacunaria; Osteocarpum acropterum var. acropterum; Senecio pinnatifolius; Heliotropium curassavicum; Dysphania simulans; Plantago turrifera; Marsilea drummondii; Myriophyllum verrucosum; Pycnosorus pleiocephalus; Lachnagrostis filiformis; Plantago drummondii; Myosurus minimus var. australis; Stemodia florulenta; Goodenia pinnatifida; Convolvulus remotus; Lepidium pseudohyssopifolium; Atriplex angulata; Atriplex limbata; Atriplex lindleyi; Rhodanthe corymbiflora; Tetragonia eremaea; Austrostipa scabra subsp. scabra; Eragrostis dielsii* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Tetragonia moorei, Sclerolaena tricuspis, Sclerolaena bicornis, Marsilea costulifera, Gnephosis arachnoidea, Lemooria burkittii, Sclerolaena lanicuspis, Arabidella eremigena, Eriochlamys cupularis, Eremophila maculata, Dodonaea viscosa, Alternanthera nodiflora, Sclerolaena muricata, Atriplex leptocarpa, Atriplex holocarpa, Centipeda thespidioides, Centipeda cunninghamii, Calotis hispidula, Acacia aneura, Thyridia repens, Senna* sp. 'zygophylla', *Senecio quadridentatus, Rhodanthe floribunda, Plantago turrifera, Lepidium sagittulatum, Calotis plumulifera, Brachyscome ciliaris, Teucrium racemosum, Eriochloa procera, Eragrostis lacunaria, Calotis dentex, Bulbine alata, Brachyscome dentata, Atriplex pseudocampanulata, Sclerolaena diacantha, Rhodanthe moschata, Pseudognaphalium luteoalbum, Portulaca oleracea, Marsilea drummondii, Maireana coronata, Lepidium oxytrichum, Lepidium muelleri-ferdinandi, Haloragis glauca, Gnephosis eriocarpa, Eragrostis dielsii, Eragrostis australasica, Enneapogon avenaceus, Dactyloctenium radulans, Calocephalus sonderi, Calandrinia eremaea, Atriplex limbata, Atriplex eardleyae, Actinobole uliginosum.* |
| **Environmental Relationships** | Found in ephemeral wetlands, particularly within sandplain and dunal landscapes. |
| **Species of Conservation Significance** | None apparent during survey. |
| **Introduced taxa** | *Spergularia rubra.* |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 908 ha<br>TSR – ca. 16 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 6 Full; 2 Rapid |
| **Total species** | 82 |
| **Species per plot (average)** | 27 |

## Notes

As per above PCT 24, 25, 161 and 53 have been mapped as a single unit. Distinguishing this combined map unit with PCT 198 is difficult based on imagery. PCT 198 would have been encompassed within the single mapping unit with PCT 24, 25, 161 and 53, however, they occur in very different Classes and Formations and so have been kept separate. Areas mapped as the single map unit with PCT 24, 25, 161 and 53 maybe interchangeable with areas mapped as PCT 198. In addition, PCT 198 has an ephemeral component and may not be distinguishable in the field during periods of inundation or may change to other ephemeral forblands based on season of inundation and duration of inundation. These types of communities are not always stable occurrences temporally. Note that *Tetragonia moorei* was found to be a dominant understorey species in this community though it only occurs seasonally and generally only after good Autumn rains. Rainfall at other times of the year will alter the understorey floristics significantly and *Tetragonia moorei* is only a temporary dominant disappearing quickly as areas dry out.

# PCT 262

| | |
|---|---|
| **Formation** | Saline Wetlands |
| **Class** | Inland Saline Lakes |
| **Plant Community Type** | Submerged flora of saline temporary wetland of the arid zone |
| **Scientific Name** | *Ruppia tuberosa, Lepilaena preissii, Lamprothamnium papulosum* |
| **TEC Status** | |

## Description

Low open forbland dominated by rhizomatous, submerged short-lived vascular plant species and macro-algae that, after inundation, temporarily dominate the flora on some salt lakes in the arid zone. During dry periods no surface flora are present. The main species are the submerged aquatics *Ruppia tuberosa, Lepilaena preissii* and the macro-algae *Lamprothamnium macropogon*. Occurs on heavy grey-brown clays that remain waterlogged during dry phases under a thick salt crust. These occur in shallow, endorheic deflation basin salt lakes that remain dry most of the time. These are hydrologically separated from river systems. Located in the arid zone of the far north western corner of NSW extending into Queensland and perhaps South Australia. When the lakes are flooded, they are clear and alkaline. The surrounding vegetation is composed of chenopod shrubland and Mulga (*Acacia aneura*). The lake margins are composed of shrubs such as tar Bush (*Eremophila glabra*) or Narrow-leaved Hopbush (*Dodonaea viscosa* subsp. *angustissima*) with low shrubs including *Gunniopsis quadrifida, Sclerolaena intricata, Halosarcia pergranulata, Atriplex vesicaria* and the grass Mulka (*Eragrostis dielsii*). In NSW this community is restricted to a few salt lakes in the Bulloo River region and Paroo-Warrego River regions of far north-western NSW

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | |
| **Mid** | |
| **Ground** | *Ruppia tuberosa; Lepilaena preissii; Lamprothamnium papulosum* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | Not occurring during time of survey but known to temporally occur during flooding periods |
| **Environmental Relationships** | In waterbodies during flooding periods |
| **Species of Conservation Significance** | None apparent at time of survey |
| **Introduced taxa** | None apparent at time of survey |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR *unknown, temporal community* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | None placed, did not occur during survey period. |
| **Total species** | NA |
| **Species per plot (average)** | NA |

## Notes

This is a temporary community that occurs under certain flooding conditions. It did not occur at the time of survey but is known to occur within the reserve. It cannot be mapped and may occur in a number of locations depending on conditions at the time of flooding and may not occur always at the same localities.

# PCT 263

| | |
|---|---|
| **Formation** | Saline Wetlands |
| **Class** | Inland Saline Lakes |
| **Plant Community Type** | Submerged flora of saline permanent wetland of the arid zone |
| **Scientific Name** | *Lawrencia glomerata, Cyperus bulbosus, Cyperus squarrosus, Epaltes australis / Ruppia maritima, Myriophyllum verrucosum, Nitella partita* |
| **TEC Status** | |

## Description

Low open forbland dominated by submerged macrophyte plant species including the submerged vascular plants *Lepilaena bilocularis, Ruppia maritima* and *Myriophyllum verrucosum* along with the macro-algae *Nitella lhotzkii, Lamprothamnium macropogon* and *Chara preisii*. When lakes dry off the lake bed may contain Golden Spike (*Lawrencia glomerata*), Nalgoo (*Cyperus bulbosus*), *Cyperus squarrosus*, Nut Heads (*Epaltes australis*), Monkey Flower (*Mimulus repens*) and the grass Mulka (*Eragrostis dielsii*). Occurs on brown and grey saline clays in endorheic basin "lakes" that mainly fill from local rainfall. Located in the arid climate zone of the Paroo-Warrego and Bulloo overflow regions of far north-western NSW and south western Queensland.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | |
| **Mid** | |
| **Ground** | *Ruppia maritima; Myriophyllum verrucosum; Nitella partita; Lamprothamnium papulosum; Cyperus bulbosus; Cyperus squarrosus; Epaltes australis; Mimulus repens; Eragrostis dielsii* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | Not found during this current survey but known to occur ephemerally. |
| **Environmental Relationships** | Found after inundation within saline lakes. |
| **Species of Conservation Significance** | *Nitella partita*. |
| **Introduced taxa** | None apparent during survey |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR *unknown, temporal community* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | Not found during current survey period. |
| **Total species** | NA |
| **Species per plot (average)** | NA |

## Notes

This is a temporary community that occurs under certain flooding conditions. It did not occur at the time of survey but is known to occur within the reserve. It cannot be mapped and may occur in a number of locations depending on conditions at the time of flooding and may not occur always at the same localities.

## *Formation:* Semi-arid Woodlands (Grassy sub-formation)

## *Class:* North-west Floodplain Woodlands

# PCT 37

| | |
|---|---|
| **Formation** | Semi-arid Woodlands (Grassy sub-formation) |
| **Class** | North-west Floodplain Woodlands |
| **Plant Community Type** | Black Box Wetland on NSW central and northern floodplains including the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion |
| **Scientific Name** | *Eucalyptus largiflorens / Acacia stenophylla, Duma florulenta, Rhagodia spinescens / Enteropogon acicularis, Oxalis chnoodes, Marsilea drummondii* |
| **TEC Status** | Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregions |

**Photograph 33: Site 9 Nocoleche Nature Reserve – PCT 37**

## Description

Open forest to open woodland dominated by Black Box (*Eucalyptus largiflorens*) often with Poplar Box (*Eucalyptus populnea* subsp. *bimbil*), Coolabah (*Eucalyptus coolabah*) or Belah (*Casuarina cristata*). The shrub layer may be sparse or dense depending on grazing regimes or other disturbance events. It may include River Cooba (*Acacia stenophylla*), Lignum (*Duma florulenta*), Old Man Saltbush (*Atriplex nummularia*), Thorny Saltbush (*Rhagodia spinescens*), Cooba (*Acacia salicina*), Wilga (*Geijera parviflora*), Budda (*Eremophila mitchellii*), Wild Orange (*Capparis mitchellii*), Spotted Fuchsia (*Eremophila maculata*) and Eurah (*Eremophila bignoniiflora*). The

ground cover is usually sparse but may be dense after flooding or rain and includes low shrubs such as Black Roly Poly (*Sclerolaena muricata* var. *muricata*), Cotton Bush (*Maireana aphylla*) and saltbushes such as *Atriplex spinibractea* and *Atriplex semibaccata*. Grass species include *Enteropogon acicularis, Rytidosperma setacea*, *Walwhalleya subxerophilum, Paspalidium jubiflorum, Lachnagrostis filiformis, Panicum decompositum* and *Leptochloa digitata*. Forbs include *Solanum esuriale, Oxalis chnoodes, Sida corruga, Goodenia fascicularis, Calotis scabiosifolia* var. *scabiosifolia* and *Einadia nutans* subsp. *nutans*. Nardoo (*Marsilea drummondii*) is common after flooding and sedges such as *Eleocharis pallens* and *Cyperus concinnus* grow in depressions. Occurs on grey and brown alluvial clays and red and brown loams on floodplains near watercourses, ox-bow lakes, and drainage depressions. Distributed across the north-western plains of NSW mainly in the Darling Riverine Plain Bioregion. Abundant along the Darling, Barwon, Macquarie and Bogan Rivers. In northern occurrences this community grades into Coolabah Box woodland on slightly higher ground. A threatened community because it has mostly been cleared and heavily grazed.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus largiflorens; Eucalyptus coolabah* subsp*. coolabah; Eucalyptus camaldulensis* subsp*. camaldulensis; Eucalyptus populnea* subsp*. bimbil; Acacia pendula; Casuarina cristata;* |
| **Mid** | *Acacia stenophylla; Duma florulenta; Rhagodia spinescens; Atriplex nummularia; Geijera parviflora; Acacia salicina; Capparis mitchellii; Capparis lasiantha; Eremophila mitchellii; Eremophila maculata; Eremophila bignoniiflora; Myoporum montanum; Acacia victoriae subsp. arida; Acacia deanei; Senna form taxon 'petiolaris'; Apophyllum anomalum; Teucrium racemosum;* |
| **Ground** | *Enteropogon acicularis; Oxalis chnoodes; Marsilea drummondii; Leptochloa digitata; Sclerolaena muricata* var*. muricata; Maireana aphylla; Einadia nutans* subsp*. nutans; Austrodanthonia setacea; Walwhalleya subxerophila; Thyridolepis mitchelliana; Solanum esuriale; Enchylaena tomentosa; Tribulus terrestris; Swainsona galegifolia; Chloris truncata; Sida corrugata; Sida trichopoda; Enchylaena tomentosa; Sporobolus caroli; Paspalidium jubiflorum; Lachnagrostis filiformis; Panicum decompositum; Atriplex spinibractea; Atriplex semibaccata; Austrostipa scabra subsp. scabra; Tragus australianus; Centipeda cunninghamii; Sclerolaena bicornis* var*. bicornis; Sclerolaena calcarata; Sclerolaena convexula; Atriplex eardleyae; Tetragonia tetragonioides; Sclerolaena birchii; Wahlenbergia communis; Eleocharis pallens; Cyperus concinnus; Goodenia fascicularis; Calotis scabiosifolia* var*. scabiosifolia; Solanum sturtianum; Stemodia florulenta; Erodium crinitum; Dactyloctenium radulans; Einadia nutans* subsp*. linifolia;* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Eucalyptus largiflorens, Haloragis glauca, Acacia stenophylla, Lemooria burkittii, Paspalidium jubiflorum, Lepidium sagittulatum, Calotis hispidula, Ranunculus pentandrus, Enchylaena tomentosa, Duma florulenta, Calocephalus sonderi, Centipeda thespidioides, Pseudognaphalium luteoalbum, Polygonum plebeium, Myoporum montanum, Brachyscome ciliaris, Arabidella eremigena, Teucrium* |

| | |
|---|---|
| | *racemosum, Tetragonia moorei, Senecio lacustrinus, Brachyscome dentata, Vittadinia cuneata, Streptoglossa liatroides, Solanum esuriale, Sida trichopoda, Rumex crystallinus, Rorippa laciniata. Roepera similis.* |
| **Environmental Relationships** | Found in more permanent channels. |
| **Species of Conservation Significance** | None apparent at time of survey |
| **Introduced taxa** | *Spergularia rubra* |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 48 ha<br>TSR – ca. 1 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 2 Full; 8 Rapid |
| **Total species** | 55 |
| **Species per plot (average)** | 28 |

## Notes

This PCT is not a clear fit for the variation found at Nocoleche. Many of the species that typify this PCT are more eastern occurring taxa that are not found within Nocoleche, however, overally it is the best fit for these areas of *Eucalyptus largiflorens* with distinct components of *Acacia stenophylla, Acacia salicina, Duma florulenta* and other species. May be more widespread than currently mapped.

# PCT 38

| | |
|---|---|
| **Formation** | Semi-arid Woodlands (Grassy sub-formation) |
| **Class** | North-west Floodplain Woodlands |
| **Plant Community Type** | Black Box low woodland wetland lining ephemeral watercourses or fringing lakes and clay pans of semi-arid (hot) and arid zones |
| **Scientific Name** | *Eucalyptus largiflorens / Myoporum montanum, Duma florulenta / Enchylaena tomentosa, Atriplex holocarpa, Sporobolus mitchellii, Tetragonia eremaea* |
| **TEC Status** | NA |

**Photograph 34: Site 76 Nocoleche Nature Reserve – PCT 38**

## Description

Low open woodland to 10 m high dominated by Black Box (*Eucalyptus largiflorens*) with a sparse cover of shrubs including *Myoporum montanum, Eremophila* spp., *Chenopodium* spp. and Lignum (*Duma florulenta*). The ground cover is mid-dense after rain but very sparse in dry times and is composed of annual chenopods including *Atriplex* spp., ephemeral forbs and summer grasses. Common ground species include the small shrubs *Enchylaena tomentosa, Teucrium racemosum, Sclerolaena intricata, Salsola australis*, *Atriplex holocarpa* and *Atriplex eardleyae*; forbs such as *Tetragonia eremaea, Lobelia darlingensis, Mimulus repens, Stemodia florulenta, Osteocarpum acropterum* var. *acropterum* and *Polycalymma stuartii*; grasses such as *Sporobolus mitchellii, Eragrostis falcata, Eragrostis parviflora, Triraphis mollis* and *Tragus australianus* and the sedge *Cyperus gymnocaulos*. Occurs on brown and grey cracking clays or sandy loams fringing ephemeral lakes, pans and watercourses among the sandplains of the Cobham Land System in the Channel Country Bioregion, Paroo and Warrego River regions of the Mulga Lands Bioregion and in the Strzelecki Desert dunefields to the west extending into South Australia. This community merges with Canegrass and Lignum communities in low lying depressions and *Acacia ligulata* shrubland

(ID124) on sand dunes. While not extensively cleared, it has been degraded by grazing by domestic stock and feral animals that use the Black Box trees as shade.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus largiflorens; Casuarina pauper; Callitris glaucophylla* |
| **Mid** | *Duma florulenta; Myoporum montanum; Eremophila deserti; Rhagodia spinescens; Eremophila sturtii; Eremophila gilesii; Olearia pimeleoides; Maireana pyramidata; Acacia oswaldii; Senna* sp. 'artemisioides'*; Hakea leucoptera* subsp*. leucoptera; Santalum lanceolatum; Pimelea microcephala* subsp*. microcephala; Acacia aneura; Senna phyllodinea; Teucrium racemosum; Amyema preissii; Chenopodium nitrariaceum; Chenopodium album* |
| **Ground** | *Enchylaena tomentosa; Salsola australis; Atriplex holocarpa; Atriplex eardleyae; Atriplex velutinella; Tetragonia eremaea; Einadia nutans* subsp*. eremaea; Eragrostis setifolia; Eragrostis parviflora; Eragrostis falcata; Monachather paradoxus; Tragus australianus; Triraphis mollis; Sporobolus mitchellii; Atriplex fissivalvis; Heliotropium curassavicum; Pterocaulon sphacelatum; Rhodanthe moschata; Rhodanthe floribunda; Cyperus gymnocaulos; Osteocarpum acropterum var. acropterum; Polycalymma stuartii; Sclerolaena intricata; Senecio lautus* subsp*. dissectifolius; Senecio runcinifolius; Gnephosis arachnoidea; Malacocera tricornis; Nicotiana simulans; Rutidosis helichrysoides; Marsilea drummondii; Zygophyllum ammophilum; Bulbine alata; Sida trichopoda; Convolvulus clementii; Solanum chenopodinum; Paractaenum novae-hollandiae; Eleocharis acuta; Eleocharis pallens; Juncus aridicola; Mentha australis; Stemodia florulenta; Centipeda cunninghamii; Pratia darlingensis; Mimulus repens* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Eucalyptus largiflorens, Enchylaena tomentosa, Arabidell eremigena, Tetragonia moorei, Duma florulenta, Dodonaea viscosa, Lepidium oxytrichum, Eremophila sturtii, Brachyscome dentata, Roepera similis, Haloragis glauca, Teucrium racemosum, Senna* sp. 'zygophylla'*, Senecio quandridentatus, Rhagodia spinescens, Paspalidium jubiflorum, Chenopodium desertorum, Centipeda thespidioides, Calotis hispidula, Sclerolaena bicornis, Marsilea costulifera, Lachnagrostis filiformis, Eucalyptus populnea, Eragrostis lacunaria, Atriplex leptocarpa, Sclerolaena muricata, Sclerolaena convexula, Rhodanthe floribunda, Plantago turrifera, Lemooria burkittii, Eriochlamys cupularis, Eremophila longifolia, Calotis plumulifera, Atriplex eardleyae, Alternanthera nodiflora, Alectryon oleifolius, Acacia aneura.* |
| **Environmental Relationships** | Found along drainage lines, around ephemeral lakes and wetlands. |

| | |
|---|---|
| **Species of Conservation Significance** | None apparent at time of survey. |
| **Introduced taxa** | *Spergularia rubra, Malva parviflora* |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 6,873 ha<br>TSR – ca. 88 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 3 Full; 24 Rapid |
| **Total species** | 65 |
| **Species per plot (average)** | 27 |

## Notes

This PCT occurs within a matrix of PCT 39, 109, 207 and 67. Within major drainage lines this community blends into PCT 67 and cannot always be separated on imagery. Similarly, many ephemeral waterbodies have a mosaic of this PCT and PCT 109 dominated by *Eucalyptus populneus* making distinctions between these two PCTs difficult. Some ephemeral wetlands are dominated by solely Poplar Box and others by Black Box. Thus many areas mapped as this PCT may in fact by 109 or vice versa.

# PCT 39

| | |
|---|---|
| **Formation** | Semi-arid Floodplain Woodlands |
| **Class** | North-west Floodplain Woodlands |
| **Plant Community Type** | Coolabah - River Coobah - Lignum woodland wetland of frequently flooded channels mainly of the Darling Riverine Plains Bioregion |
| **Scientific Name** | *Eucalyptus coolabah* subsp*. coolabah / Acacia stenophylla, Duma florulenta, Rhagodia spinescens / Paspalidium jubiflorum, Leptochloa digitata, Einadia nutans* subsp*. nutans* |
| **TEC Status** | Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregions |

**Photograph 35: Site 6 Nocoleche Nature Reserve – PCT 39**

## Description

Coolabah Box open forest and woodland dominated by Coolabah (*Eucalyptus coolabah* subsp. *coolabah*) often with River Red Gum (*Eucalyptus camaldulensis* subsp. *camaldulensis*) with understorey thickets of Lignum (*Duma florulenta*), River Cooba (*Acacia stenophylla*) or Cooba (*Acacia salicina*). *Melalueca triostachya* occurs on river banks in some areas. The ground cover contains tall tussock grasses such as *Leptochloa digitata* and *Paspalidium jubiflorum*, sedges such as *Cyperus concinnus* and *Cyperus victoriensis* and rushes (*Juncus* spp.). Coolabah occurs on areas slightly less flooded than River Red Gum. It also may adjoin Black Box communities that tend to occupy slightly higher ground. Lippia (*Phyla canescens*) and African Boxthorn (*Lycium ferocissimum*) are problem weeds in places. Occurs on alluvial silty clay soils with neutral pH on floodplains of the major rivers mainly in the Darling Riverine Plain Bioregion but with outliers in other bioregions. This community is frequently flooded and may be subject to occasional prolonged inundation. Grades into a less frequently flooded Coolabah Open Woodland (ID40) that occurs distant from the channelised section of the floodplain. It has been extensively cleared in central northern NSW but

stands remain in the Western Division in the Darling River system although clearing is extending into this region. Endangered due to the rate of its decline and long-term impacts from changed flooding regimes affecting its condition.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus coolabah* subsp. *coolabah; Eucalyptus camaldulensis* subsp. *camaldulensis; Eucalyptus largiflorens; Melaleuca trichostachya; Casuarina cristata* |
| **Mid** | *Acacia stenophylla; Acacia salicina; Duma florulenta; Geijera parviflora; Eremophila mitchellii; Rhagodia spinescens; Capparis mitchellii; Acacia pendula; Apophyllum anomalum; Eremophila bignoniiflora; Alstonia constricta; Vachellia farnesiana; Eremophila maculata* |
| **Ground** | *Paspalidium jubiflorum; Leptochloa digitata; Einadia nutans* subsp. *nutans; Sclerolaena birchii; Sclerolaena muricata var. muricata; Sclerolaena tubata; Sclerolaena intricata; Sclerolaena bicornis var. bicornis; Sclerolaena calcarata; Solanum esuriale; Solanum esuriale; Atriplex muelleri; Cyperus bifax; Marsilea drummondii; Lachnagrostis filiformis; Alternanthera nodiflora; Eleocharis pallens; Eleocharis plana; Cyperus concinnus; Cyperus victoriensis; Panicum decompositum; Chloris ventricosa; Dichanthium sericeum subsp. sericeum; Sporobolus caroli; Pratia concolor; Abutilon oxycarpum; Daucus glochidiatus; Goodenia pusilliflora; Bulbine alata; Chloris truncata; Tetragonia tetragonioides; Stellaria angustifolia* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Eucalyptus coolabah, Atriplex holocarpa, Duma florulenta, Atriplex pseudocampanulata, Sclerolaena tricuspis, Centipeda cunninghamii, Frankenia connata, Eremophila bignoniiflora, Pseudognaphalium luteoalbum, Calotis hispidula, Sporobolus actinocladus, Calocephalus sonderi, Brachyscome dentata, Sporobolus mitchellii, Minuria integerrima, Maireana coronata, Brachyscome ciliaris, Acacia stenophylla, Cyperus difformis, Crassula colorata, Arabidella eremigena, Triglochin isingiana, Eragrostis dielsii, Eragrostis lacunaria, Tetragonia moorei, Sclerolaena birchii, Myosorus minimus, Lemooria burkittii, Eriochloa procera, Centipeda minima, Sclerolaena muricata, Plantago turrifera, Lepidium sagittulatum, Lepidium oxytrichum, Goodenia glabra, Eryngium paludosum, Atriplex angulata, Alternanthera denticulata* |
| **Environmental Relationships** | In floodplain areas associated with main riparian channels |
| **Species of Conservation Significance** | None apparent at time of survey |
| **Introduced taxa** | *Spergularia rubra, Gypsophila tubulosa* |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 19 ha *likely under mapped*<br>TSR – ca. 3 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 4 Full; 3 Rapid |
| **Total species** | 68 |
| **Species per plot (average)** | 27 |

## Notes

Occurs sporadically in larger floodplain areas associated with the main channels within the reserve. Often occurring alongside and amongst *Eucalyptus ochrophloia* and thus at times maybe under mapped as occurrences of both species within plots have generally been mapped as PCT 67 rather than PCT 39.

# PCT 67

| | |
|---|---|
| **Formation** | Semi-arid Woodlands (Grassy sub-formation) |
| **Class** | North-west Floodplain Woodlands |
| **Plant Community Type** | Yapunyah woodland of Cuttaburra - Paroo River system, Mulga Lands Bioregion |
| **Scientific Name** | *Eucalyptus ochrophloia / Acacia victoriae* subsp. *victoriae, Acacia stenophylla, Eremophila bignoniiflora, Eremophila maculata / Eragrostis australasica, Duma florulenta, Astrebla lappacea, Eragrostis setifolia* |
| **TEC Status** | NA |

**Photograph 36: Site 1 Nocoleche Nature Reserve – PCT 67**

## Description

Open forest to open woodland dominated by Yapunyah (*Eucalyptus ochrophloia*) that often occurs in monospecific stands or is mixed with either Coolabah (*Eucalyptus coolabah*) or Black Box (*Eucalyptus largiflorens*). There is usually a sparse understorey of shrubs such as *Acacia victoriae, Acacia stenophylla* and *Eremophila divaricata*. The ground cover is sparse and includes the grasses Neverfail (*Eragrostis setifolia*), Curly Mitchell Grass (*Astrebla lappacea*), *Leptochloa digitata, Paspalidium* spp., the saltbushes *Atriplex leptocarpa* and *Atriplex lindleyi*, Copperburrs (*Sclerolaena* spp.), *Malacocera tricornis* and *Tetragonia eremaea*. Clumps of Lignum (*Duma florulenta*) and Cane Grass (*Eragrostis australasica*) may be present in low lying sites. Weed species include *Centaurea melitensis* and *Schismus barbatus*. Occurs on compact brown clays, red texture-contrast soils, and stony, beds of streams on floodplains and associated channels, pans and sandy rises subject to periodic inundation. In NSW it is restricted to the Paroo River reaching as far south as Peery Lake, the lower reaches of Purnanga and Dingo Creeks and the channels of Cuttabutta Creek in the Paroo Sand Sheets Cuttaburra-Paroo sub-region of the Mulga Lands Bioregion, far north western NSW. It

is not considered threatened as of 2005 but could become so if the flooding regimes of the Paroo River were to change in the future.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus ochrophloia; Eucalyptus coolabah subsp. coolabah; Eucalyptus camaldulensis; Eucalyptus largiflorens* |
| **Mid** | *Acacia victoriae* subsp*. arida; Acacia stenophylla; Eragrostis australasica; Eremophila bignoniiflora; Eremophila divaricata; Duma florulenta; Eremophila polyclada; Myoporum montanum; Pimelea microcephala* subsp*. microcephala* |
| **Ground** | *Astrebla lappacea; Eragrostis setifolia; Maireana aphylla; Sclerolaena muricata; Paspalidium jubiflorum; Leptochloa digitata; Dichanthium sericeum subsp. sericeum; Digitaria ammophila; Vittadinia cuneata; Pterocaulon sphacelatum; Olearia pimeleoides; Wahlenbergia gracilenta; Crinum flaccidum; Pluchea tetranthera; Minuria integerrima; Malacocera tricornis; Tetragonia eremaea; Chamaesyce drummondii; Osteocarpum acropterum* var*. acropterum; Tecticornia pergranulata; Einadia nutans* subsp*. eremaea* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Eucalyptus ochrophloia Acacia stenophylla, Duma florulenta, Atriplex holocarpa, Tetragonia moorei, Eremophila bignoniiflora, Ranunculus pentandrus, Sclerolaena muricata, Triglochin isingiana, Enchylaena tomentosa, Rhagodia spinescens, Lepidium sagittulatum, Lepidium oxytrichum, Calocephalus sonderi, Sclerolaena lanicuspis, Eucalyptus largiflorens, Eriochloa procera, Eriochlamys cupularis, Calotis plumulifera, Calotis hispidula, Brachyscome ciliaris, Arabidella eremigena, Teucrium racemosum, Paspalidium jubiflorum, Chenopodium auricomum, Atriplex limbata, Atriplex leptocarpa, Atriplex eardleyae, Sporobolus caroli, Rhodanthe floribunda, Plantago turrifera, Minuria integerrima, Frankenia connata, Eremophila divaricata, Einadia nutans, Centipeda minima.* |
| **Environmental Relationships** | Found along major tributaries and open floodplains associated with major channels. |
| **Species of Conservation Significance** | None apparent at time of survey. |
| **Introduced taxa** | *Spergularia rubra, Sonchus oleraceus, Sisymbrium erysimoides* |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 4,746 ha<br>TSR – ca. 120 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 4 Full; 15 Rapid |
| **Total species** | 63 |
| **Species per plot (average)** | 21 |

## Notes

Found in association with PCT 39 and 37 and 39. Some areas mapped as PCT 39 may be this community and vice versa as the type communities can form mosaics. Generally, PCT 67 occurs in larger floodplains and channels and is absent from smaller channels and floodplains.

# PCT 207

| | |
|---|---|
| **Formation** | Semi-arid Woodlands (Grassy sub-formation) |
| **Class** | North-west Floodplain Woodlands |
| **Plant Community Type** | Poplar Box grassy low woodland of drainage lines and depressions of the semi-arid (hot) and arid zone climate zones |
| **Scientific Name** | *Eucalyptus populnea* subsp. *bimbil / Acacia aneura, Acacia victoriae* subsp. *arida, Eremophila longifolia / Atriplex stipitata, Eragrostis laniflora, Austrostipa nitida* |
| **TEC Status** | NA |

**Photograph 37: Site 34 Nocoleche Nature Reserve – PCT 207**

## Description

Mid-high woodland or open woodland with trees to 10 m high dominated by Poplar Box (*Eucalyptus populnea* subsp. *bimbil*). The understorey contains a very sparse layer of tall shrubs or they may be absent. They include Prickly Wattle (*Acacia victoriae*), Mulga (*Acacia aneura*) and Emubush (*Eremophila longifolia*). Other shrubs include *Chenopodium curvispicatum, Eremophila sturtii, Maireana brevifolia* and *Olearia pimeleoides*. Lignum (*Duma florulenta*) may occur on regularly inundated areas while Pink Plains Bush (*Pluchea tetranthera*) occurs on more elevated, sandier soils. Ground cover is very sparse and is composed of grasses such as *Eragrostis laniflora, Austrostipa nitida, Eragrostis eriopoda, Eragrostis setifolia* and *Aristida contorta*. Forbs include *Atriplex stipitata, Calotis cuneifolia, Xerochrysum bracteata, Oxalis corniculata, Rhodanthe floribunda* and *Tetragonia eremaea*. Occurs on sandy red earth or clay soils in sandy creeks and watercourses and periodically flooded depressions on sandplains and alluvial plains inland from the western half of the Cobar Peneplain, being common in the Mulga Lands Bioregion and rarer in the Broken Hill and Channel Country Bioregions. Due to its occurrence in the semi-arid (hot) and arid zones little has been directly cleared but grazing pressure impacts on floristic composition and

recruitment. Stock and feral animals may concentrate in the depressions where this community occurs.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus populnea* subsp*. bimbil* |
| **Mid** | *Acacia aneura; Acacia victoriae* subsp*. arida; Eremophila longifolia; Chenopodium curvispicatum; Eremophila sturtii; Maireana brevifolia; Olearia pimeleoides; Pluchea tetranthera; Rhagodia spinescens; Myoporum montanum; Dodonaea viscosa* subsp*. angustissima; Myoporum platycarpum* subsp*. perbellum; Senna form taxon 'petiolaris'; Hibiscus trionum; Duma florulenta* |
| **Ground** | *Atriplex stipitata; Eragrostis laniflora; Austrostipa nitida; Eragrostis eriopoda; Eragrostis setifolia; Aristida contorta; Calotis cuneifolia; Harmsiodoxa blennodioides; Xerochrysum bracteatum; Oxalis corniculata; Rhodanthe floribunda; Tetragonia eremaea; Rutidosis helichrysoides; Wahlenbergia stricta; Panicum effusum; Vittadinia cuneata* var*. cuneata* f*. cuneata; Pterocaulon sphacelatum; Roepera humillima; Dissocarpus paradoxus; Salsola australis; Sclerolaena patenticuspis; Einadia nutans* subsp*. eremaea; Centipeda cunninghamii; Solanum esuriale; Marsilea drummondii* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Eucalyptus populnea, Duma florulenta, Acacia aneura, Arabidella eremigena, Eremophila longifolia, Enchylaena tomentosa, Dodonaea viscosa, Eragrostis lacunaria, Senna* sp. 'zygophylla'*, Eremophila sturtii, Sclerolaena diacantha, Eucalyptus largiflorens, Sclerolaena convexula, Roepera similis, Rhodanthe floribunda, Eremophila duttonii, Dysphania cristata, Calotis plumulifera, Vittadinia arida, Tripogon loliiformis, Teucrium racemosum, Senna* sp. 'filifolia'*, Salsola australis, Maireana villosa, Enneapogon avenaceus, Einadia nutans, Chenopodium desertorum, Calotis hispidula, Calandrinia eremaea, Bulbine alata, Brachyscome dentata, Austrostipa scabra, Atalaya hemiglauca, Aristida jerichoensis, Alternanthera nodiflora, Alectryon oleifolius, Acacia victoriae, Acacia excelsa* |
| **Environmental Relationships** | Found associated with larger drainage lines primarily in higher elevation localities such as red clay landscapes. |
| **Species of Conservation Significance** | None apparent at time of survey |
| **Introduced taxa** | None apparent at time of survey |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 1,375 ha<br>TSR – ca. 49 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 3 Full; 9 Rapid |
| **Total species** | 38 |
| **Species per plot (average)** | 13 |

## Notes

Areas mapped as this unit may at times fall better within PCT 109 or vice versa.

## *Formation:* Semi-arid Woodlands (Shrubby sub-formation)

### *Class:* Desert Woodlands

# PCT 100

| | |
|---|---|
| **Formation** | Semi-arid Woodlands (Shrubby sub-formation) |
| **Class** | Desert Woodlands |
| **Plant Community Type** | Desert Bloodwood - Mulga low woodland of the semi-arid plains |
| **Scientific Name** | *Corymbia tumescens, Eucalyptus populnea* subsp. *bimbil / Acacia aneura, Senna* sp. 'filifolia' */ Aristida contorta, Aristida jerichoensis* var. *subspinulifera, Thyridolepis mitchelliana* |
| **TEC Status** | NA |

**Photograph 38: Site 39 Nocoleche Nature Reserve – PCT 100**

## Description

Mid-high woodland or open woodland composed of Desert Bloodwood (*Corymbia tumescens*) sometimes with Poplar Box (*Eucalyptus populnea* subsp. *bimbil*) or White Cypress Pine (*Callitris glaucophylla*). A mid-dense to sparse tall shrub/small tree layer is present dominated by Mulga (*Acacia aneura*) occasionally with the small tree Ironwood (*Acacia excelsa*). Shrub diversity is low and includes Emu Bush (*Eremophila longifolia*) and Punty Bush (*Senna* sp. 'filifolia'). The ground cover is sparse is dominated by various grass species including *Aristida contorta, Aristida jerichoensis* var. *subspinulifera, Thyridolepis mitchelliana, Digitaria hystrichoides* and *Themeda triandra* along with forbs such as *Tetragonia tetragonioides, Bulbine alata* and *Calotis hispidula*. Occurs on deep sandy loam soils on gently undulating sandplains or foots of hills. The main

occurrence is north-west of Wanaaring but this community also occurs near Brewarrina to the east and south of Bourke plains at the base of the Gundabooka Range. Due to the sandy soils it is not threatened by clearing but has a long history of grazing and feral animals such as goats are common. Woody shrubs may be increasing in some areas.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Corymbia tumescens; Eucalyptus populnea* subsp. *bimbil; Eucalyptus intertexta; Acacia excelsa subsp. excelsa; Alstonia constricta; Callitris glaucophylla; Brachychiton populneus* subsp. *populneus; Grevillea striata* |
| **Mid** | *Acacia aneura; Senna* sp. 'filifolia'*; Dodonaea viscosa* subsp. *angustissima; Hakea ivoryi; Eremophila longifolia; Acacia victoriae* subsp. *victoriae* |
| **Ground** | *Aristida contorta; Aristida jerichoensis* var. *subspinulifera; Thyridolepis mitchelliana; Digitaria hystrichoides; Themeda australis; Cymbopogon obtectus; Amphipogon caricinus* var. *caricinus; Dichanthium sericeum* subsp. *sericeum; Enneapogon avenaceus; Tetragonia tetragonioides; Bulbine alata; Calotis hispidula* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Corymbia tumescens, Acacia aneura, Lepidium oxytrichum, Eriochlamys cupularis, Rhodanthe floribunda, Calotis hispidula, Atalaya hemiglauca, Erodium crinitum, Senna* sp. 'filifolia'*, Eragrostis eriopoda, Calotis plumulifera, Tetragonia moorei, Sclerolaena tricuspis, Ptilotus sessilifolius, Actinobole uliginosum, Acacia tetragonophylla, Ptilotus gaudichaudii, Arabidella eremigena, Sclerolaena lanicuspis, Roepera similis, Rhodanthe moschata, Eremophila longifolia, Acacia brachystachya, Vittadinia pterochaeta, Pimelea trichostachya, Eremophila duttonii, Xerochrysum bracteatum, Solanum ellipticum, Santalum lanceolatum, Lepidium monoplocoides, Grevillea striata, Goodenia glabra, Goodenia fascicularis, Cynoglossum australe, Calotis inermis* |
| **Environmental Relationships** | Found on gibber and sand plain areas, often associated with drainage areas within higher landscape elements |
| **Species of Conservation Significance** | *Lepidium monoplocoides* |
| **Introduced taxa** | *Sonchus oleraceus, Lysimachia arvensis* |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 5,309 ha<br>TSR – ca. 206 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 3 Full; 15 Rapid |
| **Total species** | 63 |
| **Species per plot (average)** | 24 |

## Notes

*Corymbia tumescens* forms a scattered overstorey that is often obscured by denser patches of *Acacia aneura* and *Acacia brachystachya* and thus areas mapped as PCT 100 could also easily be considered to be PCT 120 or 121 as many dominant species are shared across these communities including *Eucalyptus populnea, Acacia aneura, Acacia excelsa* and *Grevillea striata*. PCT 100 appears to occur within drainage and flow on areas within the higher elevation gibber landscapes in the western parts of the reserve.

## *Class:* Semi-arid Sandplain Woodlands

### PCT 59

| | |
|---|---|
| **Formation** | Semi-arid Woodlands (Shrubby sub-formation) |
| **Class** | Semi-arid Sandplain Woodlands |
| **Plant Community Type** | Belah/Black Oak - Western Rosewood - Leopardwood low open woodland on sandplain and sandy flats in semi-arid (hot) and arid climate zones |
| **Scientific Name** | *Casuarina cristata, Casuarina pauper, Alectryon oleifolius* subsp. *canescens, Flindersia maculosa / Apophyllum anomalum, Dodonaea viscosa* subsp. *angustissima, Eremophila mitchellii, Eremophila sturtii / Sida cunninghamii, Eragrostis eriopoda, Austrostipa nitida, Atriplex stipitata* |
| **TEC Status** | NA |

**Photograph 39: Site 60 Nocoleche Nature Reserve – PCT 59**

### Description

Low open or sparse woodland with trees 5-12 m high dominated by Black Oak (Belah) (*Casuarina pauper*), Western Rosewood (*Alectryon oleifolius* subsp. *canescens*). Poplar Box (*Eucalyptus populnea* subsp. *bimbil*) may be present along run on areas or drainage lines. Whitewood (*Atalaya hemiglauca*) and Beefwood (*Grevillea striata*) are sometimes present. Understorey shrubs include low chenopod shrubs such as Bluebush *Chenopodium curvispicataum, Enchylaena tomentosa, Atriplex stipitata, Sclerolaena diacantha, Maireana pyramidata, Maireana schistocarpa, Maireana enchylaenoides, Dissocarpus paradoxus, Sclerolaena patenticuspis, Chenopodium desertorum* subsp. *desertorum.* Tall shrubs include Warrior Bush *(Apophyllum anomallum*), Budda (*Eremophila mitchellii*), Wilga (*Geijera parviflora*), Narrow-leaved Hopbush (*Dodonaea viscosa* subsp.

*angustissima*), various subspecies of Senna artemisioides, Mulga (*Acacia aneura* sens lat.), *Acacia oswaldii* and *Acacia rigens*. The ground cover is mostly sparse and is composed of low saltbushes such as *Atriplex limbata* and *Atriplex eardleyae*, Copperburrs (*Sclerolaena* spp.), grasses and forbs. Common grass species include *Austrostipa nitida, Austrostipa scabra, Eragrostis eriopoda, Eragrostis setifolia* and *Enneapogon intermedius.* Forbs include *Sida cunninghamii, Boerhavia dominii, Ptilotus obovatus, Vittadinia cuneata, Vittidinia sulcata, Solanum ellipticum, Rutidosis helichrysoides, Gnephosis arachnoidea* and *Rhodanthe floribunda*. Occurs on calcarious red-brown or brown red earths, earthy sands and brown clays on level to undulating sandplains and sandy rises. Common in the Mulga Lands Bioregion and the north-western parts of the Cobar Peneplain Bioregion on the north western plains of NSW. Generally subject to less than 400 mm of annual rainfall. Shares some species with the similar communities ID57&58 to the east and south. Although little of this community has been cleared, some of the main tree and shrub species are not regenerating from seed and rarely from suckers due to total grazing pressure from stock, feral animals and kangaroos

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Casuarina pauper; Alectryon oleifolius* subsp*. canescens; Flindersia maculosa; Eucalyptus populnea* subsp*. bimbil; Atalaya hemiglauca; Eucalyptus intertexta; Acacia cambagei; Casuarina cristata; Grevillea striata; Myoporum platycarpum* subsp*. perbellum* |
| **Mid** | *Apophyllum anomalum; Dodonaea viscosa* subsp*. angustissima; Eremophila mitchellii; Enchylaena tomentosa; Maireana enchylaenoides; Maireana schistocarpa; Chenopodium desertorum subsp. desertorum; Chenopodium curvispicatum; Maireana pyramidata; Atriplex vesicaria; Eremophila sturtii; Geijera parviflora; Eremophila bignoniiflora; Eremophila serrulata; Eremophila longifolia; Myoporum montanum; Rhagodia spinescens; Acacia cana; Senna* sp. 'artemisioides'*; Senna* sp. 'filifolia'*; Acacia tetragonophylla; Acacia aneura; Pittosporum angustifolium; Pimelea microcephala* subsp*. microcephala; Hakea leucoptera* subsp*. leucoptera; Hakea tephrosperma; Acacia rigens; Acacia victoriae* subsp*. arida; Capparis mitchellii; Senna* sp. 'filifolia'*; Senna* sp. 'petiolaris'*; Senna phyllodinea; Acacia oswaldii; Hakea ivoryi; Chenopodium nitrariaceum; Jasminum lineare; Acacia brachystachya; Lysiana exocarpi; Pittosporum angustifolium* |
| **Ground** | *Austrostipa nitida; Eragrostis eriopoda; Sida cunninghamii; Atriplex stipitata; Enneapogon intermedius; Eragrostis setifolia; Sclerolaena diacantha; Sclerolaena intricata; Ptilotus obovatus; Vittadinia cuneata; Vittadinia sulcata; Solanum ellipticum; Rutidosis helichrysoides; Rhodanthe floribunda; Lepidium leptopetalum; Calotis cuneifolia; Austrostipa scabra subsp. scabra; Dissocarpus paradoxus; Sclerolaena patenticuspis; Atriplex limbata; Atriplex eardleyae; Atriplex holocarpa; Teucrium racemosum; Maireana brevifolia; Sida ammophila; Solanum esuriale; Sclerolaena articulata; Maireana triptera; Salsola tragus subsp. tragus; Swainsona oligophylla; Enneapogon intermedius; Boerhavia dominii; Cyperus victoriensis; Cyperus bifax; Eragrostis laniflora; Tribulus eichlerianus; Chamaesyce drummondii; Chenopodium cristatum; Plantago cunninghamii; Gnephosis arachnoidea; Lepidium oxytrichum* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Casuarina pauper, Eremophila sturtii, Dissocarpus paradoxus, Acacia aneura, Alectryon oleifolius, Senna* sp. 'zygophylla', *Lepidium oxytrichum, Sclerolaena tricuspis, Maireana triptera, Flindersia maculosa, Eremophila longifolia, Enchylaena tomentosa, Sclerolaena lanicuspis, Roepera similis, Rhagodia spinescens, Dodonaea viscosa, Arabidella eremigena, Sclerolaena muricata, Rhodanthe floribunda, Olearia pimeloides, Maireana coronata, Eragrostis setifolia, Calotis plumulifera* |
| **Environmental Relationships** | Generally found on soils with some clay content. Usually in water run on areas. |
| **Species of Conservation Significance** | None apparent at time of survey |
| **Introduced taxa** | None apparent at time of survey |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 84 ha *likely under mapped* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full; 8 Rapid |
| **Total species** | 23 |
| **Species per plot (average)** | 15 |

## Notes

In-spite of a few more eastern/southern taxa within its description this PCT is close to the floristics found within the reserve. Most of the dominant species are found together as small patches within the broader mapped PCTs of the reserve so whether patches of this combination could be deemed as forming PCT 59 or just minor components of other PCTs is debatable. There is certainly some synonymy within current western PCT descriptions. Likely to be under-mapped as it is difficult to separate individual areas of PCT 59 from broader mapped types.

## *Class:* Western Peneplain Woodlands

# Appendix 2: – PCT 109

| | |
|---|---|
| **Formation** | Semi-arid Woodlands (Shrubby sub-formation) |
| **Class** | Western Peneplain Woodlands |
| **Plant Community Type** | Poplar Box - Mulga - Ironwood woodland on red loam soils on plains in the Cobar Peneplain Bioregion and north-eastern Mulga Lands Bioregion |
| **Scientific Name** | *Eucalyptus populnea* subsp. *bimbil / Acacia aneura, Senna* sp. 'filifolia', *Senna* sp. 'artemisioides', *Eremophila sturtii / Aristida jerichoensis* var. *subspinulifera, Chloris truncata, Eragrostis eriopoda, Calotis hispidula* |
| **TEC Status** | NA |

**Photograph 40: Site 29 Nocoleche Nature Reserve – PCT 109**

## Description

Mid-high woodland or open woodland with trees to 12 m dominated by Poplar Box (*Eucalyptus populnea* subsp. *bimbil*) as the tallest canopy layer and Mulga (*Acacia aneura*) and Ironwood (*Acacia excelsa*) forming a lower tree canopy layer. Other tree species may include Gum Coolabah (*Eucalyptus intertexta*), Silver-leaved Ironbark (*Eucalyptus melanophloia*) and White Cypress Pine (*Callitris glaucophylla*). Shrubs species include various species of Senna, Narrow-leaved Hopbush (*Dodonaea viscosa subsp. angustissima*), Budda (*Eremophila mitchellii*), *Eremophila sturtii*, Western Boobialla (*Myoporum montanum*) and Emu Bush (*Eremophila longifolia*). The ground cover is sparse containing wiregrass (*Aristida jerichoensis*), *Eragrostis eriopoda,* Windmill Grass (*Chloris truncata*) and other grasses and forbs such as *Vittadinia hispidula, Erodium crinitum, Millotia greevesii* subsp. *glandulosa, Rhodanthe moschata, Sida corrugata* and *Calotis cuneifolia*. Mainly occurs on red clay

loam soils on flats or undulating sandplains and drainage lines in central-north NSW in the Cobar Peneplain Bioregion and eastern section of the Mulga Lands Bioregion. Although most of this community remains uncleared, it is generally in poor health due to grazing pressure, soil erosion and woody shrub regrowth. Eastern areas have been extensively cleared as has the area within 30 km of Cobar that was cleared to supply timber to the mining industry. Woody native shrub invasion is commonplace. Grades into other types of Poplar Box woodland, Mulga shrubland or Gum Coolabah (*Eucalyptus intertexta*) woodland and in the northwest of its range grades into Bloodwood-Mulga woodland (ID100).

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Eucalyptus populnea* subsp*. bimbil; Eucalyptus intertexta; Callitris glaucophylla; Corymbia tumescens; Grevillea striata; Eucalyptus melanophloia* |
| **Mid** | Acacia aneura; Acacia excelsa subsp. angusta; Geijera parviflora; Senna form taxon 'filifolia'; Eremophila mitchellii; Dodonaea viscosa subsp. angustissima; *Dodonaea petiolaris; Eremophila sturtii; Senna phyllodinea; Apophyllum anomalum; Eremophila longifolia; Hakea leucoptera subsp. leucoptera; Eremophila deserti; Myoporum montanum; Acacia tetragonophylla; Thryptomene hexandra; Hannafordia bissillii; Senna* sp. 'petiolaris'*; Senna* sp. 'artemisioides'*; Capparis mitchellii; Acacia brachystachya; Psydrax oleifolia* |
| **Ground** | *Aristida jerichoensis* var*. subspinulifera; Chloris truncata; Eragrostis eriopoda; Sclerolaena diacantha; Sclerolaena birchii; Calotis cuneifolia; Sida cunninghamii; Salsola australis; Aristida contorta; Vittadinia hispidula; Thyridolepis mitchelliana; Einadia nutans subsp. eremaea; Erodium crinitum; Velleia glabrata; Millotia greevesii* subsp*. glandulosa; Rhodanthe moschata; Sida corrugata; Daucus glochidiatus; Cheilanthes sieberi* subsp*. sieberi; Calandrinia eremaea* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Eucalyptus populnea, Eremophila sturtii, Roepera similis, Eremophila duttonii, Rhodanthe floribunda, Calotis plumulifera, Tetragonia moorei, Senna* sp. 'zygophylla'*, Senna* sp. 'filifolia'*, Enchylaena tomentosa, Arabidella eremigena, Acacia aneura, Lepidium oxytrichum, Pimelea microcephala, Eriochlamys cupularis, Acacia victoriae, Sclerolaena diacantha, Ptilotus sessilifolius, Eremophila longifolia, Calotis hispidula, Sclerolaena tricuspis, Lepidium monoplocoides, Grevillea striata, Dodonaea viscosa, Pimelea trichostachya, Chenopodium desertorum, Bulbine alata, Brachyscome dentata, Aristida holathera, Solanum ellipticum, Sclerolaena lanicuspis, Santalum lanceolatum, Salsola australis, Ptilotus polystachyus, Ptilotus parvifolius, Portulaca oleracea, Plantago turrifera, Pittosporum angustifolium, Phlegmatospermum cochlearinum, Lemooria burkittii, Eragrostis lacunaria, Einadia nutans, Daucus glochidiatus, Calandrinia eremaea, Atriplex leptocarpa, Atalaya hemiglauca, Actinobole uliginosum.* |

| | |
|---|---|
| **Environmental Relationships** | Found in a number of locations associated with higher influx of water. Occurring along minor ephemeral streams and around the margins of ephemeral wetlands particularly in the western portion of the reserve. |
| **Species of Conservation Significance** | *Lepidium monoplocoides* |
| **Introduced taxa** | *Sisymbrium erysimoides, Lysimachia arvensis, Erodium cicutarium, Spergularia rubra, Sonchus oleraceus, Cenchrus ciliaris* |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 2,514 ha<br>TSR – ca. 355 ha |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 5 Full; 13 Rapid |
| **Total species** | 94 |
| **Species per plot (average)** | 29 |

## Notes

PCT 109 overlaps considerably in floristics intermixes with PCT 120/121, PCT 100 and in also with PCT 134. Mapping delineation between these types can often be subjective and boundaries broadly fuzzy.

# PCT 118

| | |
|---|---|
| **Formation** | Semi-arid Woodlands (Shrubby sub-formation) |
| **Class** | Western Peneplain Woodlands |
| **Plant Community Type** | Gidgee chenopod woodland on red-brown clays in the semi-arid (hot) climate zone mainly in the Mulga Lands Bioregion |
| **Scientific Name** | *Acacia cambagei / Rhagodia spinescens, Eremophila mitchellii, Apophyllum anomalum, Chenopodium desertorum* subsp. *desertorum / Einadia nutans* subsp. *eremaea, Roepera iodocarpa, Calandrinia eremaea, Thyridolepis mitchelliana* |
| **TEC Status** | NA |

**Photograph 41: Site 61 Nocoleche Nature Reserve – PCT 118**

## Description

Mid-high woodland up to 10 m dominated by Gidgee (*Acacia cambagei*) often occurring in dense stands. Associate canopy species often include Brigalow (*Acacia harpophylla*), Whitewood (*Atalaya hemiglauca*), Budda (*Eremophila mitchellii*), Black Oak (*Casuarina pauper*) and occasionally Leopardwood (*Flindersia maculosa*). Black Box (*Eucalyptus largiflorens*) and Poplar Box (*Eucalyptus populnea* subsp. *bimbil*) may be present. The shrub layer is sparse often with Warrior Bush (*Apophyllum anomalum*), *Rhagodia spinescens, Eremophila sturtii, Eremophila deserti, Acacia oswaldii* with small shrubs including *Sclerolaena muricata, Chenopodium desertorum* subsp. *anidiophyllum*, Black Bluebush (*Maireana pyramidata*) and *Maireana brevifolia*. Ground cover is often bare or very sparse dominated by Copperburrs (*Sclerolaena* spp.); forbs such as *Einadia nutans* subsp. *eremaea*, *Roepera iodocarpa*, *Calandrinia eremaea, Vittadinia eremaea, Rhodanthe floribunda, Senecio glossanthus, Tetragonia moorei* and *Calotis hispidula*; and grasses such as *Thyridolepis mitchelliana, Enteropogon acicularis, Austrostipa scabra* and *Astrebla pectinata*. Occurs on transitional brown-red gravel clay, clay-loam to red clay soils on plains or drainage

depressions on gently undulating plains landform in the semi-arid (hot) climate zone of north western NSW particularly in the Mulga Lands Bioregion west of the Culgoa River. Also widespread in Queensland. Small areas occur near Narran lake in the east. Grades into Mulga and Brigalow communities and eucalypt floodplain woodlands. This community has been heavily grazed, and has been ringbarked or cleared over large areas with varying ages of regrowth occurring. Lack of regeneration through seedlings may pose a long-term management problem.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Acacia cambagei; Eucalyptus populnea* subsp*. bimbil; Eucalyptus largiflorens; Atalaya hemiglauca; Casuarina pauper; Acacia harpophylla; Flindersia maculosa; Grevillea striata* |
| **Mid** | *Rhagodia spinescens; Eremophila mitchellii; Apophyllum anomalum; Sclerolaena tricuspis; Chenopodium desertorum subsp. anidiophyllum; Sclerolaena birchii; Acacia aneura; Alectryon oleifolius subsp. canescens; Acacia polybotrya; Capparis mitchellii; Eremophila sturtii; Eremophila longifolia; Amyema quandang var. quandang; Pimelea microcephala subsp. microcephala; Eremophila deserti; Senna phyllodinea; Pittosporum angustifolium; Acacia oswaldii; Senna* sp. 'sturtii'*; Maireana brevifolia; Maireana pentatropis; Salsola australis; Enchylaena tomentosa; Maireana pyramidata; Citrus glauca; Sclerolaena diacantha; Sclerolaena parallelicuspis; Dodonaea peduncularis; Atriplex crassipes* var*. appendiculata* |
| **Ground** | *Einadia nutans* subsp*. eremaea; Roepera iodocarpa; Calandrinia eremaea; Thyridolepis mitchelliana; Paspalidium constrictum; Enteropogon acicularis; Dichanthium sericeum* subsp*. sericeum; Paspalidium jubiflorum; Leptochloa digitata; Eulalia aurea; Austrostipa scabra subsp. scabra; Atriplex stipitata; Dissocarpus paradoxus; Astrebla pectinata; Vittadinia eremaea; Rhodanthe floribunda; Senecio glossanthus; Tetragonia moorei; Roepera simile; Calotis hispidula; Atriplex crassipes* var*. appendiculata; Sclerolaena calcarata; Sclerolaena diacantha* |

| | |
|---|---|
| **Variations** – description of PCT as found during the current survey | *Acacia cambagei, Roepera similis, Rhagodia spinescens, Sclerolaena diacantha, Enchylaena tomentosa, Arabidella eremigena, Sclerolaena muricata, Millotia greevesii, Lepidium oxytrichum, Eremophila sturtii, Dodonaea viscosa, Atriplex stipitata* |
| **Environmental Relationships** | Restricted to the margins of major playa lakes |
| **Species of Conservation Significance** | None apparent at time of survey |
| **Introduced taxa** | None apparent at time of survey |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR 10 ha *other occurrences likely* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 1 Full |
| **Total species** | 12 |
| **Species per plot (average)** | 12 |

## Notes

Only on occurrence was noted during the survey but it is likely that other patches may occur around larger ephemeral lakes in more remote areas of the reserve.

# PCT 134

| | |
|---|---|
| **Formation** | Semi-arid Woodlands (Shrubby sub-formation) |
| **Class** | Western Peneplain Woodlands |
| **Plant Community Type** | Ironwood woodland of the semi-arid plains |
| **Scientific Name** | *Acacia excelsa* subsp. *angusta, Callitris glaucophylla, Acacia aneura / Pittosporum angustifolium, Apophyllum anomalum, Senna* sp. 'filifolia'*, Olearia pimeleoides / Aristida echinata, Eragrostis eriopoda, Sclerolaena birchii, Aristida contorta* |
| **TEC Status** | NA |

**Photograph 42: Site 52 Nocoleche Nature Reserve – PCT 134**

## Description

Mid-high or low woodland up to 10 m high dominated by Ironwood (*Acacia excelsa*) that often forms pure stands. May mix with Mulga (*Acacia aneura*), White Cypress Pine (*Callitris glaucophylla*), Poplar Box (*Eucalyptus populnea* subsp. *bimbil*), Gum Coolabah (*Eucalyptus intertexta*) or Beefwood (*Grevillea striata*). A sparse layer of shrubs may include *Pittosporum angustifolium*, Warrior Bush (*Apophyllum anomalum*), Punty Bush (*Senna* sp. 'filifolia'), Budda (*Eremophila mitchellii*), Turpentine Bush (*Eremophila sturtii*), Wilga (*Geijera parviflora*) and Tar Bush (*Eremophila glabra*). The small shrub *Olearia pimelioides* is often present. Ground cover is often very sparse and is dominated by the grasses *Aristida jerichoensis, Aristida contorta, Eragrostis eriopoda, Austrostipa scabra* and *Thyriodolepis mitchelliana*. Copperburrs such as *Sclerolaena birchii* may be common. Occurs on deep sands, solonised brown soils and red earths on undulating sandplains in the semi-arid (hot) climate zone of north western NSW mainly in the vicinity of Louth extending north-east and north-west of Bourke. Occurs mainly in the Cobar and Mulga Lands Bioregions. Often forms a mosaic with other plant communities such as Mulga, Gum Coolabah, Black Oak - Western Rosewood and Poplar Box woodlands. Most of this community remains uncleared but it has been

heavily grazed and is in average poor condition over most of its extent. Ironwood may be cut for fodder during droughts.

## Floristic Summary

| Stratum | Typical Species |
|---|---|
| **Upper** | *Acacia excelsa* subsp. *angusta; Callitris glaucophylla; Acacia aneura; Grevillea striata; Eucalyptus populnea* subsp. *bimbil; Eucalyptus intertexta; Atalaya hemiglauca* |
| **Mid** | *Pittosporum angustifolium; Apophyllum anomalum; Senna* sp. 'filifolia'*; Olearia pimeloides; Dodonaea viscosa* subsp. *angustissima; Hakea tephrosperma; Hakea leucoptera* subsp. *leucoptera; Acacia homalophylla; Eremophila mitchellii; Rhagodia spinescens; Eremophila sturtii; Eremophila bowmanii* subsp. *latifolia* |
| **Ground** | *Aristida echinata; Eragrostis eriopoda; Sclerolaena birchii; Sclerolaena diacantha; Aristida contorta; Thyridolepis mitchelliana; Enchylaena tomentosa; Einadia nutans* subsp. *linifolia; Harmsiodoxa blennodioides; Erodium crinitum; Salsola tragus subsp. tragus; Calandrinia eremaea; Ptilotus polystachyus* var. *polystachyus; Goodenia cycloptera; Solanum cleistogamum; Swainsona phacoides* |

| | |
|---|---|
| **Variations –** description of PCT as found during the current survey | *Acacia excelsa, Rhodanthe floribunda, Arabidella eremigena, Enchylaena tomentosa, Senna* sp. 'zygophylla'*, Eremophila sturtii, Eragrostis eriopoda, Sclerolaena tricuspis, Chthonocephalus pseudovax, Lemooria burkittii, Dissocarpus paradoxus, Calotis hispidula, Tetragonia moorei, Erodium crinitum, Dodonaea viscosa, Chenopodium desertorum, Tripogon loliiformis, Maireana triptera, Lepidium oxytrichum, Eremophila longifolia, Atriplex stipitata, Acacia aneura, Jasminum lineare, Gnephosis eriocarpa, Solanum ellipticum, Roepera similis, Myriocephalus pluriflorus, Eragrostis setifolia, Claotis plumulifera, Bulbine alata, Sclerolaena lanicuspis, Millotia greevesii, Maireana decalvans, Einadia nutans, Dactyloctenium radulans* |
| **Environmental Relationships** | Found on sand plain and dunal areas |
| **Species of Conservation Significance** | None apparent at time of survey |
| **Introduced taxa** | None apparent at time of survey |

## Distribution and Extent

| Reserve | Mapped Area |
|---|---|
| **Nocoleche NR** | Nocoleche NR ca. 134 ha *potentially under mapped* |

## Species Richness

| | |
|---|---|
| **No. of Sites** | 4 Full; 1 Rapid |
| **Total species** | 56 |
| **Species per plot (average)** | 27 |

## Notes

PCT 134 may be synonymous with other types described as occurring in the reserve or may be an intergrade/ecotonal. The main dominants are shared by a number of other PCTs mapped for the reserve. Many areas that may conform to this PCT have been mapped under other mapping units, thus if it occurs as a distinct unit it has likely been under mapped.

## Appendix 2 – Plot descriptions

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NC* | 1 | 19/08/2019 | 20x20 | 55 | 94 | 223 429 | 6 693 408 | 85 | Cream brown clay soil. Cattle dung. |
| *NC* | 2 | 19/08/2019 | 20x20 | 55 | 94 | 224 084 | 6 693 006 | 87 | Soil cream brown clay. Regenerating mainly youn stems. |
| *NC* | 3 | 19/08/2019 | 20x20 | 55 | 94 | 224 583 | 6 692 942 | 88 | Soil ight brown orange. Clay pan. Few old trees outside plot. Some regenerating trees. Eagles nest. Probably recently flooded. |
| *NC* | 4 | 19/08/2019 | 20x20 | 55 | 94 | 225 077 | 6 693 033 | 88 | Soil medium brown cracking clay. Regenerating trees present. In creek bed. |
| *NC* | 5 | 20/09/2019 | 20x20 | 55 | 94 | 224 202 | 6 891 868 | 100 | Soil orange brown sadny loam. Sandy ridge above clay pan. |
| *NC* | 6 | 20/09/2019 | 20x20 | 55 | 94 | 224 414 | 6 691 106 | 100 | Soil cream brown clay loam. |
| *NC* | 7 | 20/09/2019 | 20x20 | 55 | 94 | 225 002 | 6 690 074 | 100 | Soil cream brown clay loam. Flood plain. |
| *NC* | 8 | 20/09/2019 | 20x20 | 55 | 94 | 224 905 | 6 688 384 | 100 | Soil cream orange clay pan. |
| *NC* | 9 | 20/09/2019 | 20x20 | 55 | 94 | 224 653 | 6 687 663 | 100 | Soil cream brown clay. Floodplain. |
| *NC* | 10 | 20/09/2019 | 20x20 | 55 | 94 | 226 206 | 6 687 330 | 100 | Soil light orange sand on dune. |
| *NC* | 11 | 21/09/2019 | 20x20 | 55 | 94 | 223 852 | 6 694 606 | 100 | Soil pale orange clay loam. |
| *NC* | 12 | 21/09/2019 | 20x20 | 55 | 94 | 226 545 | 6 694 260 | 100 | Soil orange sand on dune. |
| *NC* | 13 | 21/09/2019 | 20x20 | 55 | 94 | 229 115 | 6 694 949 | 100 | Soil orange sand on dune. Rabbits present. |
| *NC* | 14 | 21/09/2019 | 20x20 | 55 | 94 | 229 395 | 6 692 916 | 100 | Soil pinkish cream brown clay bodering on water chanel. Lots of cattle dung. |
| *NC* | 15 | 21/09/2019 | 20x20 | 55 | 94 | 231 759 | 6 693 958 | 100 | Soil orange sand on dune near water. |
| *NC* | 16 | 21/09/2019 | 20x20 | 55 | 94 | 235 388 | 6 692 706 | 100 | Soil orange sandy loam. |
| *NC* | 17 | 21/09/2019 | 20x20 | 55 | 94 | 236 548 | 6 692 480 | 100 | Soil cream brown clay. Flood plain. |
| *NC* | 18 | 21/09/2019 | 20x20 | 55 | 94 | 240 491 | 6 692 544 | 100 | Soil range sandy loam. |
| *NC* | 19 | 21/09/2019 | 20x20 | 55 | 94 | 242 193 | 6 692 980 | 100 | Soil orange sand on ridge. |
| *NC* | 20 | 21/09/2019 | 20x20 | 55 | 94 | 242 159 | 6 693 116 | 100 | Soil orange brown clay loam. |
| *NC* | 21 | 21/09/2019 | 20x20 | 55 | 94 | 244 132 | 6 693 197 | 100 | Soil orange brown  gibber. |
| *NC* | 22 | 22/09/2019 | 20x20 | 55 | 94 | 219 483 | 6 678 081 | 100 | Soil orange sand  gibber in parts. |

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NC* | 23 | 22/09/2019 | 20x20 | 55 | 94 | 219 480 | 6 678 261 | 100 | Soil orange brown. |
| *NC* | 24 | 22/09/2019 | 20x20 | 55 | 94 | 218 523 | 6 678 288 | 100 | Soil orange brown clay loam gibber. |
| *NC* | 25 | 22/09/2019 | 20x20 | 55 | 94 | 217 494 | 6 678 273 | 100 | Soil orange clay loam. Very rocky large rock outcropping on hillside. |
| *NC* | 26 | 22/09/2019 | 20x20 | 55 | 94 | 217 303 | 6 678 663 | 100 | |
| *NC* | 27 | 22/09/2019 | 20x20 | 55 | 94 | 216 273 | 6 678 439 | 100 | Rocky area soil orange sandy loam. |
| *NC* | 28 | 22/09/2019 | 20x20 | 55 | 94 | 214 064 | 6 678 523 | 100 | Soil orange sandy loam some rocks exposed. |
| *NC* | 29 | 22/09/2019 | 20x20 | 55 | 94 | 213 630 | 6 678 556 | 100 | Soil orange brown sandy loam. |
| *NC* | 30 | 22/09/2019 | 20x20 | 55 | 94 | 212 758 | 6 679 630 | 100 | Soil orange sandy loam. |
| *NC* | 31 | 22/09/2019 | 20x20 | 55 | 94 | 212 603 | 6 680 618 | 100 | Soil orange brown sandy loam. |
| *NC* | 32 | 22/09/2019 | 20x20 | 55 | 94 | 212 464 | 6 681 455 | 100 | Soil orange sandy loam. |
| *NC* | 33 | 22/09/2019 | 20x20 | 55 | 94 | 218 352 | 6 679 698 | 100 | Soil orange sandy loam gibber. |
| *NC* | 34 | 23/09/2019 | 20x20 | 55 | 94 | 219 089 | 6 687 728 | 100 | Soil orange sandy loam. Wetland area. |
| *NC* | 35 | 23/09/2019 | 20x20 | 55 | 94 | 219 213 | 6 687 828 | 100 | Soil pinkish light brown clay loam. Many gilgai. |
| *NC* | 36 | 23/09/2019 | 20x20 | 55 | 94 | 215 583 | 6 687 017 | 100 | Soil orange sandy loam. |
| *NC* | 37 | 23/09/2019 | 20x20 | 55 | 94 | 214 398 | 6 687 062 | 100 | Soil orange sandy loam. In dry creekline. |
| *NC* | 38 | 23/09/2019 | 20x20 | 55 | 94 | 214 009 | 6 687 094 | 100 | Soil orange sandy loam. Scald area. |
| *NC* | 39 | 23/09/2019 | 20x20 | 55 | 94 | 213 018 | 6 687 160 | 100 | Soil orange brown clay loam. |
| *NC* | 40 | 23/09/2019 | 20x20 | 55 | 94 | 211 409 | 6 687 347 | 100 | Soil light orange clay loam gibber. |
| *NC* | 41 | 23/09/2019 | 20x20 | 55 | 94 | 211 179 | 6 688 870 | 100 | Soil orange clay loam gibber. |
| *NC* | 42 | 23/09/2019 | 20x20 | 54 | 94 | 788 694 | 6 689 872 | 100 | Soil orange clay loam. |
| *NC* | 43 | 23/09/2019 | 20x20 | 54 | 94 | 781 634 | 6 689 614 | 100 | Soil orange sandy loam. |
| *NC* | 44 | 23/09/2019 | 20x20 | 54 | 94 | 780 523 | 6 689 544 | 100 | Soil orange sandy loam. |
| *NC* | 45 | 23/09/2019 | 20x20 | 54 | 94 | 780 007 | 6 691 505 | 100 | Soil orange sandy loam. |
| *NC* | 46 | 23/09/2019 | 20x20 | 54 | 94 | 780 120 | 6 695 328 | 100 | Soil orange loamy sand. |
| *NC* | 47 | 23/09/2019 | 20x20 | 54 | 94 | 780 177 | 6 697 704 | 100 | Soil orange loamy sand. |
| *NC* | 48 | 23/09/2019 | 20x20 | 54 | 94 | 781 154 | 6 699 251 | 100 | Soil orange clay loam gibber. |
| *NC* | 49 | 23/09/2019 | 20x20 | 54 | 94 | 785 602 | 6 699 150 | 100 | Soil orange sandy clay loam. |

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NC* | 50 | 23/09/2019 | 20x20 | 54 | 94 | 786 615 | 6 699 053 | 100 | Soil light pinkish brown clay loam. In wetland. |
| *NC* | 51 | 24/09/2019 | 20x20 | 55 | 94 | 227 061 | 6 686 795 | 100 | Soil brown cracking clay. |
| *NC* | 52 | 24/09/2019 | 20x20 | 55 | 94 | 227 402 | 6 682 593 | 100 | Soil orange loamy sand. |
| *NC* | 53 | 24/09/2019 | 20x20 | 55 | 94 | 228 107 | 6 681 489 | 100 | Soil cream brown clay occasional gilgais. In flood plain. |
| *NC* | 54 | 24/09/2019 | 20x20 | 55 | 94 | 230 013 | 6 680 377 | 100 | Soil orange sandy loam. |
| *NC* | 55 | 24/09/2019 | 20x20 | 55 | 94 | 237 038 | 6 680 965 | 100 | Soil light grey brown clay. Occasional gilgais present. |
| *NC* | 56 | 24/09/2019 | 20x20 | 55 | 94 | 237 171 | 6 680 081 | 100 | Soil cream brown clay. Flood plain. |
| *NC* | 57 | 24/09/2019 | 20x20 | 55 | 94 | 237 803 | 6 678 475 | 100 | Soil orange loamy sand. |
| *NC* | 58 | 24/09/2019 | 20x20 | 55 | 94 | 240 927 | 6 678 441 | 100 | Soil cream grey clay flood plain. |
| *NC* | 59 | 24/09/2019 | 20x20 | 55 | 94 | 243 078 | 6 678 000 | 100 | Soil orange sandy loam. |
| *NC* | 60 | 24/09/2019 | 20x20 | 55 | 94 | 245 484 | 6 678 333 | 100 | Soil orange sandy loam. |
| *NC* | 61 | 24/09/2019 | 20x20 | 55 | 94 | 245 454 | 6 679 145 | 100 | Soil orange sandy loam. |
| *NC* | 62 | 24/09/2019 | 20x20 | 55 | 94 | 245 434 | 6 679 320 | 100 | Soil cream hard cracking clay. Clay pan. |
| *NC* | 63 | 24/09/2019 | 20x20 | 55 | 94 | 245 361 | 6 681 578 | 100 | Soil cream silty clay. Large amount of gilgais and soft under foot. |
| *NC* | 64 | 24/09/2019 | 20x20 | 55 | 94 | 245 943 | 6 684 542 | 100 | Soil cream silty clay. Many gilgais relatively soft. Very high dung cover. |
| *NC* | 65 | 24/09/2019 | 20x20 | 55 | 94 | 246 499 | 6 689 152 | 100 | Soil pinkish cream silty clay. |
| *NC* | 66 | 25/09/2019 | 20x20 | 55 | 94 | 246 907 | 6 693 435 | 100 | Soil orange loamy sand. |
| *NC* | 67 | 25/09/2019 | 20x20 | 55 | 94 | 217 308 | 6 693 587 | 100 | Soil orange brown clay loam. |
| *NC* | 68 | 25/09/2019 | 20x20 | 55 | 94 | 217 331 | 6 693 628 | 100 | |
| *NC* | 69 | 25/09/2019 | 20x20 | 55 | 94 | 213 369 | 6 692 982 | 100 | Soil orange clay. Circular clay pan. |
| *NC* | 70 | 25/09/2019 | 20x20 | 55 | 94 | 211 421 | 6 692 088 | 100 | Soil orange sandy loam gibber. |
| *NC* | 71 | 25/09/2019 | 20x20 | 54 | 94 | 789 687 | 6 692 705 | 100 | |
| *NC* | 72 | 25/09/2019 | 20x20 | 54 | 94 | 788 614 | 6 693 454 | 100 | Soil orange loamy sand. |
| *NC* | 73 | 25/09/2019 | 20x20 | 54 | 94 | 788 719 | 6 693 508 | 100 | |
| *NC* | 74 | 25/09/2019 | 20x20 | 54 | 94 | 787 513 | 6 695 219 | 100 | Soil orange loamy sand. Very heavily grazed. Goat track through plot. Significant amounts of cattle dung. |

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NC* | 75 | 25/09/2019 | 20x20 | 54 | 94 | 787 905 | 6 195 936 | 100 | Soil orange loamy sand. |
| *NC* | 76 | 25/09/2019 | 20x20 | 54 | 94 | 788 924 | 6 696 836 | 100 | Soil light grey brown silty clay loam. Flood plain. |
| *NC* | 77 | 25/09/2019 | 20x20 | 55 | 94 | 217 292 | 6 698 616 | 100 | Soil light orange brown sandy clay loam. |
| *NC* | 78 | 25/09/2019 | 20x20 | 55 | 94 | 218 523 | 6 698 302 | 100 | Soil pink brown silty clay. Clay pan. |
| *NC* | 79 | 2017 | Nested | 55 | 94 | 216 763 | 6 693 869 | 100 | NOC005. Eastlery bank of tank in claypan. |
| *NC* | 80 | 2017 | Nested | 55 | 94 | 213 562 | 6 693 105 | 100 | NOC010. On Garden Vale Firetrail in Womparley Landsystem. |
| *NC* | 81 | 2017 | Nested | 55 | 94 | 223 355 | 6 691 862 | 100 | NOC016. East of Wilcannia Wanaaring Road in Paroo Landsystem. |
| *NC* | 82 | 2017 | Nested | 55 | 94 | 223 425 | 6 687 061 | 100 | NOC020. East of Junction between Wilcannia Wanaaring Road and black Bore Trail. |
| *NC* | 83 | 2017 | Nested | 55 | 94 | 228 914 | 6 694 196 | 100 | NOC026. Bore Firetrail on edge of waterhole. |
| *NC* | 84 | 2017 | Nested | 55 | 94 | 233 396 | 6 693 789 | 100 | NOC028. On No 6 Bore Fire Trail in Colane Landsystem. |
| *NC* | 85 | 2017 | Nested | 54 | 94 | 780 036 | 6 698 708 | 100 | NOC034. |
| *NC* | 86 | 2017 | Nested | 54 | 94 | 783 898 | 6 689 778 | 100 | NOC037. |
| *NC* | 87 | 2017 | Nested | 55 | 94 | 234 737 | 6 696 098 | 100 | NOC041. |
| *NC* | 88 | 2017 | Nested | 55 | 94 | 232 795 | 6 696 208 | 100 | NOC042. |
| *NC* | 89 | 2017 | Nested | 55 | 94 | 246 988 | 6 694 766 | 100 | NOC045. |
| *NC* | 90 | 2017 | Nested | 55 | 94 | 238 140 | 6 693 380 | 100 | NOC046. |
| *NC* | 91 | 2017 | Nested | 55 | 94 | 239 627 | 6 693 148 | 100 | NOC047. |
| *NC* | 92 | 2017 | Nested | 55 | 94 | 230 796 | 6 679 063 | 100 | NOC055. |
| *NC* | 93 | 2017 | Nested | 55 | 94 | 226 742 | 6 677 536 | 100 | NOC056. |
| *NRC* | 1 | 19/08/2019 | Plotless | 55 | 94 | 223 464 | 6 693 373 | 85 | |
| *NRC* | 2 | 19/08/2019 | Plotless | 55 | 94 | 223 496 | 6 693 375 | 86 | |
| *NRC* | 3 | 19/08/2019 | Plotless | 55 | 94 | 225 288 | 6 692 910 | 88 | |
| *NRC* | 4 | 20/09/2019 | Plotless | 55 | 94 | 224 393 | 6 691 168 | 100 | |
| *NRC* | 5 | 20/09/2019 | Plotless | 55 | 94 | 224 695 | 6 687 630 | 100 | |
| *NRC* | 6 | 20/09/2019 | Plotless | 55 | 94 | 226 284 | 6 687 249 | 100 | |

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NRC* | 7 | 21/09/2019 | Plotless | 55 | 94 | 225 017 | 6 694 246 | 100 | |
| *NRC* | 8 | 21/09/2019 | Plotless | 55 | 94 | 225 901 | 6 694 365 | 100 | |
| *NRC* | 9 | 21/09/2019 | Plotless | 55 | 94 | 229 865 | 6 694 091 | 100 | |
| *NRC* | 10 | 21/09/2019 | Plotless | 55 | 94 | 229 401 | 6 692 861 | 100 | |
| *NRC* | 11 | 21/09/2019 | Plotless | 55 | 94 | 231 749 | 6 693 921 | 100 | |
| *NRC* | 12 | 21/09/2019 | Plotless | 55 | 94 | 235 384 | 6 692 484 | 100 | |
| *NRC* | 13 | 21/09/2019 | Plotless | 55 | 94 | 235 152 | 6 692 708 | 100 | |
| *NRC* | 14 | 21/09/2019 | Plotless | 55 | 94 | 236 548 | 6 692 480 | 100 | |
| *NRC* | 15 | 21/09/2019 | Plotless | 55 | 94 | 236 508 | 6 692 545 | 100 | |
| *NRC* | 16 | 21/09/2019 | Plotless | 55 | 94 | 242 187 | 6 693 067 | 100 | |
| *NRC* | 17 | 21/09/2019 | Plotless | 55 | 94 | 244 064 | 6 693 239 | 100 | |
| *NRC* | 18 | 22/09/2019 | Plotless | 55 | 94 | 219 434 | 6 678 414 | 100 | |
| *NRC* | 19 | 22/09/2019 | Plotless | 55 | 94 | 219 150 | 6 678 622 | 100 | |
| *NRC* | 20 | 22/09/2019 | Plotless | 55 | 94 | 217 337 | 6 678 726 | 100 | |
| *NRC* | 21 | 22/09/2019 | Plotless | 55 | 94 | 217 287 | 6 678 918 | 100 | |
| *NRC* | 22 | 22/09/2019 | Plotless | 55 | 94 | 217 522 | 6 679 192 | 100 | |
| *NRC* | 23 | 22/09/2019 | Plotless | 55 | 94 | 218 387 | 6 679 976 | 100 | |
| *NRC* | 24 | 20/09/2019 | Plotless | 55 | 94 | 356 210 | 6 657 934 | 100 | |
| *NRC* | 25 | 20/09/2019 | Plotless | 55 | 94 | 351 111 | 6 664 115 | 100 | |
| *NRC* | 26 | 20/09/2019 | Plotless | 55 | 94 | 356 210 | 6 657 934 | 100 | |
| *NRC* | 27 | 21/09/2019 | Plotless | 55 | 94 | 351 111 | 6 664 115 | 100 | |
| *NRC* | 28 | 21/09/2019 | Plotless | 55 | 94 | 351 594 | 6 664 192 | 100 | |
| *NRC* | 29 | 21/09/2019 | Plotless | 55 | 94 | 347 432 | 6 664 563 | 100 | |
| *NRC* | 30 | 21/09/2019 | Plotless | 55 | 94 | 346 686 | 6 664 547 | 100 | |
| *NRC* | 31 | 21/09/2019 | Plotless | 55 | 94 | 345 915 | 6 664 699 | 100 | |
| *NRC* | 32 | 21/09/2019 | Plotless | 55 | 94 | 345 403 | 6 664 529 | 100 | |
| *NRC* | 33 | 21/09/2019 | Plotless | 55 | 94 | 345 198 | 6 663 880 | 100 | |
| *NRC* | 34 | 21/09/2019 | Plotless | 55 | 94 | 344 775 | 6 663 527 | 100 | |

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NRC* | 35 | 21/09/2019 | Plotless | 55 | 94 | 343 773 | 6 664 279 | 100 | |
| *NRC* | 36 | 21/09/2019 | Plotless | 55 | 94 | 341 719 | 6 664 261 | 100 | |
| *NRC* | 37 | 21/09/2019 | Plotless | 55 | 94 | 341 455 | 6 664 288 | 100 | |
| *NRC* | 38 | 21/09/2019 | Plotless | 55 | 94 | 341 109 | 6 664 310 | 100 | |
| *NRC* | 39 | 21/09/2019 | Plotless | 55 | 94 | 340 931 | 6 664 243 | 100 | |
| *NRC* | 40 | 21/09/2019 | Plotless | 55 | 94 | 340 467 | 6 663 597 | 100 | |
| *NRC* | 41 | 21/09/2019 | Plotless | 55 | 94 | 339 983 | 6 664 120 | 100 | |
| *NRC* | 42 | 21/09/2019 | Plotless | 55 | 94 | 338 935 | 6 664 132 | 100 | |
| *NRC* | 43 | 21/09/2019 | Plotless | 55 | 94 | 337 868 | 6 664 354 | 100 | |
| *NRC* | 44 | 22/09/2019 | Plotless | 55 | 94 | 360 560 | 6 647 993 | 100 | |
| *NRC* | 45 | 22/09/2019 | Plotless | 55 | 94 | 364 423 | 6 648 128 | 100 | |
| *NRC* | 46 | 22/09/2019 | Plotless | 55 | 94 | 365 361 | 6 648 143 | 100 | |
| *NRC* | 47 | 22/09/2019 | Plotless | 55 | 94 | 366 597 | 6 648 166 | 100 | |
| *NRC* | 48 | 22/09/2019 | Plotless | 55 | 94 | 367 629 | 6 648 543 | 100 | |
| *NRC* | 49 | 22/09/2019 | Plotless | 55 | 94 | 367 152 | 6 648 921 | 100 | |
| *NRC* | 50 | 22/09/2019 | Plotless | 55 | 94 | 362 134 | 6 649 364 | 100 | |
| *NRC* | 51 | 22/09/2019 | Plotless | 55 | 94 | 362 084 | 6 650 506 | 100 | |
| *NRC* | 52 | 22/09/2019 | Plotless | 55 | 94 | 362 045 | 6 651 298 | 100 | |
| *NRC* | 53 | 22/09/2019 | Plotless | 55 | 94 | 362 024 | 6 651 757 | 100 | |
| *NRC* | 54 | 22/09/2019 | Plotless | 55 | 94 | 361 963 | 6 653 172 | 100 | |
| *NRC* | 55 | 22/09/2019 | Plotless | 55 | 94 | 361 890 | 6 654 752 | 100 | |
| *NRC* | 56 | 22/09/2019 | Plotless | 55 | 94 | 361 831 | 6 656 066 | 100 | |
| *NRC* | 57 | 22/09/2019 | Plotless | 55 | 94 | 361 807 | 6 656 676 | 100 | |
| *NRC* | 58 | 23/09/2019 | Plotless | 55 | 94 | 361 736 | 6 658 265 | 100 | |
| *NRC* | 59 | 23/09/2019 | Plotless | 55 | 94 | 363 048 | 6 656 698 | 100 | |
| *NRC* | 60 | 23/09/2019 | Plotless | 55 | 94 | 363 408 | 6 656 768 | 100 | |
| *NRC* | 61 | 23/09/2019 | Plotless | 55 | 94 | 365 545 | 6 656 753 | 100 | |
| *NRC* | 62 | 23/09/2019 | Plotless | 55 | 94 | 366 146 | 6 656 763 | 100 | |

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NRC* | 63 | 23/09/2019 | Plotless | 55 | 94 | 367 251 | 6 656 823 | 100 | |
| *NRC* | 64 | 23/09/2019 | Plotless | 55 | 94 | 367 728 | 6 656 811 | 100 | |
| *NRC* | 65 | 23/09/2019 | Plotless | 55 | 94 | 368 083 | 6 656 835 | 100 | |
| *NRC* | 66 | 23/09/2019 | Plotless | 55 | 94 | 368 361 | 6 656 848 | 100 | |
| *NRC* | 67 | 23/09/2019 | Plotless | 55 | 94 | 368 638 | 6 656 868 | 100 | |
| *NRC* | 68 | 23/09/2019 | Plotless | 55 | 94 | 368 927 | 6 656 874 | 100 | |
| *NRC* | 69 | 23/09/2019 | Plotless | 55 | 94 | 369 724 | 6 657 589 | 100 | |
| *NRC* | 70 | 23/09/2019 | Plotless | 55 | 94 | 369 809 | 6 658 143 | 100 | |
| *NRC* | 71 | 23/09/2019 | Plotless | 55 | 94 | 370 105 | 6 659 533 | 100 | |
| *NRC* | 72 | 23/09/2019 | Plotless | 55 | 94 | 372 529 | 6 659 183 | 100 | |
| *NRC* | 73 | 23/09/2019 | Plotless | 55 | 94 | 374 106 | 6 658 961 | 100 | |
| *NRC* | 74 | 23/09/2019 | Plotless | 55 | 94 | 375 407 | 6 658 774 | 100 | |
| *NRC* | 75 | 23/09/2019 | Plotless | 55 | 94 | 376 958 | 6 658 546 | 100 | |
| *NRC* | 76 | 23/09/2019 | Plotless | 55 | 94 | 377 921 | 6 658 398 | 100 | |
| *NRC* | 77 | 23/09/2019 | Plotless | 55 | 94 | 380 844 | 6 661 071 | 100 | |
| *NRC* | 78 | 23/09/2019 | Plotless | 55 | 94 | 380 915 | 6 661 991 | 100 | |
| *NRC* | 79 | 23/09/2019 | Plotless | 55 | 94 | 381 113 | 6 645 256 | 100 | |
| *NRC* | 80 | 23/09/2019 | Plotless | 55 | 94 | 381 217 | 6 658 815 | 100 | |
| *NRC* | 81 | 23/09/2019 | Plotless | 55 | 94 | 381 327 | 6 667 778 | 100 | |
| *NRC* | 82 | 23/09/2019 | Plotless | 55 | 94 | 379 961 | 6 667 950 | 100 | |
| *NRC* | 83 | 23/09/2019 | Plotless | 55 | 94 | 378 210 | 6 668 093 | 100 | |
| *NRC* | 84 | 23/09/2019 | Plotless | 55 | 94 | 376 413 | 6 668 235 | 100 | |
| *NRC* | 85 | 23/09/2019 | Plotless | 55 | 94 | 374 505 | 6 668 387 | 100 | |
| *NRC* | 86 | 23/09/2019 | Plotless | 55 | 94 | 373 375 | 6 668 478 | 100 | |
| *NRC* | 87 | 23/09/2019 | Plotless | 55 | 94 | 373 188 | 6 668 446 | 100 | |
| *NRC* | 88 | 23/09/2019 | Plotless | 55 | 94 | 373 096 | 6 668 459 | 100 | |
| *NRC* | 89 | 23/09/2019 | Plotless | 55 | 94 | 372 340 | 6 668 464 | 100 | |
| *NRC* | 90 | 23/09/2019 | Plotless | 55 | 94 | 372 227 | 6 668 322 | 100 | |

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NRC* | 91 | 23/09/2019 | Plotless | 55 | 94 | 354 456 | 6 657 344 | 100 | |
| *NRC* | 92 | 23/09/2019 | Plotless | 55 | 94 | 354 528 | 6 657 381 | 100 | |
| *NRC* | 93 | 23/09/2019 | Plotless | 55 | 94 | 353 660 | 6 657 380 | 100 | |
| *NRC* | 94 | 24/09/2019 | Plotless | 55 | 94 | 353 140 | 6 656 560 | 100 | |
| *NRC* | 95 | 24/09/2019 | Plotless | 55 | 94 | 353 166 | 6 656 003 | 100 | |
| *NRC* | 96 | 24/09/2019 | Plotless | 55 | 94 | 354 120 | 6 655 039 | 100 | |
| *NRC* | 97 | 24/09/2019 | Plotless | 55 | 94 | 353 649 | 6 653 543 | 100 | |
| *NRC* | 98 | 24/09/2019 | Plotless | 55 | 94 | 352 769 | 6 652 637 | 100 | |
| *NRC* | 99 | 24/09/2019 | Plotless | 55 | 94 | 351 804 | 6 651 589 | 100 | |
| *NRC* | 100 | 24/09/2019 | Plotless | 55 | 94 | 351 509 | 6 651 293 | 100 | |
| *NRC* | 101 | 24/09/2019 | Plotless | 55 | 94 | 351 013 | 6 651 305 | 100 | |
| *NRC* | 102 | 24/09/2019 | Plotless | 55 | 94 | 349 470 | 6 650 385 | 100 | |
| *NRC* | 103 | 24/09/2019 | Plotless | 55 | 94 | 349 549 | 6 650 204 | 100 | |
| *NRC* | 104 | 24/09/2019 | Plotless | 55 | 94 | 349 181 | 6 649 748 | 100 | |
| *NRC* | 105 | 24/09/2019 | Plotless | 55 | 94 | 348 005 | 6 649 898 | 100 | |
| *NRC* | 106 | 24/09/2019 | Plotless | 55 | 94 | 347 972 | 6 650 014 | 100 | |
| *NRC* | 107 | 24/09/2019 | Plotless | 55 | 94 | 348 062 | 6 650 247 | 100 | |
| *NRC* | 108 | 24/09/2019 | Plotless | 55 | 94 | 347 705 | 6 650 731 | 100 | |
| *NRC* | 109 | 24/09/2019 | Plotless | 55 | 94 | 346 776 | 6 649 528 | 100 | |
| *NRC* | 110 | 24/09/2019 | Plotless | 55 | 94 | 346 668 | 6 649 521 | 100 | |
| *NRC* | 111 | 24/09/2019 | Plotless | 55 | 94 | 346 517 | 6 649 515 | 100 | |
| *NRC* | 112 | 24/09/2019 | Plotless | 55 | 94 | 343 389 | 6 651 850 | 100 | |
| *NRC* | 113 | 24/09/2019 | Plotless | 55 | 94 | 343 284 | 6 651 755 | 100 | |
| *NRC* | 114 | 24/09/2019 | Plotless | 55 | 94 | 343 227 | 6 650 681 | 100 | |
| *NRC* | 115 | 24/09/2019 | Plotless | 55 | 94 | 343 337 | 6 649 393 | 100 | |
| *NRC* | 116 | 24/09/2019 | Plotless | 55 | 94 | 343 088 | 6 649 385 | 100 | |
| *NRC* | 117 | 24/09/2019 | Plotless | 55 | 94 | 341 552 | 6 649 326 | 100 | |
| *NRC* | 118 | 24/09/2019 | Plotless | 55 | 94 | 340 998 | 6 649 563 | 100 | |

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NRC* | 119 | 24/09/2019 | Plotless | 55 | 94 | 339 721 | 6 649 301 | 100 | |
| *NRC* | 120 | 24/09/2019 | Plotless | 55 | 94 | 338 975 | 6 649 512 | 100 | |
| *NRC* | 121 | 24/09/2019 | Plotless | 55 | 94 | 336 480 | 6 649 241 | 100 | |
| *NRC* | 122 | 24/09/2019 | Plotless | 55 | 94 | 334 621 | 6 652 380 | 100 | |
| *NRC* | 123 | 24/09/2019 | Plotless | 55 | 94 | 334 769 | 6 652 748 | 100 | |
| *NRC* | 124 | 24/09/2019 | Plotless | 55 | 94 | 334 549 | 6 654 014 | 100 | |
| *NRC* | 125 | 24/09/2019 | Plotless | 55 | 94 | 334 460 | 6 655 770 | 100 | |
| *NRC* | 126 | 24/09/2019 | Plotless | 55 | 94 | 334 418 | 6 656 483 | 100 | |
| *NRC* | 127 | 24/09/2019 | Plotless | 55 | 94 | 334 378 | 6 657 279 | 100 | |
| *NRC* | 128 | 24/09/2019 | Plotless | 55 | 94 | 334 317 | 6 658 663 | 100 | |
| *NRC* | 129 | 24/09/2019 | Plotless | 55 | 94 | 334 279 | 6 659 879 | 100 | |
| *NRC* | 130 | 24/09/2019 | Plotless | 55 | 94 | 334 272 | 6 660 091 | 100 | |
| *NRC* | 131 | 24/09/2019 | Plotless | 55 | 94 | 334 223 | 6 661 769 | 100 | |
| *NRC* | 132 | 24/09/2019 | Plotless | 55 | 94 | 334 216 | 6 662 220 | 100 | |
| *NRC* | 133 | 24/09/2019 | Plotless | 55 | 94 | 334 202 | 6 662 543 | 100 | |
| *NRC* | 134 | 24/09/2019 | Plotless | 55 | 94 | 334 152 | 6 664 440 | 100 | |
| *NRC* | 135 | 24/09/2019 | Plotless | 55 | 94 | 334 294 | 6 666 451 | 100 | |
| *NRC* | 136 | 24/09/2019 | Plotless | 55 | 94 | 335 279 | 6 666 492 | 100 | |
| *NRC* | 137 | 24/09/2019 | Plotless | 55 | 94 | 337 484 | 6 666 589 | 100 | |
| *NRC* | 138 | 24/09/2019 | Plotless | 55 | 94 | 342 641 | 6 666 825 | 100 | |
| *NRC* | 139 | 24/09/2019 | Plotless | 55 | 94 | 344 387 | 6 666 899 | 100 | |
| *NRC* | 140 | 24/09/2019 | Plotless | 55 | 94 | 345 468 | 6 666 951 | 100 | |
| *NRC* | 141 | 24/09/2019 | Plotless | 55 | 94 | 352 530 | 6 667 256 | 100 | |
| *NRC* | 142 | 25/09/2019 | Plotless | 55 | 94 | 222 724 | 6 694 135 | 100 | |
| *NRC* | 143 | 25/09/2019 | Plotless | 55 | 94 | 222 994 | 6 693 804 | 100 | |
| *NRC* | 144 | 25/09/2019 | Plotless | 55 | 94 | 222 894 | 6 693 344 | 100 | |
| *NRC* | 145 | 25/09/2019 | Plotless | 55 | 94 | 223 135 | 6 693 018 | 100 | |
| *NRC* | 146 | 25/09/2019 | Plotless | 55 | 94 | 223 306 | 6 692 939 | 100 | |

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NRC* | 147 | 25/09/2019 | Plotless | 55 | 94 | 222 738 | 6 693 243 | 100 | |
| *NRC* | 148 | 25/09/2019 | Plotless | 55 | 94 | 218 834 | 6 694 689 | 100 | |
| *NRC* | 149 | 25/09/2019 | Plotless | 55 | 94 | 218 534 | 6 694 399 | 100 | |
| *NRC* | 150 | 25/09/2019 | Plotless | 55 | 94 | 217 522 | 6 693 724 | 100 | |
| *NRC* | 151 | 25/09/2019 | Plotless | 55 | 94 | 216 597 | 6 693 901 | 100 | |
| *NRC* | 152 | 25/09/2019 | Plotless | 55 | 94 | 216 352 | 6 694 171 | 100 | |
| *NRC* | 153 | 25/09/2019 | Plotless | 55 | 94 | 216 034 | 6 694 412 | 100 | |
| *NRC* | 154 | 25/09/2019 | Plotless | 55 | 94 | 215 589 | 6 694 418 | 100 | |
| *NRC* | 155 | 25/09/2019 | Plotless | 55 | 94 | 215 092 | 6 694 419 | 100 | |
| *NRC* | 156 | 25/09/2019 | Plotless | 55 | 94 | 214 904 | 6 694 429 | 100 | |
| *NRC* | 157 | 25/09/2019 | Plotless | 55 | 94 | 214 754 | 6 693 595 | 100 | |
| *NRC* | 158 | 25/09/2019 | Plotless | 55 | 94 | 214 654 | 6 693 534 | 100 | |
| *NRC* | 159 | 25/09/2019 | Plotless | 55 | 94 | 214 712 | 6 693 676 | 100 | |
| *NRC* | 160 | 25/09/2019 | Plotless | 55 | 94 | 213 675 | 6 693 149 | 100 | |
| *NRC* | 161 | 25/09/2019 | Plotless | 55 | 94 | 212 670 | 6 692 682 | 100 | |
| *NRC* | 162 | 25/09/2019 | Plotless | 55 | 94 | 211 757 | 6 692 280 | 100 | |
| *NRC* | 163 | 25/09/2019 | Plotless | 55 | 94 | 210 621 | 6 691 471 | 100 | |
| *NRC* | 164 | 25/09/2019 | Plotless | 55 | 94 | 210 334 | 6 691 166 | 100 | |
| *NRC* | 165 | 25/09/2019 | Plotless | 54 | 94 | 789 781 | 6 692 579 | 100 | |
| *NRC* | 166 | 25/09/2019 | Plotless | 54 | 94 | 789 580 | 6 692 775 | 100 | |
| *NRC* | 167 | 25/09/2019 | Plotless | 54 | 94 | 789 400 | 6 692 888 | 100 | |
| *NRC* | 168 | 25/09/2019 | Plotless | 54 | 94 | 789 089 | 6 693 072 | 100 | |
| *NRC* | 169 | 25/09/2019 | Plotless | 54 | 94 | 788 908 | 6 693 198 | 100 | |
| *NRC* | 170 | 25/09/2019 | Plotless | 54 | 94 | 787 909 | 6 694 166 | 100 | |
| *NRC* | 171 | 25/09/2019 | Plotless | 54 | 94 | 787 234 | 6 695 184 | 100 | |
| *NRC* | 172 | 25/09/2019 | Plotless | 54 | 94 | 787 597 | 6 695 686 | 100 | |
| *NRC* | 173 | 25/09/2019 | Plotless | 55 | 94 | 372 941 | 6 665 828 | 100 | |
| *NRC* | 174 | 25/09/2019 | Plotless | 55 | 94 | 372 223 | 6 666 534 | 100 | |

| *Survey* | *Plot* | *Date* | *Size* | *Zone* | *Datum GDA* | *Easting* | *Northing* | *Altitude* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|
| *NRC* | 175 | 25/09/2019 | Plotless | 55 | 94 | 371 814 | 6 666 910 | 100 | |
| *NRC* | 176 | 25/09/2019 | Plotless | 55 | 94 | 371 237 | 6 667 319 | 100 | |
| *NRC* | 177 | 25/09/2019 | Plotless | 55 | 94 | 370 739 | 6 667 617 | 100 | |
| *NRC* | 178 | 25/09/2019 | Plotless | 55 | 94 | 370 227 | 6 667 925 | 100 | |
| *NRC* | 179 | 25/09/2019 | Plotless | 55 | 94 | 370 246 | 6 668 012 | 100 | |
| *NRC* | 180 | 25/09/2019 | Plotless | 55 | 94 | 370 187 | 6 668 480 | 100 | |
| *NRC* | 181 | 25/09/2019 | Plotless | 55 | 94 | 367 052 | 6 668 977 | 100 | |
| *NRC* | 182 | 25/09/2019 | Plotless | 55 | 94 | 366 835 | 6 668 998 | 100 | |
| *NRC* | 183 | 25/09/2019 | Plotless | 55 | 94 | 366 526 | 6 669 023 | 100 | |
| *NRC* | 184 | 25/09/2019 | Plotless | 55 | 94 | 366 313 | 6 669 039 | 100 | |
| *NRC* | 185 | 25/09/2019 | Plotless | 55 | 94 | 363 565 | 6 668 395 | 100 | |
| *NRC* | 186 | 25/09/2019 | Plotless | 55 | 94 | 363 628 | 6 668 326 | 100 | |
| *NRC* | 187 | 25/09/2019 | Plotless | 55 | 94 | 362 206 | 6 668 158 | 100 | |
| *NRC* | 188 | 22/09/2019 | Plotless | 55 | 94 | 367 351 | 6 648 178 | 100 | |
| *NRC* | 189 | 22/09/2019 | Plotless | 55 | 94 | 367 590 | 6 648 370 | 100 | |

**Appendix 3 – Structural Features of Full Floristic Plots –** OS – Overstorey; Up Mid – Upper Mid Storey; Low Mid – Lower Mid Storey; G – Ground Layer. In meters and percent cover.

| *Survey* | *Site* | *OS H Max* | *OS H min* | *OS Cover* | *Up Mid H Max* | *Up Mid H Min* | *Up Mid Cover* | *Low Mid H Max* | *Low Mid H Min* | *Low Mid Cover* | *G H Max* | *G H Min* | *G Cover* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *NC* | 1 | 14 | 6 | 14.9 | 4 | 0.4 | 1 | | | | 0.5 | 0.1 | 3 |
| *NC* | 2 | 14 | 6 | 1.5 | | 0.5 | 1 | 0.3 | 0.15 | 10 | 0.2 | 0.03 | 10 |
| *NC* | 3 | 15 | 5 | 1 | 2 | 1 | 1 | 0.25 | 0.5 | 10 | 0.3 | 0.03 | 25 |
| *NC* | 4 | 15 | 7 | 16.6 | 2.5 | 0.5 | | | | | 0.3 | 0.01 | 35 |
| *NC* | 5 | 7 | 6 | 0.7 | 4 | 3 | 1 | 2.5 | 0.3 | 5 | 0.25 | 0.01 | 5 |
| *NC* | 6 | 13 | 11 | 7.1 | 6 | 4 | 10 | 3 | 1 | 15 | 0.2 | 0.01 | 50 |
| *NC* | 7 | | | | 4 | 4 | 1 | 1.5 | 0.3 | 15 | 20 | 0.01 | 10 |
| *NC* | 8 | | | | | | | | | | 0.25 | 0.01 | 40 |
| *NC* | 9 | 12 | 8 | 7.5 | 3 | 1.5 | 15 | | | | 0.1 | 0.01 | 25 |
| *NC* | 10 | 8 | 8 | 0.1 | 3.5 | 1.5 | 15 | 0.5 | 0.3 | 5 | 0.3 | 0.1 | 5 |
| *NC* | 11 | 9 | 5 | 4.3 | 4 | 4 | 1 | 0.2 | 0.05 | 1 | 0.3 | 0.01 | 2 |
| *NC* | 12 | 8 | 4 | 1.2 | 2.5 | 0.6 | 20 | | | | 1 | 0.01 | 20 |
| *NC* | 13 | 6.5 | 5 | 3.2 | 3 | 1.5 | 1 | | | | 0.05 | 0.01 | 20 |
| *NC* | 14 | 10 | 6 | 5.9 | 1.5 | 0.2 | 2 | | | | 0.4 | 0.01 | 30 |
| *NC* | 15 | 6 | 3.5 | 8 | 3 | 1.5 | 5 | 0.4 | 0.15 | 1 | 0.2 | 0.01 | 4 |
| *NC* | 16 | 7 | 6 | 8.4 | 2 | 0.5 | 1 | 0.4 | 0.03 | 25 | 0.25 | 0.01 | 25 |
| *NC* | 17 | 6 | 5 | 2.7 | 2 | 1 | 40 | 0.4 | 0.1 | 2 | 0.4 | 0.01 | 10 |
| *NC* | 18 | 10 | 10 | 8.3 | 3 | 1 | 1 | 0.4 | 0.1 | 1 | 0.2 | 0.01 | 10 |
| *NC* | 19 | 8 | 6 | 14.3 | | | | 1 | 0.1 | 5 | 0.1 | 0.01 | 20 |
| *NC* | 20 | | | | | | | | | | | | |
| *NC* | 21 | 10 | 6 | 6 | 2 | 0.3 | 1 | 1 | 0.2 | 1 | 0.3 | 0.01 | 15 |
| *NC* | 22 | 5 | 3 | 9.1 | | | | | | | 0.3 | 0.01 | 70 |
| *NC* | 23 | | | | | | | | | | | | |
| *NC* | 24 | 4 | 3 | 2.5 | 1.7 | 1.7 | 1 | | | | 0.07 | 0.01 | 1 |

| *Survey* | *Site* | *OS H Max* | *OS H min* | *OS Cover* | *Up Mid H Max* | *Up Mid H Min* | *Up Mid Cover* | *Low Mid H Max* | *Low Mid H Min* | *Low Mid Cover* | *G H Max* | *G H Min* | *G Cover* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *NC* | 25 | 4.5 | 2.5 | 7.4 | | | | | | | 0.15 | 0.05 | 30 |
| *NC* | 26 | | | | | | | | | | | | |
| *NC* | 27 | 9 | 4.5 | 13.1 | | | | 0.5 | 0.2 | 1 | 0.2 | 0.02 | 2 |
| *NC* | 28 | 5 | 5 | 0.1 | 3 | 1 | 5 | 0.03 | 0.01 | 1 | 0.15 | 0.01 | 10 |
| *NC* | 29 | 12 | 8 | 12.4 | 3 | 1.5 | 5 | 0.5 | 0.2 | 2 | 0.04 | 0.01 | 1 |
| *NC* | 30 | 6 | 4 | 3.1 | 1.5 | 0.6 | | | | | 0.07 | 0.01 | 1 |
| *NC* | 31 | 8 | 3 | 0.1 | 2.5 | 1 | 2 | 0.3 | 0.1 | 5 | 0.15 | 0.01 | 2 |
| *NC* | 32 | 12 | 5.5 | 13.9 | 4 | 2 | 1 | 2 | 0.6 | 20 | 0.4 | 0.01 | 60 |
| *NC* | 33 | | | | | | | 0.2 | 0.1 | 1 | 0.03 | 0.01 | 20 |
| *NC* | 34 | 10 | 6 | 6.3 | | | | 1 | 0.05 | 1 | 0.15 | 0.01 | 5 |
| *NC* | 35 | | | | | | | 1 | 0.3 | 1 | 0.15 | 0.03 | 1 |
| *NC* | 36 | 4.5 | 4 | 0.3 | 3 | 1 | 15 | 1 | 0.2 | 10 | 0.2 | 0.01 | 1 |
| *NC* | 37 | 11 | 8 | 0.4 | 3 | 1 | 1 | 1 | 0.2 | 5 | 0.2 | 0.01 | 1 |
| *NC* | 38 | 5 | 5 | 0.1 | 0.6 | 0.2 | 1 | 0.2 | 0.1 | 1 | 0.2 | 0.01 | 1 |
| *NC* | 39 | 8.5 | 6 | 3.5 | 1.1 | 0.3 | 1 | 0.15 | 0.01 | 1 | 0.2 | 0.01 | 1 |
| *NC* | 40 | 6 | 0.2 | 1 | 0.6 | 0.3 | 1 | 0.03 | 0.01 | 1 | 0.15 | 0.01 | 2 |
| *NC* | 41 | 4.5 | 1 | 0.2 | | | | | | | 0.05 | 0.01 | 1 |
| *NC* | 42 | 6.5 | 0.4 | 10.6 | 2 | 2 | 1 | | | | 0.2 | 0.01 | 2 |
| *NC* | 43 | 8 | 0.4 | 4.2 | 3.5 | 1 | 1 | 1 | 0.3 | 1 | 0.2 | 0.01 | 2 |
| *NC* | 44 | 11 | 1.5 | 8.5 | | | | | | | 0.1 | 0.01 | 5 |
| *NC* | 45 | 7.5 | 1 | 3.1 | | | | | | | 1.5 | 0.01 | 5 |
| *NC* | 46 | 4 | 0.5 | 3.8 | | | | | | | 0.3 | 0.05 | 25 |
| *NC* | 47 | 11 | 3.5 | 0.4 | 3 | 1.5 | 5 | 1 | 0.3 | 5 | 0.3 | 0.05 | 15 |
| *NC* | 48 | | | | 2.5 | 0.3 | 7 | | | | 0.03 | 0.01 | 1 |
| *NC* | 49 | 10 | 3 | 0.15 | 3 | 0.3 | 10 | | | | 0.1 | 0.01 | 30 |
| *NC* | 50 | 13 | 12 | 5.45 | 1 | 0.3 | 5 | 0.25 | 0.02 | 1 | 0.1 | 0.05 | 25 |
| *NC* | 51 | 12 | 12 | 6.5 | 1.5 | 0.3 | 17 | | | | 0.2 | 0.01 | 5 |

| *Survey* | *Site* | *OS H Max* | *OS H min* | *OS Cover* | *Up Mid H Max* | *Up Mid H Min* | *Up Mid Cover* | *Low Mid H Max* | *Low Mid H Min* | *Low Mid Cover* | *G H Max* | *G H Min* | *G Cover* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *NC* | 52 | 10 | 5 | 2.8 | 3 | 0.5 | 3 | 0.5 | 0.01 | 3 | 0.1 | 0.01 | 2 |
| *NC* | 53 | 14 | 7 | 21.6 | | | | 0.3 | 0.1 | 1 | 0.4 | 0.01 | 75 |
| *NC* | 54 | 6 | 5 | 6 | 2.5 | 2.5 | 1 | 1 | 0.3 | 1 | 0.1 | 0.05 | 1 |
| *NC* | 55 | 8 | 6 | 5.3 | | | | 0.3 | 0.05 | 1 | 0.15 | 0.01 | 8 |
| *NC* | 56 | 12 | 10 | 23.3 | 0.5 | 0.1 | 5 | | | | 0.15 | 0.05 | 5 |
| *NC* | 57 | 8.5 | 5 | 8.9 | 3 | 0.1 | 5 | 0.1 | 0.01 | 10 | 0.1 | 0.05 | 20 |
| *NC* | 58 | 14 | 6 | 18.1 | | | | 0.3 | 0.03 | 1 | 0.2 | 0.05 | 12 |
| *NC* | 59 | | | | 3.5 | 0.2 | 15 | 0.2 | 0.01 | 1 | 0.2 | 0.05 | 20 |
| *NC* | 60 | 12 | 4 | 8.3 | 4 | 1 | 3 | 0.3 | 0.01 | 5 | 0.15 | 0.05 | 1 |
| *NC* | 61 | 14 | 8 | 20.2 | 1.5 | 0.1 | 2 | 0.1 | 0.01 | 3 | 0.1 | 0.05 | 5 |
| *NC* | 62 | | | | | | | 0.3 | 0.01 | 1 | 0.15 | 0.01 | 2 |
| *NC* | 63 | | | | 2 | 1 | 1 | 0.6 | 0.2 | 5 | 0.5 | 0.01 | 20 |
| *NC* | 64 | | | | 1.5 | 0.3 | 4 | 0.03 | 0.01 | 1 | 0.5 | 0.05 | 85 |
| *NC* | 65 | | | | | | | 0.3 | 0.01 | 15 | 0.15 | 0.05 | 7 |
| *NC* | 66 | 6 | 3 | 2.2 | 2.5 | 0.2 | 3 | 0.05 | 0.02 | 20 | 0.15 | 0.05 | 20 |
| *NC* | 67 | 14 | 6 | 20 | 3.5 | 0.3 | 5 | 0.5 | 0.02 | 1 | 0.2 | 0.01 | 1 |
| *NC* | 68 | | | | | | | | | | | | |
| *NC* | 69 | | | | | | | 0.3 | 0.01 | 15 | 0.15 | 0 5 | 2 |
| *NC* | 70 | 4.5 | 3 | 2.6 | 2.5 | 1.5 | 1 | | | | 0.15 | 0.05 | 1 |
| *NC* | 71 | 6 | 1.5 | 0.7 | 3.5 | 0.5 | 10 | 0.5 | 0.2 | 1 | 0.1 | 0.05 | 2 |
| *NC* | 72 | 11 | 9 | 5.1 | 3 | 0.5 | 2 | 0.5 | 0.2 | 1 | 0.2 | 0.05 | 20 |
| *NC* | 73 | | | | | | | | | | | | |
| *NC* | 74 | 5.5 | 2 | 0.1 | 4 | 0.2 | 2 | | | | 0.1 | 0.05 | 45 |
| *NC* | 75 | 6 | 2.5 | 6.7 | 2 | 0.2 | 1 | 0.1 | 0.01 | 1 | 0.2 | 0.05 | 15 |
| *NC* | 76 | 12 | 5 | 7 | | | | 0.4 | 0.01 | 1 | 0.15 | 0.05 | 2 |
| *NC* | 77 | | | | | | | 0.3 | 0.02 | 25 | 0.2 | 0.05 | 30 |
| *NC* | 78 | | | | | | | 0.3 | 0.05 | 1 | 1 | 0.05 | 10 |

# Appendix 4 – Ground Features of Full Floristic Survey Plots. Within 20 x 20 m.

| *Survey* | *Plot* | *Log Length* | *Log Hollows* | *Bare Earth%* | *Litter%* | *Cryptogam%* | *Dung%* |
|---|---|---|---|---|---|---|---|
| *NC* | 1 | 39 | 0 | 10 | 85 | 0 | 0 |
| *NC* | 2 | 3 | 0 | 50 | 30 | 0 | 0 |
| *NC* | 3 | 0 | 0 | 63 | 2 | 0 | 0 |
| *NC* | 4 | 13 | 0 | 15 | 30 | 20 | 0 |
| *NC* | 5 | 0 | 0 | 85 | 8 | 2 | 0 |
| *NC* | 6 | 27 | 3 | 48 | 2 | 0 | 0 |
| *NC* | 7 | 4 | 0 | 70 | 10 | 0 | 0 |
| *NC* | 8 | 0 | 0 | 60 | 1 | 0 | 0 |
| *NC* | 9 | 6 | 0 | 65 | 10 | 0 | 0 |
| *NC* | 10 | 7 | 0 | 90 | 5 | 0 | 0 |
| *NC* | 11 | 0 | 0 | 94 | 4 | 0 | 0 |
| *NC* | 12 | 6 | 0 | 70 | 5 | 5 | 0 |
| *NC* | 13 | 10 | 0 | 70 | 10 | 0 | 0 |
| *NC* | 14 | 19 | 11 | 60 | 10 | 0 | 0 |
| *NC* | 15 | 6 | 0 | 85 | 5 | 5 | 0 |
| *NC* | 16 | 35 | 5 | 38 | 10 | 2 | 0 |
| *NC* | 17 | 0 | 0 | 58 | 10 | 0 | 0 |
| *NC* | 18 | 22 | 0 | 82 | 5 | 2 | 0 |
| *NC* | 19 | 17 | 1 | 35 | 38 | 2 | 0 |
| *NC* | 20 | | | | | | |
| *NC* | 21 | 45 | 5 | 30 | 15 | 1 | 0 |
| *NC* | 22 | 25 | 4 | 15 | 15 | 0 | 0 |
| *NC* | 23 | | | | | | |
| *NC* | 24 | 0 | 0 | 94 | 5 | 0 | 0 |
| *NC* | 25 | 7 | 0 | 15 | 30 | 0 | 35 |
| *NC* | 26 | | | | | | |

| *Survey* | *Plot* | *Log Length* | *Log Hollows* | *Bare Earth%* | *Litter%* | *Cryptogam%* | *Dung%* |
|---|---|---|---|---|---|---|---|
| *NC* | 27 | 7 | 3 | 88 | 10 | 1 | 0 |
| *NC* | 28 | 2 | 0 | 79 | 10 | 0 | 5 |
| *NC* | 29 | 8 | 6 | 7 | 85 | 4 | 0 |
| *NC* | 30 | 26 | 9 | 84 | 5 | 0 | 10 |
| *NC* | 31 | 8 | 0 | 67 | 5 | 2 | 20 |
| *NC* | 32 | 63 | 7 | 20 | 20 | 1 | 0 |
| *NC* | 33 | 0 | 0 | 39 | 10 | 0 | 30 |
| *NC* | 34 | 26 | 16 | 70 | 15 | 10 | 0 |
| *NC* | 35 | 0 | 0 | 59 | 5 | 0 | 0 |
| *NC* | 36 | 0 | 0 | 14 | 5 | 80 | 0 |
| *NC* | 37 | 5 | 7 | 65 | 5 | 0 | 0 |
| *NC* | 38 | 0 | 0 | 98 | 1 | 0 | 0 |
| *NC* | 39 | 12 | 1 | 68 | 10 | 0 | 20 |
| *NC* | 40 | 3 | 1 | 67 | 1 | 5 | 25 |
| *NC* | 41 | 8 | 1 | 65 | 5 | 5 | 25 |
| *NC* | 42 | 9 | 1 | 8 | 40 | 50 | 0 |
| *NC* | 43 | 16 | 3 | 75 | 20 | 3 | 0 |
| *NC* | 44 | 6 | 4 | 60 | 25 | 10 | 0 |
| *NC* | 45 | 5 | 2 | 45 | 20 | 30 | 0 |
| *NC* | 46 | 13 | 0 | 71 | 3 | 1 | 0 |
| *NC* | 47 | 32 | 0 | 75 | 10 | 0 | 0 |
| *NC* | 48 | 0 | 0 | 57 | 2 | 1 | 40 |
| *NC* | 49 | 16 | 1 | 67 | 3 | 1 | 0 |
| *NC* | 50 | 0 | 0 | 60 | 3 | 1 | 0 |
| *NC* | 51 | 0 | 0 | 70 | 15 | 0 | 0 |
| *NC* | 52 | 32 | 1 | 50 | 20 | 25 | 0 |
| *NC* | 53 | 14 | 5 | 10 | 15 | 0 | 0 |
| *NC* | 54 | 10 | 2 | 94 | 2 | 2 | 0 |
| *NC* | 55 | 16 | 13 | 76 | 15 | 0 | 0 |

| *Survey* | *Plot* | *Log Length* | *Log Hollows* | *Bare Earth%* | *Litter%* | *Cryptogam%* | *Dung%* |
|---|---|---|---|---|---|---|---|
| *NC* | 56 | 35 | 9 | 82 | 8 | 0 | 0 |
| *NC* | 57 | 72 | 5 | 60 | 10 | 0 | 0 |
| *NC* | 58 | 50 | 14 | 27 | 50 | 0 | 0 |
| *NC* | 59 | 0 | 0 | 78 | 1 | 0 | 0 |
| *NC* | 60 | 43 | 5 | 57 | 30 | 5 | 0 |
| *NC* | 61 | 38 | 4 | 30 | 60 | 1 | 0 |
| *NC* | 62 | 0 | 0 | 92 | 5 | 0 | 0 |
| *NC* | 63 | 0 | 0 | 70 | 5 | 0 | 0 |
| *NC* | 64 | 0 | 0 | 10 | 1 | 0 | 0 |
| *NC* | 65 | 0 | 0 | 78 | 1 | 0 | 0 |
| *NC* | 66 | 11 | 5 | 69 | 3 | 0 | 0 |
| *NC* | 67 | 34 | 12 | 28 | 70 | 0 | 0 |
| *NC* | 68 | | | | | | |
| *NC* | 69 | 0 | 0 | 76 | 7 | 0 | 0 |
| *NC* | 70 | 0 | 0 | 60 | 4 | 1 | 35 |
| *NC* | 71 | 22 | 2 | 42 | 5 | 20 | 0 |
| *NC* | 72 | 10 | 7 | 45 | 30 | 1 | 0 |
| *NC* | 73 | | | | | | |
| *NC* | 74 | 5 | 0 | 53 | 0 | 0 | 0 |
| *NC* | 75 | 0 | 0 | 65 | 20 | 1 | 0 |
| *NC* | 76 | 5 | 3 | 79 | 18 | 0 | 0 |
| *NC* | 77 | 0 | 0 | 44 | 1 | 1 | 0 |
| *NC* | 78 | 0 | 0 | 90 | 1 | 0 | 0 |

# Appendix 5 – Diameter at Breast Height and Hollows of Overstorey Species (>4.9 cm diameter) from Full Floristic Survey Plots – Within 20 x 50 m area. Height in meters and diameter in cms.

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 1 | Acacia stenophylla | 5 | 1.5 | | | |
| *NC* | 1 | Dead | 10.5 | 1.8 | | | 1 |
| *NC* | 1 | Dead | 24 | 4 | | | 2 |
| *NC* | 1 | Dead | 72.5 | 5 | | | 6 |
| *NC* | 1 | Eucalyptus coolabah | 7 | 3 | | | |
| *NC* | 1 | Eucalyptus coolabah | 9 | 3.5 | 3 | 23 | |
| *NC* | 1 | Eucalyptus coolabah | 21 | 4.5 | | | |
| *NC* | 1 | Eucalyptus ochrophloia | 8 | 4 | | | |
| *NC* | 1 | Eucalyptus ochrophloia | 9 | 3 | 2 | 17.5 | 2 |
| *NC* | 1 | Eucalyptus ochrophloia | 9 | 4 | | | |
| *NC* | 1 | Eucalyptus ochrophloia | 9 | 6 | 2 | 16 | |
| *NC* | 1 | Eucalyptus ochrophloia | 9.5 | 5 | | | |
| *NC* | 1 | Eucalyptus ochrophloia | 13 | 5.5 | 2 | 24 | |
| *NC* | 1 | Eucalyptus ochrophloia | 20 | 3.5 | 2 | 35 | 1 |
| *NC* | 1 | Eucalyptus ochrophloia | 20 | 4 | 2 | 38.5 | |
| *NC* | 1 | Eucalyptus ochrophloia | 21 | 5 | 6 | 109.5 | 2 |
| *NC* | 1 | Eucalyptus ochrophloia | 22.5 | 5 | 4 | 57 | |
| *NC* | 1 | Eucalyptus ochrophloia | 24 | 7 | 3 | 65 | |
| *NC* | 1 | Eucalyptus ochrophloia | 25 | 6 | 3 | 42.5 | 3 |
| *NC* | 1 | Eucalyptus ochrophloia | 26 | 6 | | | |
| *NC* | 1 | Eucalyptus ochrophloia | 29 | 7 | | | |
| *NC* | 1 | Eucalyptus ochrophloia | 38 | 7 | 3 | 85 | |
| *NC* | 1 | Eucalyptus ochrophloia | 44 | 6 | | | |
| *NC* | 1 | Eucalyptus ochrophloia | 54 | 5 | 2 | 81 | 1 |
| *NC* | 1 | Eucalyptus ochrophloia | 56 | 7 | 2 | 82.5 | 1 |
| *NC* | 1 | Eucalyptus ochrophloia | 60 | 6 | 2 | 98 | 2 |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 2 | Dead | 6 | 4 | 3 | 16 | |
| *NC* | 2 | Dead | 8 | 3 | | | |
| *NC* | 2 | Dead | 20 | 5 | 5 | 59 | |
| *NC* | 2 | Eucalyptus ochrophloia | 5 | 2.5 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 6 | 2.5 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 6 | 3 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 6 | 4 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 6 | 4.5 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 6 | 4.5 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 6 | 4.5 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 6.5 | 3 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 6.5 | 4.5 | 2 | 12.5 | |
| *NC* | 2 | Eucalyptus ochrophloia | 6 | 3 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 7 | 3 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 7 | 4 | 2 | 23 | |
| *NC* | 2 | Eucalyptus ochrophloia | 7 | 5 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 8 | 3.5 | 5 | 32 | |
| *NC* | 2 | Eucalyptus ochrophloia | 8 | 4 | 2 | 14.5 | |
| *NC* | 2 | Eucalyptus ochrophloia | 9 | 3 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 10 | 4.5 | 2 | 17 | |
| *NC* | 2 | Eucalyptus ochrophloia | 11 | 5 | | | |
| *NC* | 2 | Eucalyptus ochrophloia | 11 | 5 | 3 | 27.5 | |
| *NC* | 2 | Eucalyptus ochrophloia | 24 | 6 | 3 | 34 | |
| *NC* | 2 | Eucalyptus ochrophloia | 40 | 8 | 4 | 105.5 | 3 |
| *NC* | 3 | Acacia stenophylla | 5 | 3.5 | 2 | 10 | |
| *NC* | 3 | Acacia stenophylla | 5 | 3.5 | | | |
| *NC* | 3 | Acacia stenophylla | 5.5 | 4 | | | |
| *NC* | 3 | Acacia stenophylla | 6 | 2 | | | |
| *NC* | 3 | Acacia stenophylla | 6 | 2.5 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 3 | Acacia stenophylla | 6 | 3 | | | |
| *NC* | 3 | Acacia stenophylla | 6.5 | 4 | 2 | 13 | |
| *NC* | 3 | Acacia stenophylla | 6.5 | 4.5 | | | |
| *NC* | 3 | Acacia stenophylla | 7 | 2.5 | | | |
| *NC* | 3 | Acacia stenophylla | 7 | 3 | | | |
| *NC* | 3 | Acacia stenophylla | 7 | 4 | 2 | 12 | |
| *NC* | 3 | Acacia stenophylla | 7.5 | 6 | | | |
| *NC* | 3 | Acacia stenophylla | 8.5 | 5 | 3 | 23 | |
| *NC* | 3 | Acacia stenophylla | 9 | 3 | | | |
| *NC* | 3 | Acacia stenophylla | 9 | 7 | | | |
| *NC* | 3 | Acacia stenophylla | 9.5 | 4 | 2 | 15.5 | |
| *NC* | 3 | Acacia stenophylla | 9.5 | 6 | | | |
| *NC* | 3 | Acacia stenophylla | 9.5 | 7 | | | |
| *NC* | 3 | Acacia stenophylla | 9.5 | 6 | | | |
| *NC* | 3 | Acacia stenophylla | 10 | 2.5 | | | |
| *NC* | 3 | Acacia stenophylla | 10 | 4 | | | |
| *NC* | 3 | Acacia stenophylla | 10 | 5.5 | | | |
| *NC* | 3 | Acacia stenophylla | 10 | 7 | | | |
| *NC* | 3 | Acacia stenophylla | 10 | 7 | | | |
| *NC* | 3 | Acacia stenophylla | 11 | 4 | 2 | 18 | |
| *NC* | 3 | Acacia stenophylla | 12 | 4.5 | 2 | 23 | |
| *NC* | 3 | Acacia stenophylla | 12 | 5.5 | 2 | 20 | |
| *NC* | 3 | Acacia stenophylla | 12 | 6 | | | |
| *NC* | 3 | Acacia stenophylla | 12 | 7 | 2 | 17 | |
| *NC* | 3 | Acacia stenophylla | 12 | 7 | | | |
| *NC* | 3 | Acacia stenophylla | 14 | 5 | | | |
| *NC* | 3 | Acacia stenophylla | 14 | 7 | 2 | 26 | |
| *NC* | 3 | Acacia stenophylla | 14.5 | 6 | | | |
| *NC* | 3 | Acacia stenophylla | 14.5 | 6 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 3 | Acacia stenophylla | 15 | 4 | | | |
| *NC* | 3 | Acacia stenophylla | 15 | 6 | | | |
| *NC* | 3 | Acacia stenophylla | 15 | 7 | | | |
| *NC* | 3 | Acacia stenophylla | 15 | 15 | 4 | 46.5 | |
| *NC* | 3 | Acacia stenophylla | 16 | 8 | 3 | 39 | |
| *NC* | 3 | Acacia stenophylla | 17 | 6 | 2 | 32 | |
| *NC* | 3 | Acacia stenophylla | 18.5 | 8 | 2 | 26.5 | |
| *NC* | 3 | Acacia stenophylla | 18.5 | 8 | | | |
| *NC* | 3 | Acacia stenophylla | 19 | 7 | 3 | 41 | |
| *NC* | 3 | Acacia stenophylla | 20 | 8 | 3 | 46 | |
| *NC* | 3 | Acacia stenophylla | 28 | 7 | 4 | 85 | |
| *NC* | 3 | Dead | 6 | 2 | | | |
| *NC* | 3 | Dead | 6 | 4 | | | |
| *NC* | 3 | Dead | 6.5 | 5 | 5 | 29 | |
| *NC* | 3 | Dead | 7 | 4 | | | |
| *NC* | 3 | Dead | 9.5 | 6 | 3 | 21 | |
| *NC* | 3 | Dead | 11 | 2 | | | |
| *NC* | 3 | Dead | 12 | 4 | | | |
| *NC* | 3 | Dead | 19 | 6 | | | |
| *NC* | 3 | Dead | 115 | 12 | 3 | 199 | 3 |
| *NC* | 3 | Eremophila bignoniiflora | 8.5 | 4 | 2 | 16.5 | |
| *NC* | 3 | Eucalyptus ochrophloia | 38 | 8 | | | |
| *NC* | 3 | Eucalyptus ochrophloia | 52.5 | 6 | | | 1 |
| *NC* | 3 | Eucalyptus ochrophloia | 59.5 | 8 | 3 | 115.5 | 1 |
| *NC* | 5 | Acacia aneura | 15 | 7 | 2 | 28.5 | |
| *NC* | 5 | Acacia aneura | 21 | 6.5 | 2 | 35 | |
| *NC* | 5 | Acacia stenophylla | 6 | 4 | | | |
| *NC* | 5 | Acacia stenophylla | 9 | 4 | 2 | 15.5 | |
| *NC* | 5 | Acacia stenophylla | 9.5 | 4.5 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 5 | Acacia stenophylla | 9.5 | 5 | | | |
| *NC* | 5 | Acacia stenophylla | 10.5 | 6 | | | |
| *NC* | 5 | Dead | 6.5 | 5 | | | |
| *NC* | 5 | Dead | 7 | 5 | | | |
| *NC* | 5 | Dead | 9.5 | 5 | | | |
| *NC* | 5 | Dodonaea viscosa | 8 | 4 | | | |
| *NC* | 5 | Eucalyptus coolabah | 14 | 6.5 | | | |
| *NC* | 6 | Acacia stenophylla | 10.5 | 4 | | | |
| *NC* | 6 | Acacia stenophylla | 15.5 | 5 | 4 | 54.5 | |
| *NC* | 6 | Acacia stenophylla | 18.5 | 6 | | | |
| *NC* | 6 | Dead | 6.5 | 4 | | | |
| *NC* | 6 | Dead | 27 | 8 | 2 | 54 | |
| *NC* | 6 | Eremophila bignoniiflora | 12 | 5 | 8 | 65.5 | |
| *NC* | 6 | Eremophila bignoniiflora | 26.5 | 9 | 5 | 79 | |
| *NC* | 6 | Eucalyptus coolabah | 23.5 | 6 | | | |
| *NC* | 6 | Eucalyptus coolabah | 27.5 | 9 | 2 | 53 | |
| *NC* | 9 | Acacia stenophylla | 16 | 6 | 2 | 32 | |
| *NC* | 9 | Eucalyptus largiflorens | 100 | 12 | 2 | 175.5 | 10 |
| *NC* | 10 | Atalaya hemiglauca | 21 | 8 | | | |
| *NC* | 11 | Eucalyptus coolabah | 6 | 4.5 | 2 | 11 | |
| *NC* | 11 | Eucalyptus ochrophloia | 10 | 8 | 8 | 63 | |
| *NC* | 11 | Eucalyptus ochrophloia | 11 | 6 | 7 | 66.5 | |
| *NC* | 11 | Eucalyptus ochrophloia | 16 | 8 | 2 | 24.5 | |
| *NC* | 11 | Eucalyptus ochrophloia | 18 | 8 | 3 | 43.5 | |
| *NC* | 11 | Eucalyptus ochrophloia | 18.5 | 10 | 6 | 76 | |
| *NC* | 12 | Atalaya hemiglauca | 8.5 | 4.5 | | | |
| *NC* | 12 | Atalaya hemiglauca | 53 | 8 | | | |
| *NC* | 13 | Acacia brachystachya | 11 | 6 | 3 | 30.5 | |
| *NC* | 13 | Acacia brachystachya | 11 | 6 | 4 | 37 | |

| Survey | Plot | Taxon | Diameter | Height | Number of Stems | Diameter Combined | Hollows |
|---|---|---|---|---|---|---|---|
| NC | 13 | Acacia brachystachya | 11.5 | 5 | | | |
| NC | 13 | Acacia brachystachya | 12 | 6.5 | 6 | 46 | |
| NC | 13 | Acacia brachystachya | 15 | 6 | 3 | 29.5 | |
| NC | 13 | Acacia brachystachya | 15.5 | 6 | 10 | 87.5 | |
| NC | 13 | Acacia brachystachya | 16.5 | 6 | 2 | 27.5 | |
| NC | 13 | Eremophila sturtii | 5.5 | 3.5 | | | |
| NC | 14 | Acacia stenophylla | 6 | 6 | 12 | | 1 |
| NC | 14 | Acacia stenophylla | 8.5 | 4.5 | | | |
| NC | 14 | Acacia stenophylla | 10 | 6 | 3 | 22 | |
| NC | 14 | Acacia stenophylla | 10.5 | 6 | | | |
| NC | 14 | Acacia stenophylla | 14 | 6 | | | |
| NC | 14 | Acacia stenophylla | 15.5 | 8 | | | |
| NC | 14 | Dead | 8 | 3.5 | 2 | 24 | 3 |
| NC | 14 | Dead | 16.5 | 6 | 2 | 24.5 | |
| NC | 14 | Dead | 28 | 6 | 2 | 40.5 | |
| NC | 14 | Eucalyptus largiflorens | 14 | 9 | 2 | 22 | 4 |
| NC | 14 | Eucalyptus largiflorens | 22 | 6 | | | 3 |
| NC | 14 | Eucalyptus largiflorens | 22 | 8 | 3 | 61 | 7 |
| NC | 14 | Eucalyptus largiflorens | 24.5 | 10 | 3 | 59 | 5 |
| NC | 14 | Eucalyptus largiflorens | 30.5 | 8 | 4 | 95 | 6 |
| NC | 14 | Eucalyptus largiflorens | 32.5 | 11 | 3 | 79.5 | 4 |
| NC | 14 | Eucalyptus largiflorens | 36 | 8 | 2 | 63 | 6 |
| NC | 14 | Eucalyptus largiflorens | 52 | 11 | | | 3 |
| NC | 15 | Alectryon oleifolius | 25.5 | 4.5 | 2 | 47.5 | |
| NC | 15 | Alectryon oleifolius | 26 | 5 | | | |
| NC | 15 | Alectryon oleifolius | 28 | 4 | | | |
| NC | 15 | Eremophila sturtii | 7 | 3.5 | 2 | 14 | |
| NC | 16 | Casuarina pauper | 6 | 4 | | | |
| NC | 16 | Casuarina pauper | 6 | 4 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 16 | Casuarina pauper | 7.5 | 4 | 2 | 14.5 | |
| *NC* | 16 | Casuarina pauper | 9.5 | 6 | | | |
| *NC* | 16 | Casuarina pauper | 10 | 5 | | | |
| *NC* | 16 | Casuarina pauper | 10 | 6 | | | |
| *NC* | 16 | Casuarina pauper | 10.5 | 6 | 3 | 27 | |
| *NC* | 16 | Casuarina pauper | 11 | 5 | | | |
| *NC* | 16 | Casuarina pauper | 11 | 6 | 2 | 18.5 | |
| *NC* | 16 | Casuarina pauper | 11.5 | 4 | | | |
| *NC* | 16 | Casuarina pauper | 11.5 | 6 | | | |
| *NC* | 16 | Casuarina pauper | 13 | 5 | 7 | 62.5 | 1 |
| *NC* | 16 | Casuarina pauper | 14 | 5 | 3 | 27 | |
| *NC* | 16 | Casuarina pauper | 14 | 6 | 20.5 | | |
| *NC* | 16 | Casuarina pauper | 15 | 5.5 | | | |
| *NC* | 16 | Casuarina pauper | 15 | 6 | | | |
| *NC* | 16 | Casuarina pauper | 16.5 | 5.5 | 3 | 33 | |
| *NC* | 16 | Casuarina pauper | 16.5 | 6 | | | |
| *NC* | 16 | Casuarina pauper | 17.5 | 5.5 | 3 | 31.5 | |
| *NC* | 16 | Casuarina pauper | 18.5 | 5 | 2 | 34.5 | 1 |
| *NC* | 16 | Casuarina pauper | 18.5 | 7 | 2 | 29 | |
| *NC* | 16 | Casuarina pauper | 19.5 | 6 | 2 | 34.5 | |
| *NC* | 16 | Casuarina pauper | 20 | 5 | 5 | 53.5 | |
| *NC* | 16 | Casuarina pauper | 20 | 5.5 | 3 | 36.5 | |
| *NC* | 16 | Casuarina pauper | 24.5 | 8 | | | |
| *NC* | 16 | Casuarina pauper | 25.5 | 6.5 | | | |
| *NC* | 16 | Dead | 5.5 | 2 | | | |
| *NC* | 16 | Dead | 11 | 3 | | | |
| *NC* | 17 | Acacia stenophylla | 10.5 | 5 | 2 | 20.5 | |
| *NC* | 17 | Acacia stenophylla | 12 | 5.5 | | | |
| *NC* | 17 | Acacia stenophylla | 14.5 | 6 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 17 | Acacia stenophylla | 18 | 6 | 2 | 31.5 | |
| *NC* | 17 | Acacia stenophylla | 20.5 | 6 | | | |
| *NC* | 17 | Acacia stenophylla | 21 | 6.5 | | | |
| *NC* | 17 | Dead | 10 | 4 | | | |
| *NC* | 17 | Dead | 10.5 | 5 | | | |
| *NC* | 17 | Dead | 16.5 | 3 | 2 | 24 | |
| *NC* | 17 | Dead | 29.5 | 7 | 2 | 45 | |
| *NC* | 18 | Acacia excelsa | 40 | 10 | | | |
| *NC* | 18 | Acacia excelsa | 46 | 10 | | | |
| *NC* | 18 | Dead | 11.5 | 6 | 2 | 22 | |
| *NC* | 18 | Dead | 15 | 6.5 | | | |
| *NC* | 18 | Dead | 32 | 9 | | | 1 |
| *NC* | 19 | Alectryon oleifolius | 7.5 | 4 | | | |
| *NC* | 19 | Alectryon oleifolius | 8 | 5 | 2 | 15 | |
| *NC* | 19 | Alectryon oleifolius | 10.5 | 6 | 3 | 36 | 3 |
| *NC* | 19 | Alectryon oleifolius | 11 | 5 | 2 | 21 | 2 |
| *NC* | 19 | Alectryon oleifolius | 12.5 | 6 | 6 | 61 | 1 |
| *NC* | 19 | Alectryon oleifolius | 14 | 6.5 | 5 | 52.5 | |
| *NC* | 19 | Alectryon oleifolius | 16 | 6 | | | |
| *NC* | 19 | Alectryon oleifolius | 27 | 7 | | | 5 |
| *NC* | 19 | Atalaya angustifolia | 24 | 7.5 | | | |
| *NC* | 19 | Atalaya hemiglauca | 9.5 | 5 | | | |
| *NC* | 19 | Atalaya hemiglauca | 15.5 | 8 | | | |
| *NC* | 19 | Atalaya hemiglauca | 17.5 | 8 | | | |
| *NC* | 19 | Atalaya hemiglauca | 19 | 6 | | | |
| *NC* | 19 | Atalaya hemiglauca | 21.5 | 7.5 | | | 1 |
| *NC* | 19 | Atalaya hemiglauca | 22 | 6 | | | |
| *NC* | 19 | Atalaya hemiglauca | 23 | 6 | | | |
| *NC* | 19 | Atalaya hemiglauca | 23 | 7 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 19 | Atalaya hemiglauca | 24 | 7.5 | | | |
| *NC* | 19 | Atalaya hemiglauca | 24 | 8 | | | |
| *NC* | 19 | Atalaya hemiglauca | 25.5 | 6.5 | | | |
| *NC* | 19 | Casuarina pauper | 11 | 6 | 2 | 20.5 | |
| *NC* | 19 | Casuarina pauper | 21 | 7.5 | 6 | 93 | |
| *NC* | 19 | Casuarina pauper | 21 | 8 | 2 | 38.5 | |
| *NC* | 19 | Dead | 24 | 7 | | | |
| *NC* | 21 | Acacia excelsa | 27 | 9 | | | |
| *NC* | 21 | Acacia excelsa | 68.5 | 10 | | | |
| *NC* | 21 | Alectryon oleifolius | 21.5 | 7 | 2 | 39.5 | 1 |
| *NC* | 21 | Alectryon oleifolius | 22 | 7 | | | |
| *NC* | 21 | Alectryon oleifolius | 22.5 | 8 | | | |
| *NC* | 21 | Alectryon oleifolius | 31.5 | 7 | 3 | 59 | 1 |
| *NC* | 21 | Dead | 8.5 | 4 | 2 | 16.5 | |
| *NC* | 21 | Dead | 14.5 | 5 | | | |
| *NC* | 22 | Acacia brachystachya | 5.5 | 4.5 | | | |
| *NC* | 22 | Acacia brachystachya | 6 | 4 | 3 | 17 | |
| *NC* | 22 | Acacia brachystachya | 6.5 | 5.5 | 2 | 11.5 | |
| *NC* | 22 | Acacia brachystachya | 7 | 5 | 6 | 39 | |
| *NC* | 22 | Acacia brachystachya | 7 | 5 | 5 | 29.5 | |
| *NC* | 22 | Acacia brachystachya | 7.5 | 5 | | | |
| *NC* | 22 | Acacia brachystachya | 7.5 | 5.5 | 9 | 53 | |
| *NC* | 22 | Acacia brachystachya | 7.5 | 5 | | | |
| *NC* | 22 | Acacia brachystachya | 8 | 4.5 | 3 | 29 | |
| *NC* | 22 | Acacia brachystachya | 8 | 5 | 6 | 36.5 | |
| *NC* | 22 | Acacia brachystachya | 8 | 5.5 | 15 | | |
| *NC* | 22 | Acacia brachystachya | 9.5 | 5 | 5 | 39 | |
| *NC* | 22 | Acacia brachystachya | 9.5 | 5.5 | 6 | 42 | |
| *NC* | 22 | Acacia brachystachya | 11 | 5 | 6 | 55.5 | |

| Survey | Plot | Taxon | Diameter | Height | Number of Stems | Diameter Combined | Hollows |
|---|---|---|---|---|---|---|---|
| NC | 22 | Acacia brachystachya | 11.5 | 5.5 | | | |
| NC | 22 | Dead | 5.5 | 4.5 | | | |
| NC | 22 | Dead | 5.5 | 4.5 | 2 | 11 | |
| NC | 22 | Dead | 5.5 | 4.5 | 2 | 11 | |
| NC | 22 | Dead | 6 | 4.5 | 2 | 11 | |
| NC | 22 | Dead | 6 | 5 | | | |
| NC | 22 | Dead | 6 | 4.5 | 2 | 12 | |
| NC | 22 | Dead | 6.5 | 5 | | | |
| NC | 22 | Dead | 7.5 | 4.5 | | | |
| NC | 22 | Dead | 7.5 | 6 | 5 | 41.5 | |
| NC | 22 | Dead | 8 | 5 | 15 | | |
| NC | 22 | Dead | 8 | 6 | 4 | 30.5 | |
| NC | 22 | Dead | 8.5 | 5.5 | | | |
| NC | 22 | Dead | 11.5 | 4 | 2 | 21 | |
| NC | 22 | Dead | 12 | 5 | 2 | 19 | |
| NC | 22 | Dead | 12.5 | 4.5 | 2 | 25 | |
| NC | 24 | Acacia brachystachya | 5.5 | 3.5 | | | |
| NC | 24 | Acacia brachystachya | 10 | 4 | 3 | 35.5 | |
| NC | 25 | Acacia aneura | 5 | 5 | 2 | 10 | |
| NC | 25 | Acacia aneura | 5 | 5 | 2 | 10 | |
| NC | 25 | Acacia aneura | 5 | 5 | | | |
| NC | 25 | Acacia aneura | 5 | 5 | | | |
| NC | 25 | Acacia aneura | 5.5 | 4.5 | | | |
| NC | 25 | Acacia aneura | 5.5 | 5 | | | |
| NC | 25 | Acacia aneura | 5.5 | 5.5 | | | |
| NC | 25 | Acacia aneura | 5.5 | 5 | | | |
| NC | 25 | Acacia aneura | 5.5 | 5 | | | |
| NC | 25 | Acacia aneura | 5.5 | 5 | | | |
| NC | 25 | Acacia aneura | 5.5 | 5 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 25 | Acacia aneura | 5.5 | 4.5 | 2 | 11 | |
| *NC* | 25 | Acacia aneura | 5.5 | 5 | 2 | 10.5 | |
| *NC* | 25 | Acacia aneura | 5.5 | 5 | | | |
| *NC* | 25 | Acacia aneura | 5.5 | 5.5 | | | |
| *NC* | 25 | Acacia aneura | 5.5 | 5 | 2 | 10.5 | |
| *NC* | 25 | Acacia aneura | 5.5 | 4.5 | 2 | 10.5 | |
| *NC* | 25 | Acacia aneura | 5.5 | 5 | 2 | 10.5 | |
| *NC* | 25 | Acacia aneura | 6 | 4.5 | | | |
| *NC* | 25 | Acacia aneura | 6 | 5 | 2 | 12 | |
| *NC* | 25 | Acacia aneura | 6 | 5.5 | | | |
| *NC* | 25 | Acacia aneura | 6 | 5.5 | | | |
| *NC* | 25 | Acacia aneura | 6 | 5.5 | | | |
| *NC* | 25 | Acacia aneura | 6 | 5.5 | 2 | 11.5 | |
| *NC* | 25 | Acacia aneura | 6.5 | 4 | 4 | 22.5 | |
| *NC* | 25 | Acacia aneura | 6.5 | 5 | 4 | 24 | |
| *NC* | 25 | Acacia aneura | 6.5 | 5.5 | 2 | 12.5 | |
| *NC* | 25 | Acacia aneura | 6.5 | 5 | 2 | 12 | |
| *NC* | 25 | Acacia aneura | 6.5 | 4 | 2 | 12 | |
| *NC* | 25 | Acacia aneura | 6.5 | 5 | 2 | 12 | |
| *NC* | 25 | Acacia aneura | 7 | 4 | 3 | 18 | |
| *NC* | 25 | Acacia aneura | 7.5 | 4 | 2 | 13.5 | |
| *NC* | 25 | Acacia aneura | 7.5 | 5 | | | |
| *NC* | 25 | Acacia aneura | 7.5 | 5.5 | 4 | 29.5 | |
| *NC* | 25 | Acacia aneura | 8 | 5 | 20.5 | | |
| *NC* | 25 | Acacia aneura | 9 | 5 | | | |
| *NC* | 25 | Dead | 5 | 4 | | | |
| *NC* | 25 | Dead | 5.5 | 3 | | | |
| *NC* | 25 | Dead | 5.5 | 4 | 2 | 10.5 | |
| *NC* | 25 | Dead | 6 | 4 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 25 | Dead | 6.5 | 4.5 | 2 | 12.5 | |
| *NC* | 25 | Dead | 6.5 | 5 | 4 | 24 | |
| *NC* | 25 | Dead | 6.5 | 4.5 | 2 | 12 | |
| *NC* | 25 | Dead | 7.5 | 3.5 | 3 | 18 | |
| *NC* | 26 | Acacia aneura | 9.5 | 4.5 | | | |
| *NC* | 26 | Acacia aneura | 12 | 4.5 | 2 | 21 | |
| *NC* | 26 | Acacia aneura | 15 | 6 | | | |
| *NC* | 26 | Acacia aneura | 19.5 | 6 | | | |
| *NC* | 26 | Corymbia tumescens | 24 | 9 | 4 | 88.5 | |
| *NC* | 26 | Corymbia tumescens | 34.5 | 7 | 2 | 59.5 | |
| *NC* | 26 | Dead | 9 | 2 | | | |
| *NC* | 26 | Dead | 11 | 6 | 3 | 30 | |
| *NC* | 26 | Dead | 12 | 3 | | | |
| *NC* | 28 | Dead | 6.5 | 2.4 | | | |
| *NC* | 28 | Eremophila duttonii | 6 | 2.2 | | | |
| *NC* | 28 | Pittosporum angustifolium | 9 | 4.5 | 2 | 14.5 | |
| *NC* | 29 | Eucalyptus populnea | 18 | 8 | 2 | 31 | 5 |
| *NC* | 29 | Eucalyptus populnea | 25 | 8 | | | |
| *NC* | 29 | Eucalyptus populnea | 33.5 | 12 | 6 | 117 | 4 |
| *NC* | 30 | Acacia aneura | 7 | 5 | 2 | 14 | |
| *NC* | 30 | Acacia aneura | 7.5 | 4 | | | |
| *NC* | 30 | Acacia aneura | 9 | 4.5 | | | |
| *NC* | 30 | Acacia aneura | 10 | 4.5 | 7 | 53 | |
| *NC* | 30 | Acacia aneura | 10.5 | 5 | 7 | 49.5 | |
| *NC* | 30 | Acacia aneura | 11 | 6 | 3 | 31.5 | |
| *NC* | 30 | Dead | 5.5 | 4 | | | |
| *NC* | 31 | Atalaya hemiglauca | 8 | 2.5 | | | 1 |
| *NC* | 31 | Atalaya hemiglauca | 14 | 5 | 2 | 25.5 | 1 |
| *NC* | 31 | Atalaya hemiglauca | 19 | 5 | 2 | 38 | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 31 | Atalaya hemiglauca | 25 | 6 | | | |
| *NC* | 31 | Atalaya hemiglauca | 25 | 6 | 2 | 45 | 1 |
| *NC* | 31 | Atalaya hemiglauca | 48 | 10 | | | |
| *NC* | 31 | Corymbia tumescens | 24.5 | 8 | | | |
| *NC* | 31 | Dead | 12.5 | 3 | | | |
| *NC* | 31 | Dead | 15.5 | 4 | 2 | 26.5 | |
| *NC* | 32 | Acacia aneura | 8.5 | 6 | | | |
| *NC* | 32 | Acacia aneura | 11 | 4 | | | |
| *NC* | 32 | Acacia aneura | 17 | 6 | | | |
| *NC* | 32 | Acacia aneura | 20 | 7 | | | |
| *NC* | 32 | Acacia aneura | 21 | 7 | 3 | 48 | |
| *NC* | 32 | Acacia aneura | 26 | 8 | | | |
| *NC* | 32 | Acacia aneura | 27.5 | 9 | 2 | 39.5 | |
| *NC* | 32 | Acacia tetragonophylla | 7 | 2.5 | 3 | 18.5 | |
| *NC* | 32 | Acacia tetragonophylla | 7.5 | 4 | | | |
| *NC* | 32 | Acacia tetragonophylla | 14 | 3 | 2 | 26 | |
| *NC* | 32 | Atalaya hemiglauca | 47.5 | 8 | 2 | 85.5 | 2 |
| *NC* | 32 | Atalaya hemiglauca | 54 | 10 | | | 2 |
| *NC* | 32 | Capparis mitchellii | 20.5 | 5 | | | |
| *NC* | 32 | Dead | 8 | 5 | | | |
| *NC* | 32 | Dead | 9 | 4.5 | | | |
| *NC* | 32 | Dead | 9.5 | 2.5 | 3 | 26.5 | |
| *NC* | 32 | Dead | 11 | 4 | | | |
| *NC* | 32 | Dead | 39.5 | 7 | 6 | 123.5 | 1 |
| *NC* | 34 | Dead | 27.5 | 5.5 | | | 1 |
| *NC* | 34 | Eucalyptus populnea | 15 | 3.5 | | | 1 |
| *NC* | 34 | Eucalyptus populnea | 18.5 | 3.5 | | | 1 |
| *NC* | 34 | Eucalyptus populnea | 18.5 | 5.5 | 6 | 93.5 | 9 |
| *NC* | 34 | Eucalyptus populnea | 20.5 | 4.5 | 2 | 39.5 | 1 |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 34 | Eucalyptus populnea | 21 | 6 | | | 1 |
| *NC* | 34 | Eucalyptus populnea | 24 | 4.5 | 2 | 34 | |
| *NC* | 34 | Eucalyptus populnea | 24 | 5 | | | 1 |
| *NC* | 34 | Eucalyptus populnea | 28 | 6.5 | 2 | 41 | 1 |
| *NC* | 34 | Eucalyptus populnea | 30 | 8.5 | 3 | 78 | 5 |
| *NC* | 34 | Eucalyptus populnea | 30.5 | 8 | 2 | 46 | 3 |
| *NC* | 34 | Eucalyptus populnea | 37 | 7.5 | | | 1 |
| *NC* | 36 | Grevillea striata | 6.5 | 2.2 | | | |
| *NC* | 36 | Grevillea striata | 10 | 3 | 2 | 17 | |
| *NC* | 37 | Acacia aneura | 6 | 4 | | | |
| *NC* | 37 | Acacia aneura | 12 | 4 | | | |
| *NC* | 37 | Acacia aneura | 13 | 4.5 | | | |
| *NC* | 37 | Dead | 5.5 | 3 | | | |
| *NC* | 37 | Eucalyptus populnea | 10 | 6 | 2 | 17.5 | |
| *NC* | 37 | Eucalyptus populnea | 20 | 5 | 2 | 31.5 | 1 |
| *NC* | 37 | Eucalyptus populnea | 28 | 8 | 2 | 52.5 | 1 |
| *NC* | 37 | Eucalyptus populnea | 45 | 8.5 | 10 | 236 | 15 |
| *NC* | 37 | Eucalyptus populnea | 59 | 11 | 17 | 234.5 | 8 |
| *NC* | 38 | Corymbia tumescens | 9.5 | 5 | 8 | 62.5 | |
| *NC* | 39 | Corymbia tumescens | 16.5 | 6 | 2 | 31.5 | |
| *NC* | 39 | Corymbia tumescens | 18 | 6 | | | |
| *NC* | 39 | Corymbia tumescens | 24.5 | 7 | 2 | 40 | 1 |
| *NC* | 39 | Corymbia tumescens | 44 | 8.5 | | | |
| *NC* | 40 | Acacia brachystachya | 15 | 4.5 | | | |
| *NC* | 40 | Acacia brachystachya | 17 | 4.5 | 2 | 26 | |
| *NC* | 41 | Acacia aneura | 6.5 | 3 | 2 | 12.5 | |
| *NC* | 41 | Acacia brachystachya | 5 | 2 | | | |
| *NC* | 41 | Acacia brachystachya | 5 | 2.2 | | | |
| *NC* | 41 | Acacia brachystachya | 7 | 3 | 2 | 14 | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 41 | Acacia brachystachya | 7.5 | 2.5 | | | |
| *NC* | 42 | Acacia aneura | 7 | 6 | 3 | 21 | |
| *NC* | 42 | Acacia aneura | 8 | 4 | 2 | 15 | |
| *NC* | 42 | Acacia aneura | 9 | 2 | | | |
| *NC* | 42 | Acacia aneura | 9 | 5 | 2 | 16.5 | |
| *NC* | 42 | Acacia aneura | 9 | 6 | 4 | 25.5 | |
| *NC* | 42 | Acacia aneura | 9.5 | 5 | 3 | 26 | |
| *NC* | 42 | Acacia aneura | 9.5 | 5 | 3 | 25 | |
| *NC* | 42 | Acacia aneura | 12 | 5 | 5 | 38 | |
| *NC* | 42 | Acacia aneura | 12 | 6 | 3 | 27.5 | |
| *NC* | 42 | Acacia aneura | 16 | 5 | 3 | 34 | |
| *NC* | 42 | Acacia aneura | 16 | 6 | 3 | 32.5 | |
| *NC* | 42 | Acacia aneura | 18 | 4.5 | | | |
| *NC* | 42 | Dead | 15 | 4 | 2 | 28 | |
| *NC* | 42 | Dead | 21 | 9 | 2 | 38.5 | |
| *NC* | 43 | Acacia aneura | 8.5 | 4.5 | | | |
| *NC* | 43 | Acacia aneura | 15 | 5 | | | |
| *NC* | 43 | Acacia aneura | 15.5 | 5 | | | |
| *NC* | 43 | Acacia excelsa | 5.5 | 2.5 | | | |
| *NC* | 43 | Acacia excelsa | 7.5 | 3 | | | |
| *NC* | 43 | Acacia excelsa | 13 | 5 | 2 | 26 | |
| *NC* | 43 | Acacia excelsa | 22.5 | 8 | 2 | 41.5 | |
| *NC* | 43 | Dead | 17 | 4 | | | 2 |
| *NC* | 44 | Acacia aneura | 5 | 2.5 | | | |
| *NC* | 44 | Acacia aneura | 6 | 5 | 3 | 17.5 | |
| *NC* | 44 | Acacia aneura | 9 | 3.5 | | | |
| *NC* | 44 | Acacia aneura | 9 | 7 | 4 | 32 | |
| *NC* | 44 | Acacia aneura | 10 | 6 | 3 | 23 | |
| *NC* | 44 | Acacia aneura | 11.5 | 5.5 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 44 | Acacia aneura | 16.5 | 8 | 2 | 27.5 | |
| *NC* | 44 | Eucalyptus populnea | 38 | 9 | 2 | 72 | 3 |
| *NC* | 45 | Acacia aneura | 5.5 | 6 | 2 | 10.5 | |
| *NC* | 45 | Acacia aneura | 6 | 4.5 | 2 | 11 | |
| *NC* | 45 | Acacia aneura | 6 | 4.5 | 2 | 11.5 | |
| *NC* | 45 | Acacia aneura | 6 | 5 | 2 | 11.5 | |
| *NC* | 45 | Acacia aneura | 6 | 10 | 10.5 | | |
| *NC* | 45 | Acacia aneura | 6.5 | 5.5 | 2 | 12.5 | |
| *NC* | 45 | Acacia aneura | 7 | 5 | 2 | 14 | |
| *NC* | 45 | Acacia aneura | 7.5 | 5 | | | |
| *NC* | 45 | Acacia aneura | 7.5 | 5 | 2 | 14 | |
| *NC* | 45 | Acacia aneura | 9 | 5 | | | |
| *NC* | 45 | Acacia aneura | 9 | 5 | | | |
| *NC* | 45 | Acacia aneura | 9 | 5.5 | 2 | 17 | |
| *NC* | 45 | Acacia aneura | 9 | 6 | 4 | 32.5 | |
| *NC* | 45 | Acacia aneura | 10 | 5 | 3 | 24.5 | |
| *NC* | 45 | Acacia aneura | 10.5 | 5 | | | |
| *NC* | 45 | Acacia aneura | 10.5 | 5.5 | | | |
| *NC* | 45 | Acacia aneura | 12 | 5 | | | |
| *NC* | 45 | Acacia aneura | 12 | 5.5 | 3 | 29 | |
| *NC* | 45 | Acacia aneura | 12 | 5.5 | 2 | 20 | |
| *NC* | 45 | Acacia aneura | 12.5 | 6 | | | |
| *NC* | 45 | Acacia aneura | 18 | 6.5 | | | |
| *NC* | 45 | Acacia aneura | 21 | 6.5 | | | |
| *NC* | 45 | Acacia excelsa | 17 | 7.5 | | | |
| *NC* | 45 | Dead | 6.5 | 3.5 | | | |
| *NC* | 45 | Dead | 7 | 3.5 | | | |
| *NC* | 45 | Dead | 11 | 4.5 | | | |
| *NC* | 45 | Dead | 12 | 4 | | | |

| Survey | Plot | Taxon | Diameter | Height | Number of Stems | Diameter Combined | Hollows |
|---|---|---|---|---|---|---|---|
| NC | 45 | Dead | 12.5 | 4 | | | |
| NC | 45 | Dead | 13 | 3 | | | |
| NC | 46 | Acacia brachystachya | 6 | 4 | | | |
| NC | 46 | Dead | 9 | 3 | 4 | 29.5 | |
| NC | 46 | Dead | 9.5 | 2.5 | 3 | 21.5 | |
| NC | 46 | Dead | 24.5 | 8 | | | |
| NC | 47 | Acacia brachystachya | 23 | 6 | 2 | 35 | |
| NC | 47 | Alectryon oleifolius | 15.5 | 3.5 | 3 | 38 | |
| NC | 47 | Dodonaea viscosa | 6.5 | 3.5 | 2 | 12.5 | |
| NC | 47 | Grevillea striata | 42.5 | 11 | 2 | 73.5 | |
| NC | 49 | Dead | 14.5 | 4 | 6 | 56.5 | |
| NC | 49 | Dead | 14.5 | 5 | 3 | 32.5 | |
| NC | 49 | Eremophila longifolia | 6 | 2.5 | | | |
| NC | 49 | Grevillea striata | 39 | 8 | | | |
| NC | 49 | Grevillea striata | 49 | 9 | | | |
| NC | 50 | Eucalyptus populnea | 38.5 | 7 | 2 | 76 | 7 |
| NC | 50 | Eucalyptus populnea | 46 | 8 | 2 | 92 | 3 |
| NC | 52 | Acacia excelsa | 9 | 4 | | | |
| NC | 52 | Acacia excelsa | 9 | 4 | | | |
| NC | 52 | Acacia excelsa | 11 | 4.5 | | | |
| NC | 52 | Acacia excelsa | 32 | 10 | 5 | 94.5 | |
| NC | 52 | Acacia excelsa | 37 | 10 | 2 | 66 | |
| NC | 52 | Dead | 18 | 4 | | | |
| NC | 53 | Dead | 10 | 6 | | | |
| NC | 53 | Dead | 44 | 10 | 5 | 198 | 14 |
| NC | 53 | Eucalyptus largiflorens | 12.5 | 6 | 2 | 24 | |
| NC | 53 | Eucalyptus largiflorens | 13.5 | 9 | 2 | 24.5 | |
| NC | 53 | Eucalyptus largiflorens | 15 | 8 | | | |
| NC | 53 | Eucalyptus largiflorens | 15 | 8.5 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 53 | Eucalyptus largiflorens | 16 | 8 | | | |
| *NC* | 53 | Eucalyptus largiflorens | 16.5 | 12 | | | |
| *NC* | 53 | Eucalyptus largiflorens | 17 | 9 | | | |
| *NC* | 53 | Eucalyptus largiflorens | 19 | 8 | 2 | 37 | |
| *NC* | 53 | Eucalyptus largiflorens | 20.5 | 9 | 6 | 96.5 | |
| *NC* | 53 | Eucalyptus largiflorens | 21.5 | 10 | | | |
| *NC* | 53 | Eucalyptus largiflorens | 21.5 | 11 | 5 | 91.5 | |
| *NC* | 53 | Eucalyptus largiflorens | 26.5 | 8 | | | |
| *NC* | 53 | Eucalyptus largiflorens | 27 | 10 | | | |
| *NC* | 53 | Eucalyptus largiflorens | 28 | 7 | | | |
| *NC* | 53 | Eucalyptus largiflorens | 29 | 12 | 4 | 96.5 | |
| *NC* | 54 | Alectryon oleifolius | 11 | 3.5 | 2 | 21 | |
| *NC* | 54 | Alectryon oleifolius | 12 | 4.5 | | | 1 |
| *NC* | 54 | Alectryon oleifolius | 13 | 3.5 | | | |
| *NC* | 54 | Alectryon oleifolius | 13 | 4 | 2 | 24 | |
| *NC* | 54 | Alectryon oleifolius | 14 | 4.5 | 3 | 36.5 | |
| *NC* | 54 | Alectryon oleifolius | 14.5 | 3.5 | 2 | 26 | |
| *NC* | 54 | Alectryon oleifolius | 14.5 | 5 | 4 | 47.5 | |
| *NC* | 54 | Alectryon oleifolius | 17 | 4.5 | 2 | 32 | |
| *NC* | 54 | Alectryon oleifolius | 18 | 5 | | | |
| *NC* | 54 | Alectryon oleifolius | 18 | 5.5 | 3 | 38.5 | 1 |
| *NC* | 55 | Eucalyptus largiflorens | 25.5 | 7 | 3 | 69 | 1 |
| *NC* | 55 | Eucalyptus largiflorens | 40.5 | 8 | 3 | 78 | 7 |
| *NC* | 56 | Dead | 10.5 | 2 | 2 | 16 | 2 |
| *NC* | 56 | Dead | 18 | 2.5 | 2 | 26.5 | 2 |
| *NC* | 56 | Dead | 19 | 5.5 | | | 5 |
| *NC* | 56 | Dead | 23 | 5 | 2 | 44 | 6 |
| *NC* | 56 | Dead | 25 | 3.5 | | | 4 |
| *NC* | 56 | Eucalyptus largiflorens | 37 | 11 | 2 | 70 | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 56 | Eucalyptus largiflorens | 40.5 | 11 | 3 | 97 | 9 |
| *NC* | 56 | Eucalyptus largiflorens | 42.5 | 10 | 2 | 63.5 | 2 |
| *NC* | 56 | Eucalyptus largiflorens | 55 | 12 | 3 | 95.5 | 3 |
| *NC* | 57 | Acacia loderi | 13 | 7 | 2 | 19 | |
| *NC* | 57 | Acacia loderi | 15 | 7 | | | 1 |
| *NC* | 57 | Acacia loderi | 19 | 7.5 | | | 2 |
| *NC* | 57 | Acacia loderi | 19 | 8.5 | | | |
| *NC* | 57 | Acacia loderi | 21 | 8 | | | |
| *NC* | 57 | Acacia loderi | 25.5 | 8 | 3 | 63 | 4 |
| *NC* | 57 | Alectryon oleifolius | 23.5 | 5 | 2 | 43.5 | 1 |
| *NC* | 57 | Dead | 5.5 | 2 | | | |
| *NC* | 57 | Dead | 6 | 2 | | | |
| *NC* | 57 | Dead | 8.5 | 2.5 | | | |
| *NC* | 57 | Dead | 10.5 | 3 | | | |
| *NC* | 57 | Dead | 10.5 | 4 | | | |
| *NC* | 57 | Dead | 14 | 4.5 | | | 2 |
| *NC* | 57 | Dead | 14 | 6 | 4 | 43.5 | |
| *NC* | 57 | Dead | 14.5 | 5 | | | |
| *NC* | 57 | Dead | 22 | 8 | 3 | 54.5 | |
| *NC* | 57 | Dodonaea viscosa | 7 | 2.5 | | | |
| *NC* | 58 | Eucalyptus ochrophloia | 25 | 5 | | | 1 |
| *NC* | 58 | Eucalyptus ochrophloia | 41 | 12 | 3 | 108 | 2 |
| *NC* | 58 | Eucalyptus ochrophloia | 43 | 12 | 3 | 88 | |
| *NC* | 58 | Eucalyptus ochrophloia | 46.5 | 2 | 2 | 89.5 | 2 |
| *NC* | 58 | Eucalyptus ochrophloia | 51.5 | 12 | 10 | 250.5 | 4 |
| *NC* | 58 | Eucalyptus ochrophloia | 68 | 14 | 3 | 117 | 5 |
| *NC* | 60 | Acacia aneura | 14.5 | 7 | | | |
| *NC* | 60 | Acacia aneura | 15 | 5.5 | | | |
| *NC* | 60 | Acacia aneura | 20.5 | 5.5 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 60 | Acacia aneura | 24 | 8 | | | |
| *NC* | 60 | Alectryon oleifolius | 8 | 3 | 2 | 13 | 2 |
| *NC* | 60 | Alectryon oleifolius | 11 | 3 | | | 3 |
| *NC* | 60 | Alectryon oleifolius | 15 | 4 | 3 | 31 | 2 |
| *NC* | 60 | Alectryon oleifolius | 16 | 3.5 | 2 | 30 | |
| *NC* | 60 | Alectryon oleifolius | 16 | 4.5 | 2 | 27 | |
| *NC* | 60 | Alectryon oleifolius | 17 | 4.5 | 3 | 41 | |
| *NC* | 60 | Casuarina pauper | 15.5 | 5.5 | | | |
| *NC* | 60 | Casuarina pauper | 18 | 6 | | | |
| *NC* | 60 | Casuarina pauper | 25 | 12 | | | |
| *NC* | 60 | Dead | 5.5 | 4 | 2 | 11 | |
| *NC* | 60 | Dead | 5.5 | 4 | 2 | 10.5 | |
| *NC* | 60 | Dead | 6 | 1.8 | | | |
| *NC* | 60 | Dead | 6 | 2 | | | |
| *NC* | 60 | Dead | 6 | 3 | 2 | 11 | |
| *NC* | 60 | Dead | 7 | 3 | | | |
| *NC* | 60 | Dead | 7 | 4 | 2 | 12.5 | |
| *NC* | 60 | Dead | 7.5 | 5 | | | |
| *NC* | 60 | Dead | 8 | 4.5 | | | |
| *NC* | 60 | Dead | 9.5 | 1.8 | 2 | 15.5 | |
| *NC* | 60 | Dead | 9.5 | 4.5 | | | |
| *NC* | 60 | Dead | 12 | 5.5 | | | |
| *NC* | 60 | Dead | 12 | 28 | | | |
| *NC* | 60 | Dead | 14 | 3 | | | 1 |
| *NC* | 60 | Dead | 16.5 | 4.5 | 3 | 44 | |
| *NC* | 60 | Dead | 25 | 7 | | | |
| *NC* | 60 | Eremophila duttonii | 6.5 | 3.5 | 3 | 18.5 | |
| *NC* | 61 | Acacia cambagei | 26.5 | 8 | 2 | 35 | |
| *NC* | 61 | Acacia cambagei | 29 | 9 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 61 | Acacia cambagei | 36 | 10 | 4 | 85 | 4 |
| *NC* | 61 | Acacia cambagei | 38.5 | 7 | 2 | 67.5 | 1 |
| *NC* | 61 | Acacia cambagei | 39 | 9 | 3 | 92 | 1 |
| *NC* | 61 | Acacia cambagei | 40 | 8 | 2 | 75 | |
| *NC* | 61 | Acacia cambagei | 57 | 10 | 2 | 67 | 1 |
| *NC* | 61 | Acacia cambagei | 69 | 11 | 3 | 151 | 3 |
| *NC* | 66 | Melaleuca densispicata | 8 | 3 | | | |
| *NC* | 66 | Melaleuca densispicata | 10 | 2.5 | 2 | 17 | |
| *NC* | 66 | Melaleuca densispicata | 11 | 3 | | | |
| *NC* | 66 | Melaleuca densispicata | 15 | 4 | 3 | 34 | |
| *NC* | 66 | Melaleuca densispicata | 19 | 4 | 4 | 45 | |
| *NC* | 67 | Atalaya hemiglauca | 6.5 | 4.5 | | | |
| *NC* | 67 | Atalaya hemiglauca | 9 | 5 | | | |
| *NC* | 67 | Atalaya hemiglauca | 27.5 | 7 | | | |
| *NC* | 67 | Atalaya hemiglauca | 54 | 10 | 3 | 108.5 | 3 |
| *NC* | 67 | Eucalyptus populnea | 33 | 8 | 3 | 66 | 3 |
| *NC* | 67 | Eucalyptus populnea | 34.5 | 6.5 | 4 | 72.5 | 6 |
| *NC* | 67 | Eucalyptus populnea | 35 | 8.5 | 3 | 97 | |
| *NC* | 67 | Eucalyptus populnea | 39 | 8 | 3 | 108 | 1 |
| *NC* | 67 | Eucalyptus populnea | 46 | 9 | | | 1 |
| *NC* | 67 | Eucalyptus populnea | 48 | 10 | 3 | 132.5 | |
| *NC* | 67 | Eucalyptus populnea | 50 | 8 | 2 | 82 | 1 |
| *NC* | 67 | Eucalyptus populnea | 60 | 8.5 | | | 3 |
| *NC* | 68 | Acacia aneura | 31 | 6 | | | |
| *NC* | 68 | Grevillea striata | 40 | 9 | | | |
| *NC* | 71 | Dead | 7.5 | 2.5 | 3 | 20.5 | |
| *NC* | 71 | Hakea tephrosperma | 6 | 2.5 | 2 | 11 | |
| *NC* | 71 | Hakea tephrosperma | 9.5 | 4.5 | 7 | 52 | |
| *NC* | 71 | Hakea tephrosperma | 9.5 | 5 | | | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 71 | Hakea tephrosperma | 11.5 | 4 | 6 | 52.5 | |
| *NC* | 71 | Hakea tephrosperma | 12 | 4.5 | 2 | 20.5 | |
| *NC* | 72 | Acacia aneura | 8 | 4 | 3 | 18 | |
| *NC* | 72 | Eucalyptus populnea | 5 | 2 | | | |
| *NC* | 72 | Eucalyptus populnea | 9.5 | 5 | 3 | 23.5 | |
| *NC* | 72 | Eucalyptus populnea | 13 | 3 | 2 | 25 | 1 |
| *NC* | 72 | Eucalyptus populnea | 13 | 5 | 2 | 26 | 1 |
| *NC* | 72 | Eucalyptus populnea | 13.5 | 3 | | | |
| *NC* | 72 | Eucalyptus populnea | 15 | 6 | 2 | 24 | |
| *NC* | 72 | Eucalyptus populnea | 15 | 6 | | | |
| *NC* | 72 | Eucalyptus populnea | 20 | 3.5 | | | |
| *NC* | 72 | Eucalyptus populnea | 23 | 5 | | | 1 |
| *NC* | 72 | Eucalyptus populnea | 31 | 8 | 3 | 76 | 6 |
| *NC* | 72 | Eucalyptus populnea | 32.5 | 7 | 3 | 79.5 | 3 |
| *NC* | 74 | Acacia aneura | 6 | 3 | 2 | 11 | |
| *NC* | 74 | Dead | 5 | 3.5 | | | |
| *NC* | 74 | Eremophila longifolia | 6 | 3 | | | |
| *NC* | 74 | Melaleuca densispicata | 18 | 4.5 | 3 | 40 | |
| *NC* | 75 | Alectryon oleifolius | 5.5 | 4 | | | |
| *NC* | 75 | Alectryon oleifolius | 7 | 4 | | | |
| *NC* | 75 | Alectryon oleifolius | 7 | 4.5 | 4 | 24 | |
| *NC* | 75 | Alectryon oleifolius | 7 | 4 | | | |
| *NC* | 75 | Alectryon oleifolius | 8 | 4 | 2 | 15 | |
| *NC* | 75 | Alectryon oleifolius | 8.5 | 3 | 5 | 37.5 | |
| *NC* | 75 | Alectryon oleifolius | 10 | 3 | | | |
| *NC* | 75 | Alectryon oleifolius | 10 | 6 | 3 | 26 | |
| *NC* | 75 | Alectryon oleifolius | 10.5 | 5 | 2 | 17 | |
| *NC* | 75 | Alectryon oleifolius | 11.5 | 5 | 2 | 17.5 | |
| *NC* | 75 | Alectryon oleifolius | 12 | 4 | 5 | 48 | |

| *Survey* | *Plot* | *Taxon* | *Diameter* | *Height* | *Number of Stems* | *Diameter Combined* | *Hollows* |
|---|---|---|---|---|---|---|---|
| *NC* | 75 | Alectryon oleifolius | 12.5 | 6 | 2 | 25 | 2 |
| *NC* | 75 | Alectryon oleifolius | 13.5 | 3 | 5 | 40 | |
| *NC* | 75 | Alectryon oleifolius | 14.5 | 6 | 7 | 86 | |
| *NC* | 75 | Alectryon oleifolius | 22 | 3.5 | 2 | 30 | 1 |
| *NC* | 76 | Eucalyptus largiflorens | 35 | 5 | | | 3 |
| *NC* | 76 | Eucalyptus largiflorens | 36 | 7 | 3 | 72 | 2 |
| *NC* | 76 | Eucalyptus largiflorens | 38 | 8 | 3 | 95 | |

# Appendix 6 – Suggested Plant Communities for each Plot.

| *Survey* | *Plot* | *Analysis Primer7* | *PCT Primary* | *PCT Secondary* |
|---|---|---|---|---|
| *NC* | 1 | C4 | 67 | |
| *NC* | 2 | C6 | 67 | 39 |
| *NC* | 3 | C6 | 39 | 67 |
| *NC* | 4 | C4 | 67 | |
| *NC* | 5 | C8 | 198 | 149 |
| *NC* | 6 | C4 | 39 | 67 |
| *NC* | 7 | C6 | 39 | 67 |
| *NC* | 8 | C6 | 39 | 149 |
| *NC* | 9 | C4 | 37 | 38 |
| *NC* | 10 | C8 | 143 | 139 |
| *NC* | 11 | C6 | 198 | 166 |
| *NC* | 12 | C8 | 143 | 198 |
| *NC* | 13 | C8 | 143 | 212 |
| *NC* | 14 | C4 | 37 | 38 |
| *NC* | 15 | C8 | 143 | 144 |
| *NC* | 16 | C8 | 119 | 199 |
| *NC* | 17 | C4 | 53 | 25 |
| *NC* | 18 | C8 | 134 | |
| *NC* | 19 | C8 | 137 | 144 |
| *NC* | 20 | C4 | 25 | 53 |
| *NC* | 21 | C8 | 134 | |
| *NC* | 22 | C2 | 121 | 120 |
| *NC* | 23 | C1 | 100 | 120 |
| *NC* | 24 | C1 | 121 | 120 |
| *NC* | 25 | C1 | 215 | |
| *NC* | 26 | C9 | 120 | 121 |
| *NC* | 27 | C9 | 121 | 100 |

| *Survey* | *Plot* | *Analysis Primer7* | *PCT Primary* | *PCT Secondary* |
|---|---|---|---|---|
| *NC* | 28 | C9 | 109 | 120 |
| *NC* | 29 | C9 | 109 | 120 |
| *NC* | 30 | C1 | 121 | 215 |
| *NC* | 31 | C9 | 139 | 109 |
| *NC* | 32 | C9 | 100 | 137 |
| *NC* | 33 | C9 | 166 | 198 |
| *NC* | 34 | C8 | 207 | 25 |
| *NC* | 35 | C4 | 25 | 53 |
| *NC* | 36 | C9 | 120 | 121 |
| *NC* | 37 | C9 | 109 | 207 |
| *NC* | 38 | C7 | 212 | 149 |
| *NC* | 39 | C9 | 100 | |
| *NC* | 40 | C1 | 121 | 120 |
| *NC* | 41 | C1 | 121 | 120 |
| *NC* | 42 | C2 | 120 | 121 |
| *NC* | 43 | C1 | 134 | 125 |
| *NC* | 44 | C1 | 121 | 120 |
| *NC* | 45 | C1 | 120 | 121 |
| *NC* | 46 | C2 | 121 | 120 |
| *NC* | 47 | C2 | 121 | 120 |
| *NC* | 48 | C1 | 127 | 120 |
| *NC* | 49 | C2 | 121 | 120 |
| *NC* | 50 | C8 | 207 | 25 |
| *NC* | 51 | C6 | 161 | 198 |
| *NC* | 52 | C8 | 134 | 125 |
| *NC* | 53 | C4 | 38 | 37 |
| *NC* | 54 | C8 | 137 | 143 |
| *NC* | 55 | C3 | 149 | 198 |
| *NC* | 56 | C8 | 38 | 37 |

| *Survey* | *Plot* | *Analysis Primer7* | *PCT Primary* | *PCT Secondary* |
|---|---|---|---|---|
| *NC* | 57 | C8 | 128 | 143 |
| *NC* | 58 | C6 | 67 | 38 |
| *NC* | 59 | C8 | 143 | |
| *NC* | 60 | C2 | 59 | 119 |
| *NC* | 61 | C8 | 118 | |
| *NC* | 62 | C5 | 18 | 24 |
| *NC* | 63 | C4 | 25 | 199 |
| *NC* | 64 | C4 | 198 | 149 |
| *NC* | 65 | C5 | 198 | 212 |
| *NC* | 66 | C8 | 261 | |
| *NC* | 67 | C8 | 109 | 134 |
| *NC* | 68 | C8 | 120 | 121 |
| *NC* | 69 | C5 | 198 | 212 |
| *NC* | 70 | C1 | 120 | 121 |
| *NC* | 71 | C8 | 199 | 125 |
| *NC* | 72 | C8 | 109 | 119 |
| *NC* | 73 | C4 | 25 | 53 |
| *NC* | 74 | C8 | 261 | 137 |
| *NC* | 75 | C8 | 137 | 144 |
| *NC* | 76 | C8 | 38 | 37 |
| *NC* | 77 | C5 | 198 | 149 |
| *NC* | 78 | C5 | 24 | 198 |
| *NC* | 79 | | 120 | 121 |
| *NC* | 80 | | 120 | 121 |
| *NC* | 81 | | 120 | 121 |
| *NC* | 82 | | 120 | 125 |
| *NC* | 83 | | 120 | |
| *NC* | 84 | | 120 | |
| *NC* | 85 | | 120 | 121 |

| *Survey* | *Plot* | *Analysis Primer7* | *PCT Primary* | *PCT Secondary* |
|---|---|---|---|---|
| *NC* | 86 | | 120 | 121 |
| *NC* | 87 | | 120 | 121 |
| *NC* | 88 | | 120 | 121 |
| *NC* | 89 | | 120 | 121 |
| *NC* | 90 | | 207 | 109 |
| *NC* | 91 | | 120 | 137 |
| *NC* | 92 | | 120 | |
| *NC* | 93 | | 125 | 134 |
| *NRC* | 1 | | 39 | |
| *NRC* | 2 | | 11 | |
| *NRC* | 3 | | 39 | |
| *NRC* | 4 | | 67 | |
| *NRC* | 5 | | 137 | 120 |
| *NRC* | 6 | | 198 | |
| *NRC* | 7 | | 67 | |
| *NRC* | 8 | | 67 | |
| *NRC* | 9 | | 38 | 37 |
| *NRC* | 10 | | 121 | 120 |
| *NRC* | 11 | | 38 | 37 |
| *NRC* | 12 | | 134 | 137 |
| *NRC* | 13 | | 137 | 59 |
| *NRC* | 14 | | 37 | 38 |
| *NRC* | 15 | | 143 | 139 |
| *NRC* | 16 | | 37 | 38 |
| *NRC* | 17 | | 120 | |
| *NRC* | 18 | | 120 | 121 |
| *NRC* | 19 | | 120 | 139 |
| *NRC* | 20 | | 100 | 120 |
| *NRC* | 21 | | 100 | |

| *Survey* | *Plot* | *Analysis Primer7* | *PCT Primary* | *PCT Secondary* |
|---|---|---|---|---|
| *NRC* | 22 | | 137 | 120 |
| *NRC* | 23 | | 120 | |
| *NRC* | 24 | | 53 | 25 |
| *NRC* | 25 | | 137 | 143 |
| *NRC* | 26 | | 67 | |
| *NRC* | 27 | | 53 | 25 |
| *NRC* | 28 | | 37 | 38 |
| *NRC* | 29 | | 125 | 137 |
| *NRC* | 30 | | 59 | 143 |
| *NRC* | 31 | | 137 | 143 |
| *NRC* | 32 | | 212 | 198 |
| *NRC* | 33 | | 53 | 25 |
| *NRC* | 34 | | 37 | 38 |
| *NRC* | 35 | | 67 | |
| *NRC* | 36 | | 137 | 134 |
| *NRC* | 37 | | 59 | |
| *NRC* | 38 | | 125 | 134 |
| *NRC* | 39 | | 37 | 38 |
| *NRC* | 40 | | 59 | 143 |
| *NRC* | 41 | | 121 | 120 |
| *NRC* | 42 | | 125 | 137 |
| *NRC* | 43 | | 38 | 37 |
| *NRC* | 44 | | 100 | 121 |
| *NRC* | 45 | | 137 | 120 |
| *NRC* | 46 | | 120 | |
| *NRC* | 47 | | 109 | 144 |
| *NRC* | 48 | | 120 | 121 |
| *NRC* | 49 | | 120 | 137 |
| *NRC* | 50 | | 137 | 144 |

| *Survey* | *Plot* | *Analysis Primer7* | *PCT Primary* | *PCT Secondary* |
|---|---|---|---|---|
| *NRC* | 51 | | 121 | 137 |
| *NRC* | 52 | | 100 | 120 |
| *NRC* | 53 | | 121 | 120 |
| *NRC* | 54 | | 100 | 137 |
| *NRC* | 55 | | 121 | 100 |
| *NRC* | 56 | | 109 | 100 |
| *NRC* | 57 | | 139 | 137 |
| *NRC* | 58 | | 120 | 121 |
| *NRC* | 59 | | 121 | 109 |
| *NRC* | 60 | | 121 | 120 |
| *NRC* | 61 | | 297 | 109 |
| *NRC* | 62 | | 207 | 38 |
| *NRC* | 63 | | 120 | |
| *NRC* | 64 | | 100 | 121 |
| *NRC* | 65 | | 100 | 120 |
| *NRC* | 66 | | 100 | 120 |
| *NRC* | 67 | | 137 | 121 |
| *NRC* | 68 | | 100 | 120 |
| *NRC* | 69 | | 137 | |
| *NRC* | 70 | | 100 | 120 |
| *NRC* | 71 | | 109 | 120 |
| *NRC* | 72 | | 109 | 120 |
| *NRC* | 73 | | 109 | 120 |
| *NRC* | 74 | | 137 | 59 |
| *NRC* | 75 | | 121 | 109 |
| *NRC* | 76 | | 125 | 134 |
| *NRC* | 77 | | 109 | 120 |
| *NRC* | 78 | | 100 | 120 |
| *NRC* | 79 | | 100 | 121 |

| *Survey* | *Plot* | *Analysis Primer7* | *PCT Primary* | *PCT Secondary* |
|---|---|---|---|---|
| *NRC* | 80 | | 100 | 120 |
| *NRC* | 81 | | 100 | 121 |
| *NRC* | 82 | | 121 | 120 |
| *NRC* | 83 | | 125 | 134 |
| *NRC* | 84 | | 109 | 120 |
| *NRC* | 85 | | 125 | 134 |
| *NRC* | 86 | | 125 | 120 |
| *NRC* | 87 | | 109 | 137 |
| *NRC* | 88 | | 137 | 143 |
| *NRC* | 89 | | 109 | 207 |
| *NRC* | 90 | | 125 | 120 |
| *NRC* | 91 | | 53 | 25 |
| *NRC* | 92 | | 67 | |
| *NRC* | 93 | | 198 | |
| *NRC* | 94 | | 67 | |
| *NRC* | 95 | | 119 | 143 |
| *NRC* | 96 | | 144 | 59 |
| *NRC* | 97 | | 137 | |
| *NRC* | 98 | | 119 | 59 |
| *NRC* | 99 | | 144 | 134 |
| *NRC* | 100 | | 38 | 37 |
| *NRC* | 101 | | 125 | 144 |
| *NRC* | 102 | | 67 | |
| *NRC* | 103 | | 53 | 25 |
| *NRC* | 104 | | 67 | 38 |
| *NRC* | 105 | | 67 | 39 |
| *NRC* | 106 | | 143 | 119 |
| *NRC* | 107 | | 67 | 53 |
| *NRC* | 108 | | 67 | 53 |

| *Survey* | *Plot* | *Analysis Primer7* | *PCT Primary* | *PCT Secondary* |
|---|---|---|---|---|
| *NRC* | 109 | | 199 | 125 |
| *NRC* | 110 | | 38 | 37 |
| *NRC* | 111 | | 119 | 143 |
| *NRC* | 112 | | 125 | 137 |
| *NRC* | 113 | | 137 | 143 |
| *NRC* | 114 | | 137 | 143 |
| *NRC* | 115 | | 119 | 143 |
| *NRC* | 116 | | 38 | 37 |
| *NRC* | 117 | | 137 | 143 |
| *NRC* | 118 | | 67 | 38 |
| *NRC* | 119 | | 38 | 37 |
| *NRC* | 120 | | 38 | 37 |
| *NRC* | 121 | | 119 | 137 |
| *NRC* | 122 | | 144 | 119 |
| *NRC* | 123 | | 24 | 18 |
| *NRC* | 124 | | 137 | 119 |
| *NRC* | 125 | | 144 | 199 |
| *NRC* | 126 | | 59 | 144 |
| *NRC* | 127 | | 59 | 144 |
| *NRC* | 128 | | 59 | 144 |
| *NRC* | 129 | | 207 | 38 |
| *NRC* | 130 | | 38 | 37 |
| *NRC* | 131 | | 143 | 199 |
| *NRC* | 132 | | 38 | 37 |
| *NRC* | 133 | | 59 | 144 |
| *NRC* | 134 | | 24 | 37 |
| *NRC* | 135 | | 38 | 37 |
| *NRC* | 136 | | 38 | 37 |
| *NRC* | 137 | | 59 | 144 |

| *Survey* | *Plot* | *Analysis Primer7* | *PCT Primary* | *PCT Secondary* |
|---|---|---|---|---|
| *NRC* | 138 | | 144 | 125 |
| *NRC* | 139 | | 144 | 137 |
| *NRC* | 140 | | 38 | 37 |
| *NRC* | 141 | | 38 | 37 |
| *NRC* | 142 | | 67 | |
| *NRC* | 143 | | 137 | 144 |
| *NRC* | 144 | | 39 | 38 |
| *NRC* | 145 | | 37 | 38 |
| *NRC* | 146 | | 11 | |
| *NRC* | 147 | | 67 | 38 |
| *NRC* | 148 | | 38 | 137 |
| *NRC* | 149 | | 120 | 137 |
| *NRC* | 150 | | 137 | 144 |
| *NRC* | 151 | | 38 | 37 |
| *NRC* | 152 | | 137 | 199 |
| *NRC* | 153 | | 109 | |
| *NRC* | 154 | | 261 | 38 |
| *NRC* | 155 | | 38 | 207 |
| *NRC* | 156 | | 109 | |
| *NRC* | 157 | | 207 | 109 |
| *NRC* | 158 | | 137 | 120 |
| *NRC* | 159 | | 38 | 37 |
| *NRC* | 160 | | 38 | 199 |
| *NRC* | 161 | | 120 | 134 |
| *NRC* | 162 | | 120 | 109 |
| *NRC* | 163 | | 100 | 120 |
| *NRC* | 164 | | 120 | |
| *NRC* | 165 | | 207 | |
| *NRC* | 166 | | 207 | 109 |

| *Survey* | *Plot* | *Analysis Primer7* | *PCT Primary* | *PCT Secondary* |
|---|---|---|---|---|
| *NRC* | 167 | | 207 | 109 |
| *NRC* | 168 | | 199 | 125 |
| *NRC* | 169 | | 207 | 109 |
| *NRC* | 170 | | 120 | 125 |
| *NRC* | 171 | | 38 | 207 |
| *NRC* | 172 | | 38 | 207 |
| *NRC* | 173 | | 125 | 137 |
| *NRC* | 174 | | 137 | 144 |
| *NRC* | 175 | | 207 | 134 |
| *NRC* | 176 | | 125 | 134 |
| *NRC* | 177 | | 125 | 134 |
| *NRC* | 178 | | 109 | 143 |
| *NRC* | 179 | | 38 | 37 |
| *NRC* | 180 | | 125 | 134 |
| *NRC* | 181 | | 38 | 137 |
| *NRC* | 182 | | 143 | 119 |
| *NRC* | 183 | | 109 | 137 |
| *NRC* | 184 | | 144 | 137 |
| *NRC* | 185 | | 38 | 37 |
| *NRC* | 186 | | 24 | |
| *NRC* | 187 | | 207 | 38 |
| *NRC* | 188 | | 121 | 120 |
| *NRC* | 189 | | 121 | 120 |

# Appendix 7 – Species list for Nocoleche Nature Reserve

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| **Fern & Fern Allies** | | | | | | | |
| **Marsileaceae** | | | | | | | |
| *Marsilea costulifera* | D.L.Jones | | | | Nardoo | E | Native |
| *Marsilea drummondii* | A.Braun. | | | | Common Nardoo | E | Native |
| *Marsilea exarata* | A.Braun. | | | | Nardoo | E | Native |
| *Ophioglossaceae* | | | | | | | |
| *Ophioglossum lusitanicum* | | subsp. | *coriaceum* | (Cunn.) Clausen | Adder's Tongue | E | Native |
| **Pteridaceae** | | | | | | | |
| *Cheilanthes sieberi* | Kunze | subsp. | *sieberi* | | Narrow Rock Fern | E | Native |
| **Monocotyledon** | | | | | | | |
| **Amaryllidaceae** | | | | | | | |
| *Crinum flaccidum* | Herb. | | | | Darling Lily  Macquarie Lily | F | Native |
| **Anthericaceae** | | | | | | | |
| *Thysanotus baueri* | R.Br. | | | | Fringe-lily | F | Native |
| **Aponogetonaceae** | | | | | | | |
| *Aponogeton queenslandicus* | H.Bruggen | | | | Pond Lily | F | Native |
| **Asphodelaceae** | | | | | | | |
| *Asphodelus fistulosus* | L. | | | | Onion Weed  Asphodel | | **Introduced** |
| *Bulbine alata* | Baijnath | | | | Native Leek | F | Native |
| **Asteliaceae** | | | | | | | |
| *Pluchea dunlopii* | Hunger | | | | Daisy | S | Native |
| **Centrolepidaceae** | | | | | | | |
| *Centrolepis eremica* | D.A.Cooke | | | | Centrolepis | R | Native |
| **Cyperaceae** | | | | | | | |
| *Carex inversa* | R.Br. | | | | Knob Sedge | V | Native |
| *Cyperus bifax* | C.B.Clarke | | | | Downs Nutgrass | V | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Cyperus difformis* | L. | | | | Dirty Dora | V | Native |
| *Cyperus gilesii* | Benth. | | | | Sedge | V | Native |
| *Cyperus pygmaeus* | Rottb. | | | | Dwarf Sedge | V | Native |
| *Cyperus squarrosus* | L. | | | | Bearded Flat-sedge | V | Native |
| *Eleocharis acuta* | R.Br. | | | | Common Spike Rush | V | Native |
| *Eleocharis pallens* | S.T.Blake | | | | Pale Spike Rush | V | Native |
| *Eleocharis plana* | S.T.Blake | | | | Spike Rush | V | Native |
| *Eleocharis pusilla* | R.Br. | | | | Small Spike Rush | | Native |
| *Fimbristylis dichotoma* | (L.) Vahl | | | | Common Fringe Rush | V | Native |
| *Isolepis australiensis* | (Maiden & Betche) K.L.Wilson | | | | Club-rush | V | Native |
| *Isolepis congrua* | Nees | | | | Club-rush | V | Native |
| *Lipocarpha microcephala* | (R.Br.) Kunth | | | | Lipocarpa Sedge | V | Native |
| *Schoenoplectiella dissachantha* | (S.T.Blake) Lye | | | | Schoenoplectiella | | Native |
| **Hydrocharitaceae** | | | | | | | |
| *Ottelia ovalifolia* | (R.Br.) Rich | | | | Swamp Lily | F | Native |
| **Juncaceae** | | | | | | | |
| *Juncus aridicola* | L.A.S.Johnson | | | | Tussock Rush | R | Native |
| *Juncus bufonius* | L. | | | | Toad Rush | | Native |
| **Juncaginaceae** | | | | | | | |
| *Triglochin isingiana* | (J.M.Black) Aston | | | | Arrowhead | F | Native |
| **Najadaceae** | | | | | | | |
| *Najas tenuifolia* | R.Br. | | | | Thin-leaved Naiad | F | Native |
| **Phormiaceae** | | | | | | | |
| *Dianella porracea* | (R.J.F.Hend.) P.F.Harsfall et. G.W.Carr | | | | Blue Flax Lily | F | Native |
| **Poaceae** | | | | | | | |
| *Aristida anthoxanthoides* | (Domin) Henrard | | | | Kerosene Grass | G | Native |
| *Aristida contorta* | F.Muell. | | | | Bunched Kerosene Grass | G | Native |
| *Aristida holathera* | Domin | var. | *holathera* | | Erect Kerosene Grass | G | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Aristida jerichoensis* | | var. | *subspinulifera* | Henrard | Jericho Wiregrass | G | Native |
| *Aristida latifolia* | Domin | | | | Feathertop Wiregrass | G | Native |
| *Astrebla pectinata* | (Lindl.) F.Muell. ex Benth. | | | | Barley Mitchell Grass | G | Native |
| *Austrostipa scabra* | (Lindl.) S.W.L.Jacobs & J.Everett | subsp. | *scabra* | | Rough Speargrass | G | Native |
| *Bothriochloa erianthoides* | (F.Muell.) C.E.Hubb. | | | | Satintop Grass | G | Native |
| *Cenchrus ciliaris* | L. | | | | Buffel Grass | | **Introduced** |
| *Cenchrus setaceus* | (Forssk.) Morrone | | | | Fountain Grass | | **Introduced** |
| *Chloris divaricata* | R.Br. | var. | *divaricata* | | Slender Chloris | G | Native |
| *Chloris pectinata* | Benth. | | | | Comb Chloris | G | Native |
| *Chloris truncata* | R.Br. | | | | Windmill Grass | G | Native |
| *Chrysopogon fallax* | S.T.Blake | | | | Chrysopogon | G | Native |
| *Dactyloctenium radulans* | (R.Br.) P.Beauv. | | | | Button Grass  Finger Grass | G | Native |
| *Dichanthium sericeum* | S.T.Blake | | | | Queensland Bluegrass | G | Native |
| *Digitaria ammophila* | Hughes | | | | Silky Umbrella Grass | G | Native |
| *Digitaria brownii* | (Roem. & Schult.) Hughes | | | | Cotton Panic Grass | G | Native |
| *Digitaria coenicola* | (F.Muell.) Hughes | | | | Finger Panic Grass | G | Native |
| *Digitaria divaricatissima* | (R.Br.) Hughes | | | | Spreading Umbrella Grass | G | Native |
| *Digitaria hystrichoides* | Vickery | | | | Curley Umbrella Grass | G | Native |
| *Diplachne fusca* | (L.) P.Beauv. | | | | Brown Beetle Grass | G | Native |
| *Diplachne uninervia* | (J.Presl) Parodi | | | | Beetle Grass | | **Introduced** |
| *Elytrophorus spicatus* | (Willd.) A.Camus | | | | Spikegrass | G | Native |
| *Enneapogon avenaceus* | (Lindl.) C.E.Hubb | | | | Bottle-washers | G | Native |
| *Enneapogon polyphyllus* | (Domin) N.T.Burb. | | | | Limestone Bottle-washers | G | Native |
| *Enteropogon acicularis* | (Lindl.) Lazarides | | | | Curly Windmill Grass | G | Native |
| *Eragrostis australasica* | (Steud.) C.E.Hubb. | | | | Canegrass | G | Native |
| *Eragrostis basedowii* | Jedwabn. | | | | Lovegrass | G | Native |
| *Eragrostis cilianensis* | (All.) Link ex Vignolo | | | | Stinkgrass | | **Introduced** |
| *Eragrostis dielsii* | Pilger | | | | Mallee Lovegrass | D | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Eragrostis eriopoda* | Benth. | | | | Woollybutt | G | Native |
| *Eragrostis falcata* | (Gaudich.) Gaudich. ex Steud | | | | Sickle Lovegrass | G | Native |
| *Eragrostis kennedyae* | F.Turner | | | | Small-flowered Lovegrass | G | Native |
| *Eragrostis lacunaria* | F.Muell. ex Benth. | | | | Purple Lovegrass | G | Native |
| *Eragrostis laniflora* | Benth. | | | | Woollybutt | G | Native |
| *Eragrostis parviflora* | (R.Br.) Trin. | | | | Weeping Lovegrass | G | Native |
| *Eragrostis setifolia* | Nees | | | | Neverfail | G | Native |
| *Eriachne helmsii* | (Domin) Hartley | | | | Woollybutt Wanderrie Grass | G | Native |
| *Eriachne mucronata* | R.Br. | | | | Mountain Wanderrie Grass | H | Native |
| *Eriochloa australiensis* | Stapf ex Thell. | | | | Spring Grass | G | Native |
| *Eriochloa procera* | (Retz.) C.E.Hubb | | | | Spring Grass | G | Native |
| *Eriochloa pseudoacrotricha* | (Stapf ex Thell.) J.M.Black | | | | Early Spring Grass | G | Native |
| *Lachnagrostis filiformis* | (Forst.) Trinius | | | | Blown Grass | G | Native |
| *Leptochloa peacockii* | (Maiden & Betche) Domin | | | | Canegrass | G | Native |
| *Monachather paradoxa* | Steud. | | | | Bandicoot Grass | G | Native |
| *Panicum decompositum* | R.Br. | | | | Native Millet | G | Native |
| *Panicum effusum* | R.Br. | | | | Hairy Panic | G | Native |
| *Panicum gilvum* | Launert | | | | Panic | | **Introduced** |
| *Panicum laevinode* | Lindl. | | | | Pepper Grass | G | Native |
| *Paspalidium constrictum* | (Domin) C.E.Hubb. | | | | Knottybutt Grass | G | Native |
| *Paspalidium jubiflorum* | (Trin.) Hughes | | | | Warrego Grass | G | Native |
| *Schismus barbatus* | (L.) Thell. | | | | Arabian Grass | | **Introduced** |
| *Sporobolus actinocladus* | (F.Muell.) F.Muell. | | | | Katoora Grass | G | Native |
| *Sporobolus caroli* | Mez | | | | Fairy Grass  Yakka Grass | G | Native |
| *Sporobolus mitchellii* | (Trin.) C.E.Hubb. ex S.T.Blake | | | | Rats tail Couch | D | Native |
| *Themeda triandra* | Forssk. | | | | Kangaroo Grass | G | Native |
| *Thyridolepis mitchelliana* | (Nees) S.T.Blake | | | | Mulga Mitchell Grass | G | Native |
| *Tragus australianus* | S.T.Blake | | | | Small Burr-grass | | Native |
| *Tripogon loliiformis* | (F.Muell.) C.E.Hubb. | | | | Five Minute Grass | G | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Triraphis mollis* | R.Br. | | | | Purple Needle-grass | G | Native |
| **Dicotyledon** | | | | | | | |
| **Aizoaceae** | | | | | | | |
| *Disphyma crassifolium* | | subsp. | *clavellatum* | (Haw.) Chinnock | | F | Native |
| *Glinus lotoides* | Loefl. | | | | | F | Native |
| *Tetragonia moorei* | M.Gray | | | | New Zealand Spinach | F | Native |
| *Trianthema triquetra* | Willd. | | | | Small Hogweed | F | Native |
| **Alismataceae** | | | | | | | |
| *Damasonium minus* | (R.Br.) Buchenau | | | | Starfruit | F | Native |
| **Amaranthaceae** | | | | | | | |
| *Alternanthera denticulata* | R.Br. | var. | *denticulata* | | Joyweed | F | Native |
| *Alternanthera nodiflora* | R.Br. | | | | Common Joyweed | F | Native |
| *Ptilotus exaltatus* | | var. | *exaltatus* | Nees ex Lemn. | Tall Mulla Mulla | F | Native |
| *Ptilotus gaudichaudii* | | var. | *parviflorus* | (Benth.) Benth. | | F | Native |
| *Ptilotus leucocoma* | (Moq.) F.Muell. | | | | | F | Native |
| *Ptilotus macrocephalus* | (R.Br.) Poir. | | | | Green Pussytails | F | Native |
| *Ptilotus nobilis* | (Lindl.) F.Muell. | | | | | F | Native |
| *Ptilotus obovatus* | (Gaudich.) F.Muell. | var. | *obovatus* | | Smoke Bush | S | Native |
| *Ptilotus parvifolius* | (F.Muell.) F.Muell. | var. | *laetus* | Benl | | | Native |
| *Ptilotus polystachyus* | | var. | *polystachyus* | (Gaudich.) F.Muell. | Long-tails | | Native |
| *Ptilotus semilanatus* | (Lindl.) J.M.Black | | | | | F | Native |
| *Ptilotus seminudus* | J.M.Black | | | | | F | Native |
| *Ptilotus sessilifolius* | (Lindl.) Benl | var. | *sessilifolius* | | Crimson Foxtail | S | Native |
| **Apiaceae** | | | | | | | |
| *Daucus glochidiatus* | (Labill.) Fisch. C.A.Mey. & Ave-Lall. | | | | Native Carrot | F | Native |
| *Eryngium paludosum* | (Moore & Betche) P.W.Michael | | | | Long Eryngium | F | Native |
| *Trachymene glaucifolia* | (F.Muell.) Benth. | | | | Wild Parsnip | F | Native |
| *Hydrocotyle trachycarpa* | F.Muell. | | | | Wild Parsley | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| **Asclepiadaceae** | | | | | | | |
| *Centipeda pleiocephala* | N.G.Walsh | | | | Tall Sneezeweed | F | Native |
| *Marsdenia australis* | (R.Br.) Druce | | | | Doubah | L | Native |
| *Marsdenia viridiflora* | R.Br. | | | | Native Pear | L | Native |
| *Rhyncharrhena linearis* | (Decne.) K.L.Wilson | | | | | L | Native |
| **Asteraceae** | | | | | | | |
| *Actinobole uliginosum* | (A.Gray) H.Eichler | | | | Flannel Cudweed | F | Native |
| *Arctotheca calendula* | (L.) Levyns | | | | | | **Introduced** |
| *Brachyscome ciliaris* | | var. | *lanuginosa* | (Steetz) Benth. | Variable Daisy | F | Native |
| *Brachyscome dentata* | Gaudich. | | | | Lobed-seed Daisy | F | Native |
| *Brachyscome goniocarpa* | Sond. & F.Muell. | | | | Dwarf Daisy | F | Native |
| *Brachyscome lineariloba* | (DC.) Druce | | | | Hard-headed Daisy | F | Native |
| *Brachyscome nodosa* | P.S.Short & Watan | | | | Daisy | F | Native |
| *Calocephalus platycephalus* | (F.Muell.) Benth. | | | | Western Beauty-heads | F | Native |
| *Calocephalus sonderi* | F.Muell. | | | | Pale Beauty Heads | F | Native |
| *Calotis cuneifolia* | R.Br. | | | | Purple Burr-daisy | F | Native |
| *Calotis dentex* | R.Br. | | | | | S | Native |
| *Calotis erinacea* | Steetz | | | | Tangled Burr-daisy | S | Native |
| *Calotis hispidula* | (F.Muell.) F.Muell. | | | | Bogan Flea | F | Native |
| *Calotis inermis* | Maiden & Betche | | | | Fluffy Burr-daisy | F | Native |
| *Calotis latiuscula* | F.Muell. & Tate | | | | Leafy Burr-daisy | F | Native |
| *Calotis plumulifera* | F.Muell. | | | | Woolly-headed Burr-daisy | F | Native |
| *Carthamus lanatus* | L. | | | | Saffron Thistle | | **Introduced** |
| *Centaurea melitensis* | L. | | | | Maltese Cockspur | | **Introduced** |
| *Centipeda crateriformis* | | subsp. | *compacta* | N.G.Walsh | Sneezeweed | F | Native |
| *Centipeda cunninghamii* | (DC.) A.Braun & Asch. | | | | Common Sneezeweed | F | Native |
| *Centipeda minima* | | var. | *lanuginosa* | (DC.) Domin | | | Native |
| *Centipeda minima* | (L.) A.Braun & Asch. | var. | *minima* | | Spreading Sneezeweed | | Native |
| *Centipeda thespidioides* | F.Muell. | | | | Desert Sneezeweed | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Chrysocephalum apiculatum* | (Labill.) Steetz | | | | Common Everlasting | F | Native |
| *Chthonocephalus pseudovax* | Steetz | | | | Ground Heads | F | Native |
| *Cirsium vulgare* | (Savi) Ten. | | | | Spear Thistle | | **Introduced** |
| *Conyza bonariensis* | (L.) Cronq. | | | | Flaxleaf Fleabane | | **Introduced** |
| *Eclipta platyglossa* | F.Muell. | | | | Twin-heads | F | Native |
| *Epaltes australis* | Less. | | | | Spreading Nut-heads | F | Native |
| *Eriochlamys behrii* | Sond. & F.Muell. | | | | Woolly Mantle | | Native |
| *Eriochlamys cupularis* | N.G.Walsh | | | | | F | Native |
| *Euchiton sphaericus* | (Willd.) Holub | | | | Cudweed | F | Native |
| *Gamochaeta coarctata* | (Willd.) Kerguelen | | | | Spiked Cudweed | | **Introduced** |
| *Glossocardia bidens* | (Redtz.) Veldkamp. | | | | Cobbler's Tack | | Native |
| *Gnaphalium polycaulon* | Pers. | | | | Cudweed | | **Introduced** |
| *Gnephosis arachnoidea* | Turcz. | | | | | F | Native |
| *Gnephosis eriocarpa* | (F.Muell.) Benth. | | | | Native Chamomile | F | Native |
| *Gnephosis tenuissima* | Cass. | | | | | F | Native |
| *Hyalosperma glutinosum* | | subsp. | *glutinosum* | Steetz | | F | Native |
| *Hyalosperma semisterile* | (F.Muell.) Paul G.Wilson | | | | | F | Native |
| *Hypochaeris glabra* | L. | | | | Smooth Catsear | | **Introduced** |
| *Isoetopsis graminifolia* | Turcz. | | | | Grass Cushion | F | Native |
| *Ixiochlamys nana* | (Ewart & J.R.White) Grau | | | | Small Fuzzweed | | Native |
| *Lactuca serriola* | L. | forma | *integrifolia* | | Prickly Lettuce | | **Introduced** |
| *Leiocarpa panaetioides* | (DC.) Paul G.Wilson | | | | Woolly Buttons | F | Native |
| *Leiocarpa websteri* | (S.Moore) Paul G.Wilson | | | | Ixiolaena | F | Native |
| *Lemooria burkittii* | (Benth.) P.Short | | | | Wires-a-wool  Wires & Wool | F | Native |
| *Leptorhynchos baileyi* | F.Muell. | | | | | F | Native |
| *Millotia greevesii* | | subsp. | *greevesii* | F.Muell. | | F | Native |
| *Minuria annua* | (Tate) Tate ex J.Black | | | | | | Native |
| *Minuria cunninghamii* | (DC.) Benth. | | | | | F | Native |
| *Minuria integerrima* | (DC.) Benth. | | | | Smooth Minuria | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Myriocephalus pluriflorus* | (J.M.Black) D.Cooke | | | | Woolly-heads | F | Native |
| *Myriocephalus rhizocephalus* | (DC.) Benth. | | | | Woolly-heads | F | Native |
| *Olearia pimeloides* | (DC.) Benth. | | | | Daisby Bush | S | Native |
| *Podolepis canescens* | A.Cunn. ex DC. | | | | Large Copper-wire Daisy | F | Native |
| *Podolepis capillaris* | (Steetz) Diels | | | | Invisible Plant | F | Native |
| *Polycalymma stuartii* | F.Muell. & Sond. | | | | Poached Eggs | F | Native |
| *Pseudognaphalium luteoalbum* | (L.) Hilliard & B.L.Burtt | | | | Jersey Cudweed | F | Native |
| *Pterocaulon sphacelatum* | (Labill.) Benth. & Hook. f. ex F.Muell. | | | | Applebush | F | Native |
| *Pycnosorus chrysanthes* | (Schldl.) Sonder | | | | | F | Native |
| *Rhodanthe floribunda* | (DC.) Paul G.Wilson | | | | Pale Billy Buttons | F | Native |
| *Rhodanthe moschata* | (DC.) Paul G.Wilson | | | | Musk Sunray | F | Native |
| *Rhodanthe stricta* | (Lindl.) Paul G. Wilson | | | | Slender Sunray | F | Native |
| *Rhodanthe stuartiana* | (Sonder) Paul G.Wilson | | | | | F | Native |
| *Rutidosis helichrysoides* | | subsp. | *helichrysoides* | DC. | | F | Native |
| *Senecio glossanthus* | (Sonder) Belcher | | | | Slender Groundsel | F | Native |
| *Senecio lacustrinus* | I.Thomps. | | | | Groundsel | | Native |
| *Senecio quadridentatus* | Labill. | | | | Cotton Fireweed | F | Native |
| *Senecio runcinifolius* | J.H.Willis | | | | Tall Groundsel | F | Native |
| *Sonchus oleraceus* | L. | | | | Common Sowthistle | | **Introduced** |
| *Streptoglossa adscendens* | (Benth.) Dunlop | | | | Desert Daisy | F | Native |
| *Streptoglossa liatroides* | (Turcz.) Dunlop | | | | Wertaloona Daisy | F | Native |
| *Stuartina muelleri* | Sond. | | | | Spoon Cudweed | F | Native |
| *Triptilodiscus pygmaeus* | Turcz. | | | | | F | Native |
| *Vittadinia cervicularis* | N.T.Burb. | var. | *cervicularis* | | Fuzzweed | F | Native |
| *Vittadinia cuneata* | DC. | | | | Fuzzweed | F | Native |
| *Vittadinia dissecta* | | var. | *hirta* | N.T.Burb. | New Holland Daisy | F | Native |
| *Vittadinia eremaea* | N.T.Burb. | | | | Fuzzweed | F | Native |
| *Vittadinia hispidula* | F.Muell. ex A.Gray | | | | Fuzzweed | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Vittadinia pterochaeta* | (F.Muell. ex Benth.) J.M.Black | | | | Rough Fuzzweed | F | Native |
| *Vittadinia pustulata* | N.T.Burb. | | | | Fuzzweed | F | Native |
| *Vittadinia sulcata* | N.T.Burb. | | | | Fuzzweed | F | Native |
| *Waitzia acuminata* | Steetz | | | | Orange Immortelle | F | Native |
| *Xanthium occidentale* | Bertol. | | | | Noogoora Burr  Cockle Burr | | **Introduced** |
| *Xanthium spinosum* | L. | | | | Bathurst Burr | | **Introduced** |
| *Xerochrysum bracteatum* | (Vent.) Tzvelev | | *bracteatum* | | Golden Everlasting | F | Native |
| **Boraginaceae** | | | | | | | |
| *Cynoglossum australe* | R.Br. | | | | Austral Hounds Tongue | F | Native |
| *Heliotropium asperrimum* | R.Br. | | | | Rough Heliotrope | F | Native |
| *Heliotropium curassavicum* | L. | | | | Smooth Heliotrope | | **Introduced** |
| *Heliotropium supinum* | L. | | | | Prostrate Heliotrope | | **Introduced** |
| *Plagiobothrys plurisepaleus* | (F.Muell.) I.M.Johnston | | | | | F | Native |
| **Brassicaceae** | | | | | | | |
| *Arabidella eremigena* | (F.Muell.) E.Shaw | | | | Priddiwalkatji | F | Native |
| *Brassica tournefortii* | Gouan | | | | | | **Introduced** |
| *Cardamine moirensis* | I.Thomps. | | | | Bittercress | F | Native |
| *Cuphonotus andraeanus* | (F.Muell.) E.Shaw | | | | | F | Native |
| *Lepidium africanum* | (Burman f.) DC. | | | | Peppercress | | **Introduced** |
| *Lepidium monoplocoides* | F.Muell. | | | | Winged Peppercress | F | Native |
| *Lepidium muelleri-ferdinandi* | Thell. | | | | Peppercress | F | Native |
| *Lepidium oxytrichum* | Sprague | | | | Peppercress | F | Native |
| *Lepidium phlebopetalum* | (F.Muell.) F.Muell. | | | | Veined Peppercress | F | Native |
| *Lepidium pseudopapillosum* | Thell. | | | | Peppercress | F | Native |
| *Lepidium sagittulatum* | Thell. | | | | Fine-leaf Peppercress | F | Native |
| *Menkea australis* | Lehm. | | | | Fairy Spectacles | F | Native |
| *Phlegmatospermum cochlearinum* | (F.Muell.) O.Schulz | | | | Oval-podded Cress | F | Native |
| *Rorippa eustylis* | (F.Muell.) L.A.S.Johnson | | | | River Cress | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Rorippa laciniata* | (F.Muell.) L.A.S.Johnson | | | | Native Cress | F | Native |
| *Sisymbrium erysimoides* | Desf. | | | | Smooth Mustard | | **Introduced** |
| *Stenopetalum lineare* | R.Br. ex DC. | | | | | F | Native |
| *Stenopetalum nutans* | F.Muell. | | | | | F | Native |
| *Stenopetalum sphaerocarpum* | F.Muell. | | | | | F | Native |
| **Cactaceae** | | | | | | | |
| *Opuntia stricta* | (Haw.) Haw. | var. | *stricta* | | Common Prickly Pear | S | **Introduced** |
| **Callitrichaceae** | | | | | | | |
| *Callitriche muelleri* | Sond. | | | | | F | Native |
| **Campanulaceae** | | | | | | | |
| *Wahlenbergia communis* | Carolin | | | | Tufted Bluebell | F | Native |
| *Wahlenbergia gracilenta* | Loth. | | | | Annual Bluebell | F | Native |
| *Wahlenbergia graniticola* | Carolin | | | | Granite Bluebell | F | Native |
| *Wahlenbergia tumidifructa* | P.J.Sm. | | | | Bluebell | F | Native |
| **Capparaceae** | | | | | | | |
| *Apophyllum anomalum* | F.Muell. | | | | Warrior Bush | S | Native |
| *Capparis mitchellii* | Lindl. | | | | Wild Orange | S | Native |
| **Caryophyllaceae** | | | | | | | |
| *Gypsophila tubulosa* | (Jaub. & Spach) Boiss | | | | Annual Chalkwort | F | Native |
| *Polycarpaea arida* | Pedley | | | | | F | Native |
| *Spergularia bocconei* | (Scheele) Graebn. | | | | Bocconi's Sand-spurrey | | Native |
| *Spergularia brevifolia* | (Bartl.) Walp. | | | | Lesser Sea-spurrey | | Native |
| *Spergularia diandra* | (Guss.) Boiss | | | | Lesser Sandspurry | | **Introduced** |
| *Spergularia rubra* | (L.) J.S. & C.Presl. | | | | | | Native |
| *Stellaria angustifolia* | Hook. | | | | Swamp Starwort | F | Native |
| **Casuarinaceae** | | | | | | | |
| *Casuarina pauper* | F.Muell. ex L.A.S.Johnson | | | | Black Oak  Belah | T | Native |
| **Chenopodiaceae** | | | | | | | |
| *Atriplex angulata* | Benth. | | | | Fan Saltbush | C | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Atriplex crassipes* | J.M.Black | | | | | C | Native |
| *Atriplex eardleyae* | Aellen | | | | Small Saltbush | C | Native |
| *Atriplex elachophylla* | F.Muell. | | | | | C | Native |
| *Atriplex holocarpa* | F.Muell. | | | | Pop Saltbush | F | Native |
| *Atriplex intermedia* | R.Anderson | | | | | F | Native |
| *Atriplex leptocarpa* | F.Muell. | | | | Slender-fruited Saltbush | C | Native |
| *Atriplex limbata* | Benth. | | | | Spreading Saltbush | F | Native |
| *Atriplex nessorhina* | S.Jacobs | | | | Donald Duck Saltbush | F | Native |
| *Atriplex nummularia* | Lindl. | | | | Old Man Saltbush | C | Native |
| *Atriplex pseudocampanulata* | Aellen | | | | Mealy Saltbush | C | Native |
| *Atriplex pumilio* | R.Br. | | | | Slender-fruit Saltbush | F | **Naturalised** |
| *Atriplex spongiosa* | F.Muell. | | | | Pop Saltbush | | Native |
| *Atriplex stipitata* | Benth. | | | | Bitter Saltbush | | Native |
| *Atriplex suberecta* | Verd. | | | | Lagoon Saltbush | F | Native |
| *Chenopodium auricomum* | Lindley | | | | | C | Native |
| *Chenopodium desertorum* | | subsp. | *anidiophyllum* | (Aellen) Paul G.Wilson | | C | Native |
| *Chenopodium desertorum* | (J.M.Black) J.M.Black | subsp. | *desertorum* | | | C | Native |
| *Chenopodium truncatum* | Paul G.Wilson | | | | Goosefoot | C | Native |
| *Dissocarpus paradoxus* | (R.Br.) F.Muell. ex Ulbr. | | | | Cannonball Burr | C | Native |
| *Dysphania carinata* | (R.Br.) Mosyakin & Clemants | | | | Crowned Goosefoot | | Native |
| *Dysphania cristata* | (F.Muell.) Mosyakin & Clements | | | | | | Native |
| *Dysphania glomulifera* | (Nees) Paul G. Wilson | | | | | F | Native |
| *Dysphania kalpari* | Paul G.Wilson | | | | Crumbweed | F | Native |
| *Dysphania melanocarpa* | (J.M.Black) Moysakin & Clements | | | | Black Crumbweed | | Native |
| *Dysphania platycarpa* | Paul G.Wilson | | | | Crumbweed | | Native |
| *Dysphania pumilio* | (R.Br.) Mosyakin & Clemants | | | | Goosefoot | | Native |
| *Einadia hastata* | (R.Br.) A.J.Scott | | | | Berry Saltbush | F | Native |
| *Einadia nutans* | (R.Br.) A.J.Scott | | | | Climbing Saltbush | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Einadia nutans* | | subsp. | *eremaea* | Paul G.Wilson | Climbing Saltbush | F | Native |
| *Einadia nutans* | (R.Br.) A.J.Scott | subsp. | *nutans* | | Climbing Saltbush | F | Native |
| *Enchylaena tomentosa* | R.Br. | | | | Ruby Saltbush | C | Native |
| *Maireana aphylla* | (R.Br.) Paul G.Wilson | | | | Cotton Bush | C | Native |
| *Maireana appressa* | (Benth.) Paul G.Wilson | | | | Maireana | C | Native |
| *Maireana brevifolia* | (R.Br.) Paul G.Wilson | | | | Yanga Bush | C | Native |
| *Maireana cheelii* | (R.Anderson) Paul G. Wilson | | | | Chariot Wheels | C | Native |
| *Maireana coronata* | (J.M.Black) Paul G.Wilson | | | | Crowned Fissure-weed | C | Native |
| *Maireana decalvans* | (Gand.) Paul G.Wilson | | | | Black Cotton Bush | C | Native |
| *Maireana integra* | (Paul G.Wilson) Paul G.Wilson | | | | | C | Native |
| *Maireana microcarpa* | (Benth.) Paul G.Wilson | | | | Swamp Bluebush | C | Native |
| *Maireana pentagona* | (R.Anderson) Paul G. Wilson | | | | Slender Fissure-weed | F | Native |
| *Maireana pyramidata* | (Benth.) Paul G.Wilson | | | | Black Bluebush Shrubby Bluebu | C | Native |
| *Maireana sclerolaenoides* | (F.Muell.) Paul G.Wilson | | | | Wolly-fruit Copper-burr | C | Native |
| *Maireana triptera* | (Benth.) Paul G.Wilson | | | | Three-wing Bluebush | C | Native |
| *Maireana villosa* | (Lindl.) Paul G. Wilson | | | | Silky Bluebush | C | Native |
| *Osteocarpum acropterum* | (F.Muell. & Tate) Volkens | var. | *acropterum* | | | C | Native |
| *Osteocarpum dipterocarpum* | (F.Muell.) Volkens | | | | Babbagia | C | Native |
| *Rhagodia parabolica* | R.Br. | | | | | C | Native |
| *Rhagodia spinescens* | R.Br. | | | | Thorny Saltbush | C | Native |
| *Salsola australis* | R.Br. | | | | | | Native |
| *Sclerolaena bicornis* | Lindl. | var. | *bicornis* | | Goathead Burr | C | Native |
| *Sclerolaena bicornis* | | var. | *horrida* | | Goathead Burr | C | Native |
| *Sclerolaena birchii* | (F.Muell.) Domin | | | | Galvanized Burr | C | Native |
| *Sclerolaena calcarata* | (Ising) A.J.Scott | | | | Red Copperburr | C | Native |
| *Sclerolaena convexula* | (R.Anderson) A.J.Scott | | | | Tall Copperburr | C | Native |
| *Sclerolaena cuneata* | Paul G.Wilson | | | | Tangled Copperburr | C | Native |
| *Sclerolaena decurrens* | (J.M.Black) A.J.Scott | | | | Green Copperburr | C | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Sclerolaena diacantha* | (Nees) Benth. | | | | Grey Copperburr | C | Native |
| *Sclerolaena divaricata* | (R.Br.) Domin | | | | Pale Poverty-bush | C | Native |
| *Sclerolaena eriacantha* | (F.Muell.) Ulbr. | | | | Silky Copperburr | C | Native |
| *Sclerolaena glabra* | (F.Muell.) Domin | | | | | C | Native |
| *Sclerolaena intricata* | (R.Anderson) A.J.Scott | | | | Tangled Poverty-bush | C | Native |
| *Sclerolaena johnsonii* | (Ising) A.J.Scott | | | | Johnson's Copperburr | C | Native |
| *Sclerolaena lanicuspis* | (F.Muell.) Benth. | | | | Woolly Copperburr | C | Native |
| *Sclerolaena muricata* | (Moq.) Domin | | | | Black Rolypoly | C | Native |
| *Sclerolaena obliquicuspis* | (R.Anderson) Ulbr. | | | | Limestone Bindii | C | Native |
| *Sclerolaena parallelicuspis* | (R.Anderson) A.J.Scott | | | | Western Copperburr | C | Native |
| *Sclerolaena parviflora* | (R.Anderson) A.J.Scott | | | | Mallee Copperburr | C | Native |
| *Sclerolaena patenticuspis* | (R.Anderson) Ulbr. | | | | Spear-fruit Copperburr | C | Native |
| *Sclerolaena stelligera* | (F.Muell.) S.W.L.Jacobs | | | | Star Copperburr | C | Native |
| *Sclerolaena tricuspis* | (F.Muell.) Ulbr. | | | | Giant Redburr | C | Native |
| *Tecticornia lylei* | (Ewart & J.W.White) K.A.Sheph. & Paul G.Wilson | | | | | | Native |
| *Tecticornia tenuis* | (Benth.) K.A.Sheph. & Paul G.Wilson | | | | | | Native |
| **Clusiaceae** | | | | | | | |
| *Hypericum gramineum* | Forst.f. | | | | Small St. John's Wort | F | Native |
| **Convolvulaceae** | | | | | | | |
| *Convolvulus erubescens* | Sims | | | | Bindweed | L | Native |
| *Cressa australis* | R.Br. | | | | | F | Native |
| *Evolvulus alsinoides* | | var. | *decumbens* | (R.Br.) Ooststr. | | F | Native |
| *Evolvulus alsinoides* | | var. | *villosicalyx* | Ooststr. | Evolvulus | F | Native |
| **Crassulaceae** | | | | | | | |
| *Crassula colorata* | | var. | *acuminata* | (Reader) Toelken | Stonecrop | F | Native |
| *Crassula tetramera* | (Toelken) A.P.Druce & Sykes | | | | Stonecrop | | Native |
| **Droseraceae** | | | | | | | |
| *Drosera indica* | L. | | | | Sundew | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| **Elatinaceae** | | | | | | | |
| *Bergia trimera* | Fischer & C.Meyer | | | | | F | Native |
| **Euphorbiaceae** | | | | | | | |
| *Euphorbia dallachyana* | Baill. | | | | Caustic Weed | | Native |
| *Euphorbia inappendiculata* | | var. | *queenslandica* | Domin | Spurge | | Native |
| *Euphorbia mulfifaria* | Halford & W.K.Harris | | | | Spurge | | Native |
| *Euphorbia parvicaruncula* | Hassall | | | | Rough-seeded Spurge | F | Native |
| *Euphorbia tannensis* | | subsp. | *eremophila* | (A.Cunn.) D.C.Hassall | Desert Spurge | S | Native |
| **Fabaceae** | | | | | | | |
| *Acacia aneura* | F.Muell. ex Benth. | | | | Mulga | S | Native |
| *Acacia brachystachya* | Benth. | | | | Umbrella Mulga | S | Native |
| *Acacia cambagei* | R.T.Baker | | | | Gidgee | T | Native |
| *Acacia excelsa* | Benth. | | | | Ironwood | T | Native |
| *Acacia ligulata* | A.Cunn. ex Benth. | | | | Umbrella Bush | S | Native |
| *Acacia loderi* | Maiden | | | | Nealie | T | Native |
| *Acacia oswaldii* | F.Muell. | | | | Miljee | T | Native |
| *Acacia salicina* | Lindl. | | | | Cooba Native Willow | T | Native |
| *Acacia siberica* | S.Moore | | | | Bastard Mulga | S | Native |
| *Acacia stenophylla* | A.Cunn. ex Benth. | | | | River Cooba | T | Native |
| *Acacia tetragonophylla* | F.Muell. | | | | Dead Finish | S | Native |
| *Acacia victoriae* | | subsp. | *arida* | Pedley | Elegant Wattle Prickly Wattle | S | Native |
| *Aeschynomene indica* | L. | | | | Budda Pea | F | Native |
| *Crotalaria smithiana* | A.T.Lee | | | | | | Native |
| *Cullen cinereum* | (Lindl.) J.W.Grimes | | | | Annual Verbine | F | Native |
| *Cullen pallidum* | (N.T.Burb.) J.W.Grimes | | | | Woolly Psoralea | F | Native |
| *Glycine canescens* | F.J.Herm. | | | | Silky Glycine | L | Native |
| *Glycyrrhiza acanthocarpa* | (Lindl.) J.M.Black | | | | Native Liquorice | F | Native |
| *Lotus cruentus* | Court | | | | Red-flowered Lotus | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Medicago laciniata* | (L.) Miller | | | | Cut-leaved Medic | | **Introduced** |
| *Medicago minima* | (L.) Bartal. | | | | Woolly Burr Medic | | **Introduced** |
| *Muelleranthus stipularis* | (J.M.Black) A.T.Lee | | | | Sand Pea | F | Native |
| *Rhynchosia minima* | (L.) DC. | | | | Ryncho | L | Native |
| *Senna circinnata* | (Benth.) Randell | | | | | S | Native |
| *Senna phyllodinea* | (R.Br.) Symon | | | | Woody Cassia | S | Native |
| *Senna sp. 'alicia'* | | | | | | S | Native |
| *Senna sp. 'artemisioides'* | | | | | | | Native |
| *Senna sp. 'coriacea'* | | | | | | | Native |
| *Senna sp. 'filifolia'* | | | | | | | Native |
| *Senna sp. 'petiolaris'* | | | | | Woody Cassia | | Native |
| *Senna sp. 'sturtii'* | | | | | Dense Cassia | S | Native |
| *Senna sp. 'zygophylla'* | | | | | | | Native |
| *Swainsona affinis* | (A.T.Lee) Joy Thomps. | | | | Darling Pea | F | Native |
| *Swainsona microphylla* | A.Gray | | | | Poison Pea | F | Native |
| *Swainsona murrayana* | Wawra | | | | Slender Darling Pea | F | Native |
| *Swainsona phacoides* | Benth. | | | | Lilac Darling Pea | F | Native |
| *Tephrosia sphaerospora* | F.Muell. | | | | Mulga Trefoil | F | Native |
| *Trigonella suavissima* | Lindl. | | | | Coopers Clover | F | Native |
| *Zornia muriculata* | Mohlenbr. | subsp. | *angustata* | S.T.Reynolds & A.E.Holland | Zornia | F | Native |
| **Frankeniaceae** | | | | | | | |
| *Frankenia connata* | Sprague | | | | Clustered Sea-heath | S | Native |
| *Frankenia gracilis* | Summerh. | | | | Dainty Sea-heath | S | Native |
| *Frankenia serpyllifolia* | Lindley | | | | Bristly Sea-heath | | Native |
| *Frankenia uncinata* | Sprague & Summerh. | | | | Hairy Sea-heath | F | Native |
| **Gentianaceae** | | | | | | | |
| *Centaurium spicatum* | (L.) Fritsch | | | | | | Native |
| *Schenkia australis* | (R.Br.) Mansion | | | | Spike Centaury | | Native |
| *Sebaea ovata* | (Labill.) R.Br. | | | | Yellow Centaury | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| **Geraniaceae** | | | | | | | |
| *Erodium cicutarium* | (L.) L'Her. ex Aiton | | | | Common Storksbill/Crowfoot | | **Introduced** |
| *Erodium crinitum* | Carolin | | | | Blue Storksbill Blue Crowfoot | F | Native |
| *Goodeniaceae* | | | | | | | |
| *Goodenia berardiana* | (Gaudich.) Carolin | | | | Goodenia | F | Native |
| *Goodenia cycloptera* | R.Br. | | | | Serrated Goodenia | F | Native |
| *Goodenia fascicularis* | F.Muell. & Tate | | | | Silky Goodenia | F | Native |
| *Goodenia glabra* | R.Br. | | | | Pale Goodenia | F | Native |
| *Goodenia glauca* | F.Muell. | | | | Pale Goodenia | F | Native |
| *Goodenia havilandii* | Maiden & Betche | | | | Hill Goodenia | F | Native |
| *Goodenia lunata* | J.M.Black | | | | Hairy Goodenia | F | Native |
| *Goodenia nocoleche* | Pellow & J.L.Porter | | | | Nocheleche Goodenia | F | Native |
| *Scaevola parvibarbata* | Carolin | | | | | F | Native |
| *Scaevola spinescens* | R.Br. | | | | Spiny Fan-flower | S | Native |
| *Velleia arguta* | R.Br. | | | | Spur Velleia | F | Native |
| **Haloragaceae** | | | | | | | |
| *Haloragis aspera* | Lindl. | | | | Rough Raspwort | F | Native |
| *Haloragis glauca* | Lindl. | forma | *glauca* | | Grey Raspwort | F | Native |
| *Myriophyllum verrucosum* | Lindl. | | | | Red Water-milfoil | F | Native |
| **Lamiaceae** | | | | | | | |
| *Mentha australis* | R.Br. | | | | River Mint | F | Native |
| *Salvia verbenaca* | L. | | | | Wild Sage | | **Introduced** |
| *Teucrium racemosum* | R.Br. | | | | Grey Germander | F | Native |
| **Lobeliaceae** | | | | | | | |
| *Lobelia concolor* | R.Br. | | | | Poison Pratia | | Native |
| *Lobelia darlingensis* | (E.Wimm.) Albr. | | | | Darling Pratia | F | Native |
| **Loranthaceae** | | | | | | | |
| *Amyema maidenii* | | subsp. | *maidenii* | (Blakely) Barlow | Pale-leaf Mistletoe | K | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| **Loranthaceae** | | | | | | | |
| *Amyema miraculosum* | | subsp. | *boormanii* | (Blakely) Barlow | Fleshy Mistletoe | K | Native |
| *Lysiana exocarpi* | | subsp. | *exocarpi* | (Behr) Tieghem | Harlequin Mistletoe | K | Native |
| *Lysiana murrayi* | (F.Muell. & Tate) Tieghem | | | | Mulga Mistletoe | K | Native |
| **Lythraceae** | | | | | | | |
| *Ammannia multiflora* | Roxb. | | | | Jerry-jerry | F | Native |
| *Lythrum hyssopifolia* | L. | | | | Hyssop Loosestrife | F | Native |
| *Lythrum wilsonii* | Hewson | | | | | F | Native |
| **Malvaceae** | | | | | | | |
| *Abutilon fraseri* | (Hook.) Hook. ex Walp. | | | | Dwarf Lantern-flower | | Native |
| *Abutilon halophilum* | F.Muell. | | | | Plains Lantern Bush | | Native |
| *Abutilon leucopetalum* | (F.Muell.) F.Muell. ex Benth. | | | | Lantern Bush | S | Native |
| *Abutilon macrum* | F.Muell. | | | | Slender Lantern Bush | S | Native |
| *Abutilon malvifolium* | (Benth.) J.M.Black | | | | Mallow-leaf Lantern Flower | S | Native |
| *Abutilon otocarpum* | F.Muell. | | | | Desert Chinese Lantern | S | Native |
| *Abutilon oxycarpum* | (F.Muell.) F.Muell. ex Benth. | | | | Straggly Lantern Bush | S | Native |
| *Hibiscus brachysiphonius* | F.Muell. | | | | | F | Native |
| *Hibiscus sturtii* | Hook. | | | | Hill Hibiscus | F | Native |
| *Hibiscus trionum* | L. | | | | Bladder ketmia | F | Native |
| *Malva parviflora* | L. | | | | Small-flowered Mallow | | **Introduced** |
| *Malvastrum americanum* | (L.) Torr. | | | | Spiked Malvastrum | | **Introduced** |
| *Malvastrum coromandelianum* | (L.) Garcke | | | | Prickly Malvestrum | F | Native |
| *Sida ammophila* | F.Muell. ex J.H.Willis | | | | Sand Sida | F | Native |
| *Sida cunninghamii* | C.T.White | | | | Ridge Sida | F | Native |
| *Sida fibulifera* | Lindl. | | | | Pin Sida | F | Native |
| *Sida filiformis* | A.Cunn. | | | | Fine Sida | F | Native |
| *Sida goniocarpa* | (F.Muell. ex Benth.) Domin | | | | Sida | F | Native |
| *Sida platycalyx* | F.Muell. ex Benth. | | | | Lifesaver Burr | S | Native |
| *Sida trichopoda* | F.Muell. | | | | High Sida | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| **Meliaceae** | | | | | | | |
| *Owenia acidula* | F.Muell. | | | | Gruie Apple Colane | T | Native |
| **Menyanthaceae** | | | | | | | |
| *Nymphoides crenata* | (F.Muell.) Kuntze | | | | Wavy Marshwort | F | Native |
| **Molluginaceae** | | | | | | | |
| *Mollugo cerviana* | (L.) Ser. | | | | Wire-stem Chickweed | F | Native |
| **Myrtaceae** | | | | | | | |
| *Corymbia tumescens* | K.D.Hill & L.A.S.Johnson | | | | Bloodwood | T | Native |
| *Eucalyptus camaldulensis* | Dehnh. | | | | River Gum River Red Gum | T | Native |
| *Eucalyptus coolabah* | Blakely & S.W.L.Jacobs | | | | Coolabah | T | Native |
| *Eucalyptus largiflorens* | F.Muell. | | | | Black Box | T | Native |
| *Eucalyptus ochrophloia* | F.Muell. | | | | Yapunyah | T | Native |
| *Eucalyptus populnea* | | subsp. | *bimbil* | L.A.S.Johnson & K.D.Hill | Bimble Box Poplar Box | T | Native |
| *Melaleuca densispicata* | Byrnes | | | | | S | Native |
| **Nyctaginaceae** | | | | | | | |
| *Boerhavia coccinea* | Miller | | | | Tarvine | F | Native |
| *Boerhavia dominii* | Meikle & Hewson | | | | Tarvine | F | Native |
| *Boerhavia repleta* | Hewson | | | | Tarvine | F | Native |
| **Oleaceae** | | | | | | | |
| *Jasminum lineare* | R.Br. | | | | Desert Jasmine | L | Native |
| **Oxalidaceae** | | | | | | | |
| *Oxalis perennans* | Haw. | | | | Wood Sorrel | F | Native |
| *Oxalis radicosa* | A.Rich. | | | | Wood Sorrel | F | Native |
| **Papaveraceae** | | | | | | | |
| *Argemone ochroleuca* | Sweet | subsp. | *ochroleuca* | | Mexican Poppy | | **Introduced** |
| **Phyllanthaceae** | | | | | | | |
| *Phyllanthus lacunarius* | F.Muell. | | | | Lagoon Spurge | F | Native |
| *Synostemon trachyspermus* | (F.Muell.) I.R.Telford & J.J.Bruhl | | | | Dwarf Spurge | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| **Phyrmaceae** | | | | | | | |
| *Glossostigma diandrum* | (L.) Kuntze | | | | Mountain Mudwort | F | Native |
| *Peplidium foecundum* | W.R.Barker | | | | | | Native |
| *Thyridia repens* | (R.Br.) W.R.Barker & Beardsley | | | | Creeping Monkey-flower | | Native |
| **Pittosporaceae** | | | | | | | |
| *Pittosporum angustifolium* | Lodd. | | | | Weeping Pittosporum Berrigan | S | Native |
| **Plantaginaceae** | | | | | | | |
| *Plantago cunninghamii* | Decne | | | | Plantain | F | Native |
| *Plantago turrifera* | B.G.Briggs Carolin & Pulley | | | | Plantain | F | Native |
| *Stemodia florulenta* | W.R.Barker | | | | Bluerod | F | Native |
| *Veronica peregrina* | L. | | | | Wandering Speedwell | | **Introduced** |
| **Polygonaceae** | | | | | | | |
| *Acetosa vesicaria* | (L.) A.Love | | | | Bladder Dock | | **Introduced** |
| *Duma florulenta* | (Meisn.) T.M.Schust. | | | | Lignum | | Native |
| *Emex australis* | Steinh. | | | | Spiny Emex Doublegee | | **Introduced** |
| *Persicaria attenuata* | (R.Br.) Sojak | | | | | F | Native |
| *Persicaria lapathifolia* | (L.) S.F.Gray | | | | Pale Knotweed | F | Native |
| *Polygonum arenastrum* | Boreau | | | | Fireweed | | **Introduced** |
| *Polygonum plebeium* | R.Br. | | | | Small Knotweed | F | Native |
| *Rumex crystallinus* | Lange | | | | | F | Native |
| **Portulacaceae** | | | | | | | |
| *Calandrinia balonensis* | Lindl. | | | | Broad-leaf Parakeelya | F | Native |
| *Calandrinia eremaea* | Ewart | | | | Small Purslane | F | Native |
| *Calandrinia ptychosperma* | F.Muell. | | | | Creeping Parakeelya | F | Native |
| *Calandrinia pumila* | (Benth.) F.Muell. | | | | Tiny Purslane | F | Native |
| *Calandrinia remota* | | | | | | | Native |
| *Portulaca filifolia* | F.Muell. | | | | | F | Native |
| *Portulaca intraterranea* | J.M.Black | | | | | F | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Portulaca oleracea* | L. | | | | Pigweed Purslane | F | Native |
| **Primulaceae** | | | | | | | |
| *Lysimachia arvensis* | (L.) U.Manns & Anderb. | | | | Scarlet or Blue Pimpernel | | **Introduced** |
| **Proteaceae** | | | | | | | |
| *Grevillea striata* | R.Br. | | | | Beefwood | T | Native |
| *Hakea eryeana* | (S.Moore) D.McGillivray | | | | Straggly Corkbark | T | Native |
| *Hakea ivoryi* | F.M.Bailey | | | | Corkbark Tree | T | Native |
| *Hakea leucoptera* | R.Br. | subsp. | *leucoptera* | | Needlewood | S | Native |
| *Hakea tephrosperma* | R.Br. | | | | Hooked Needlewood | S | Native |
| **Ranunculaceae** | | | | | | | |
| *Myosurus minimus* | L. | var. | *australis* | (F.Muell.) Huth | Mousetail | F | Native |
| *Ranunculus pentandrus* | | var. | *platycarpus* | (F.Muell.) H.Eichler | Buttercup | F | Native |
| *Ranunculus sessiliflorus* | | var. | *pilulifer* | (Hook.) Melville | Small-flowered Buttercup | F | Native |
| **Rubiaceae** | | | | | | | |
| *Dentella minutissima* | C.T.White & W.D.Francis (F.Muell. ex Benth.) | | | | | | Native |
| *Psydrax latifolium* | S.T.Reynolds & R.J.F.Hend. | | | | Native Currant | S | Native |
| *Synaptantha tillaeacea* | (F.Muell.) Hook.f. | | | | Synaptantha | T | Native |
| **Rutaceae** | | | | | | | |
| *Flindersia maculosa* | (Lindl.) Benth. | | | | Leopardwood Leopard Tree | T | Native |
| **Santalaceae** | | | | | | | |
| *Santalum acuminatum* | (R.Br.) DC. | | | | Sweet Quandong | S | Native |
| *Santalum lanceolatum* | R.Br. | | | | Northern Sandalwood | S | Native |
| *Santalum obtusifolium* | R.Br. | | | | Sandalwood | S | Native |
| **Sapindaceae** | | | | | | | |
| *Alectryon oleifolius* | | subsp. | *canescens* | S.T.Reynolds | Western Rosewood Bonaree | T | Native |
| *Atalaya hemiglauca* | (F.Muell.) F.Muell. ex Benth. | | | | Whitewood | S | Native |
| *Dodonaea viscosa* | | subsp. | *angustissima* | (DC.) J.G.West | Hop Bush | S | Native |
| **Scrophulariaceae** | | | | | | | |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Eremophila bignoniiflora* | (Benth.) F.Muell. | | | | Eurah Bignonia Emubush | S | Native |
| *Eremophila bowmanii* | F.Muell. | | | | Silver Turkeybush | S | Native |
| *Eremophila deserti* | (A.Cunn. ex Benth.) Chinnock | | | | Turkeybush | S | Native |
| *Eremophila divaricata* | (F.Muell.) F.Muell. | | | | Spreading Emubush | S | Native |
| *Eremophila duttonii* | F.Muell. | | | | Budda Harlequin Fuschia Bush | S | Native |
| *Eremophila gilesii* | F.Muell. | | | | Charleville Turkeybush | S | Native |
| *Eremophila glabra* | (R.Br.) Ostenf. | | | | Tar Bush | S | Native |
| *Eremophila goodwinii* | F.Muell. | | | | Purple Fuschia Bush | S | Native |
| *Eremophila latrobei* | | subsp. | *latrobei* | F.Muell. | Crimson Turkeybush | S | Native |
| *Eremophila longifolia* | (R.Br.) F.Muell. | | | | Emu Bush Berrigan | S | Native |
| *Eremophila maculata* | (Ker Gawl.) F.Muell. | | | | Native/Spotted Fuschia | S | Native |
| *Eremophila polyclada* | (F.Muell.) F.Muell. | | | | Flowering Lignum Twiggy Emubu | S | Native |
| *Eremophila sturtii* | R.Br. | | | | Turpentine Bush | S | Native |
| *Gratiola pumilo* | F.Muell. | | | | Brooklime | F | Native |
| *Myoporum montanum* | R.Br. | | | | Western Boobialla Water Bush | S | Native |
| **Solanaceae** | | | | | | | |
| *Lycium ferocissimum* | Miers | | | | African Boxthorn | | **Introduced** |
| *Nicotiana simulans* | N.T.Burb. | | | | Native Tabacco | F | Native |
| *Nicotiana velutina* | H.Wheeler | | | | | F | Native |
| *Solanum chenopdioides* | Lam. | | | | Whitetip Nightshade | | **Introduced** |
| *Solanum cleistogamum* | Symon | | | | Shy Nightshade | F | Native |
| *Solanum ellipticum* | R.Br. | | | | Velvet Potato Bush | F | Native |
| *Solanum esuriale* | Lindl. | | | | Quena | F | Native |
| *Solanum nigrum* | L. | | | | Black-berry Nightshade | | **Introduced** |
| **Tamaricaceae** | | | | | | | |
| *Tamarix aphylla* | (L.) Karsten | | | | Athel Tree | | **Introduced** |
| **Thymelaeaceae** | | | | | | | |
| *Pimelea microcephala* | R.Br. | subsp. | *microcephala* | | Shrubby Rice Flower | S | Native |

| Taxon | Authority | Infra-status | Infraspecific | Infra-authority | Common Name | Life Form | Status |
|---|---|---|---|---|---|---|---|
| *Pimelea simplex* | | subsp. | *continua* | (J.M.Black) Threlfall | Rice Flower | F | Native |
| *Pimelea simplex* | | subsp. | *simplex* | F.Muell. | Rice Flower | F | Native |
| *Pimelea trichostachya* | Lindl. | | | | Spiked Rice Flower | S | Native |
| **Verbenaceae** | | | | | | | |
| *Verbena gaudichaudii* | (Briquet) P.W.Michael | | | | | F | Native |
| *Verbena supina* | L. | | | | Trailing Verbena | | **Introduced** |
| **Zygophyllaceae** | | | | | | | |
| *Roepera emarginata* | (H.Eichler) Beier & Thulin | | | | Twinleaf | F | Native |
| *Roepera eremaea* | (Diels) Beier & Thulin | | | | Climbing Twinleaf | F | Native |
| *Roepera iodocarpa* | (F.Muell.) Beier & Thulin | | | | Violet Twinleaf | F | Native |
| *Roepera similis* | (H.Eichler) Beier & Thulin | | | | Twinleaf | F | Native |

# Appendix 8 – Fire responses of species noted within Nocoleche Nature Reserve

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| *Abutilon otocarpum* | Resprouter | | | | | | | |
| *Abutilon oxycarpum* | Resprouter | Fire stimulates recruitment | | | | 2-4 | | 4-10 |
| *Acacia aneura* | Obligate Seeder | Fire may stimulate germination of the mostly 'hard' seeds. | Seed | | | | | |
| *Acacia brachystachya* | Obligate Seeder | | Seed | | | | | |
| *Acacia cambagei* | Obligate Seeder | | Seed | | | | | |
| *Acacia excelsa* | Resprouter | | Seed | | | | | |
| *Acacia ligulata* | Resprouter | | Seed | | | | | |
| *Acacia loderi* | | | Seed | | | | | |
| *Acacia oswaldii* | Obligate Seeder | | Seed | | | | | |
| *Acacia sibirica* | Obligate Seeder | | Seed | | | | | |
| *Acacia stenophylla* | Obligate Seeder | | Seed | | | | | |
| *Acacia tetragonophylla* | Obligate Seeder | | Seed | | | | | |
| *Acacia victoriae* | Resprouter | | Seed | | | | | |
| *Actinobole uliginosum* | Repprouter | | | | | | | |
| *Alectryon oleifolius* | Obligate Seeder | Fire intolerant. | Fruit. | | | | | |
| *Alternanthera nodiflora* | | | Fruit | | | | | |
| *Aristida contorta* | Resprouter | | Fruit (Dry indehiscent 1 seeded) | Animal - Passive | Adhesive fruit animal dispersed. | | | |

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| *Aristida holathera* | Resprouter | | Fruit (Dry indehiscent 1 seeded) | Animal - Passive | Adhesive fruit animal dispersed. | | | |
| *Aristida jerichoensis* | Resprouter | | Fruit (Dry indehiscent 1 seeded) | Animal - Passive | Adhesive fruit animal dispersed. | | | |
| *Atalaya hemiglauca* | Resprouter | | Fruit (Dry indehiscent 1 seeded) | | | | | |
| *Atriplex angulata* | | | Bracteols enclosing fruit | Gravity - No secondary | | | | |
| *Atriplex eardleyae* | | | Bracteols enclosing fruit | Gravity - No secondary | | | | |
| *Atriplex elachophylla* | Resprouter | F | Bracteols enclosing fruit | Gravity - No secondary | | | | |
| *Atriplex holocarpa* | | | Bracteols enclosing fruit | Gravity - No secondary | | | | |
| *Atriplex intermedia* | | | Bracteols enclosing fruit | Gravity - No secondary | | | | |
| *Atriplex leptocarpa* | Obligate Seeder | | Bracteols enclosing fruit | Gravity - No secondary | | | | |
| *Atriplex limbata* | | | Bracteols enclosing fruit | Gravity - No secondary | | | | |
| *Atriplex nessorhina* | | | Bracteols enclosing fruit | Gravity - No secondary | | | | |
| *Atriplex pseudocampanulata* | | | Bracteols enclosing fruit | Gravity - No secondary | | <1 | | 1 |
| *Atriplex stipitata* | Obligate Seeder | | Bracteols enclosing fruit | Gravity - No secondary | | | | |
| *Austrostipa scabra* | Resprouter | | Fruit (Dry indehiscent 1 seeded) | Animal - Passive | Adhesive animal dispersed. | | | |

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| *Brachyscome ciliaris* | Resprouter | | Fruit | Animal - Caching | | | | |
| *Brachyscome dentata* | Resprouter | | Fruit | Animal - Caching | | | | |
| *Bulbine alata* | | | Seed | | | | | |
| *Calandrinia eremaea* | Obligate Seeder | | | | | | | |
| *Calotis dentex* | Obligate Seeder | | Fruit | Animal - Passive | | | | |
| *Calotis hispidula* | Obligate Seeder | | Fruit | Animal - Passive | | | | |
| *Calotis inermis* | Obligate Seeder | | Fruit | Animal - Passive | | | | |
| *Calotis plumulifera* | Obligate Seeder | | Fruit | Animal - Passive | | | | |
| *Carex inversa* | Resprouter | | Fruit | | | | | |
| *Casuarina pauper* | Obligate Seeder | | Seed (winged) | Wind - Samara | | | | |
| *Cenchrus ciliaris* | Obligate Seeder | | Fruit (1 seeded indehiscent) | | Burrs attach to animals clothing bags & float on water. | | | |
| *Centipeda cunninghamii* | | | Fruit | | | | | |
| *Centipeda minima* | | | Fruit | | | | | |
| *Centipeda thespidioides* | | | Fruit | | | | | |
| *Centrolepis eremica* | | | Seed | Gravity - No secondary | | | | |
| *Cheilanthes sieberi* | Resprouter | | Spores | | Wind-dispersed. Probably no dormancy mechanism. | 1-2 | | |

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| *Chenopodium auricomum* | Resprouter | | Pericarp | | | | | |
| *Chenopodium desertorum* | Resprouter | | Pericarp inflated sometimes succulent | | | | | |
| *Chthonocephalus pseudovax* | | | | | | | | |
| *Convolvulus erubescens* | Variable | | | | | 1 | | |
| *Corymbia tumescens* | Resprouter | | Seed | Wind - Tiny Seed | | | | |
| *Cynoglossum australe* | Resprouter | | Fruit (mericarp) | | Seedling recruitment possibly related to soil disturbance. Seeds dispersed by animals. | 1 | | <5 |
| *Dactyloctenium radulans* | Obligate Seeder | | Fruit (dry indehiscent 1 seeded) | | | | | Indefinite |
| *Daucus glochidiatus* | Obligate Seeder | | Fruit | Animal - Passive | | <1 yr | | |
| *Digitaria hystrichoides* | Resprouter | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Dissocarpus paradoxus* | | | Inflorescence | Gravity - No secondary | | | | 2 |
| *Dodonaea viscosa* | Resprouter | | | | | | | |
| *Duma florulenta* | Obligate Seeder | | | | | | | |
| *Dysphania carinata* | Obligate Seeder | | Pericarp | | | 1 | | |

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| *Dysphania melanocarpa* | Obligate Seeder | | Pericarp | | | | | |
| *Dysphania platycarpa* | | | Inflorescence | Gravity - No secondary | | | | |
| *Einadia hastata* | Obligate Seeder | | Inflated perianth surrounds fruit berry like | Animal - Ingestion | | 1 | | |
| *Einadia nutans* | Obligate Seeder | | Inflated perianth surrounds fruit berry like | Animal - Ingestion | | | | |
| *Eleocharis pusilla* | | | Fruit | | | | | |
| *Enchylaena tomentosa* | Obligate Seeder | | Perianth fused into berry like fruit | Animal - Ingestion | | | | |
| *Enneapogon avenaceus* | Resprouter | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Enteropogon acicularis* | Resprouter | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Eragrostis australasica* | Resprouter | | Fruit (dry indehiscent 1 seeded) | Gravity - No secondary | | | | |
| *Eragrostis cilianensis* | Obligate Seeder | | Fruit (dry indehiscent 1 seeded) | Gravity - No secondary | No particular mechanism for dispersal. In mud on cars. | <1 | | <1 |
| *Eragrostis dielsii* | Resprouter | | Fruit (dry indehiscent 1 seeded) | Gravity - No secondary | | | | |

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| *Eragrostis eriopoda* | Resprouter | | Fruit (dry indehiscent 1 seeded) | Gravity - No secondary | | | | |
| *Eragrostis lacunaria* | Resprouter | | Fruit (dry indehiscent 1 seeded) | Gravity - No secondary | | | | |
| *Eragrostis setifolia* | Resprouter | | Fruit (dry indehiscent 1 seeded) | Gravity - No secondary | | | | |
| *Eremophila bignoniiflora* | Obligate Seeder | | Fruit | | | | | |
| *Eremophila deserti* | | | Fruit | | | | | |
| *Eremophila divaricata* | | | Fruit | | | | | |
| *Eremophila duttonii* | Resprouter | | Fruit | | | | | |
| *Eremophila longifolia* | Resprouter | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Eremophila maculata* | Obligate Seeder | | Fruit | | | | | |
| *Eremophila sturtii* | Resprouter | | Fruit | | | | | |
| *Eriachne mucronata* | | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Eriochloa procera* | | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Erodium cicutarium* | | | | | | <1 | | <1 |
| *Erodium crinitum* | | | | | | 1 | | <1 |
| *Eucalyptus coolabah* | Resprouter | No dormancy. | Seed | Wind - Tiny Seed | Dispersed locally by | | | |

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| | | | | | wind or gravity. | | | |
| *Eucalyptus largiflorens* | Resprouter | No dormancy. | Seed | Wind - Tiny Seed | Dispersed locally by wind or gravity. No dormancy mechanism. | | | |
| *Eucalyptus ochrophloia* | Resprouter | No dormancy. | Seed | Wind - Tiny Seed | Dispersed locally by wind or gravity. | | | |
| *Eucalyptus populnea* | Resprouter | No dormancy. | Seed | Wind - Tiny Seed | Dispersed locally by wind or gravity. No dormancy mechanism. | | | |
| *Euchiton sphaericus* | Obligate Seeder | | Achene | | Coloniser. | <1 | | 1-2 |
| *Euphorbia dallachyana* | Obligate Seeder | | Seed | Mechanistic - Ballistic | | | | |
| *Evolvulus alsinoides* | Obligate Seeder | | Seed | Mechanistic - Ballistic | | | | |
| *Fimbristylis dichotoma* | Resprouter | | | | | | | |
| *Flindersia maculosa* | Obligate Seeder | | | | | | | |
| *Goodenia fascicularis* | | | Seed | | | | | |
| *Goodenia glabra* | | | Seed | | | | | |
| *Goodenia lunata* | Obligate Seeder | | Seed | | | | | |

| Name | Fire Response | Notes | Germination | Diaspore | Dispersal | 1 Juv | 2 Juv | Longevity |
|---|---|---|---|---|---|---|---|---|
| *Grevillea striata* | Obligate Seeder | | Seed | | | | | |
| *Gypsophila tubulosa* | | | | | | | | |
| *Hakea tephrosperma* | Resprouter | | Seed (winged) | Wind - Samara | | | | |
| *Haloragis glauca* | | | | | | | | |
| *Hibiscus brachysiphonius* | | | Seed | | | | | |
| *Hibiscus trionum* | Obligate Seeder | | Seed | | | | | |
| *Isolepis congrua* | | | Fruit | | | | | |
| *Jasminum lineare* | Resprouter | | Fruit | Animal - Ingestion | | | | |
| *Lachnagrostis filiformis* | Obligate Seeder | | Fruit (dry indehiscent 1 seeded) | | | <1 | | <1 |
| *Leiocarpa panaetioides* | | | Fruit | Wind - Plume | | | | |
| *Lepidium monoplocoides* | | | Seed | | | | | |
| *Lepidium muelleri-ferdinandi* | | | Seed | | | | | |
| *Lepidium oxytrichum* | | | Seed | | | | | |
| *Lepidium pseudopapillosum* | | | Seed | | | | | |
| *Lepidium sagittulatum* | | | Seed | | | | | |
| *Leptochloa peacockii* | Resprouter | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Lobelia darlingensis* | | | | | | | | |
| *Lotus cruentus* | | | Seed | | | | | |
| *Lysimachia arvensis* | Resprouter | | Seed | | | 1-2 | | |
| *Maireana brevifolia* | | | Inflorescence | Wind - Samara | | | | |
| *Maireana coronata* | Obligate Seeder | | Inflorescence | Wind - Plume | | | | |
| *Maireana decalvans* | Obligate Seeder | | Inflorescence | Wind - Samara | | | | |

| Name | Fire Response | Notes | Germination | Diaspore | Dispersal | 1 Juv | 2 Juv | Longevity |
|---|---|---|---|---|---|---|---|---|
| *Maireana integra* | | | Inflorescence | Wind - Samara | | | | |
| *Maireana triptera* | Obligate Seeder | | Inflorescence | Wind - Samara | | | | |
| *Maireana villosa* | | | Inflorescence | Wind - Samara | | | | |
| *Malva parviflora* | | | | | | | | |
| *Malvastrum coromandelianum* | | | | | | | | |
| *Marsdenia viridiflora* | Resprouter | | Seed | Wind - Plume | | | | |
| *Marsilea costulifera* | Resprouter | | Sporocarp | | | | | |
| *Marsilea drummondii* | | | Sporocarp | | | | | |
| *Melaleuca densispicata* | | No soil stored seedbank. | Seed | Wind - Tiny Seed | Gravity & water dispersed. | | | |
| *Myoporum montanum* | Resprouter | | Fruit | Animal - Ingestion | | 3-5 | | |
| *Myosurus minimus* | | | | | | | | |
| *Nicotiana simulans* | | | | | | | | |
| *Olearia pimeloides* | Obligate Seeder | | Fruit | Wind - Plume | | | | |
| *Osteocarpum acropterum* | | | Inflorescence | Wind - Samara | | | | |
| *Paspalidium jubiflorum* | Resprouter | Germination variable after one month 0-80% increasesup to 18 m then declines rapidly. | Inflorescence | | | | | |
| *Pimelea microcephala* | Resprouter | | | Gravity - No secondary | | | | |
| *Pimelea trichostachya* | Obligate Seeder | | | Gravity - No secondary | | | | |
| *Pittosporum angustifolium* | Obligate Seeder | | | | | | | |
| *Podolepis capillaris* | | | Fruit | | | | | |

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| *Portulaca oleracea* | Obligate Seeder | | Seed | | | | | |
| *Pseudognaphalium luteoalbum* | | Coloniser. | | | Wind-dispersed locally. | <1 | | 1 |
| *Psydrax latifolium* | Obligate Seeder | | Fruit | | | | | |
| *Ptilotus gaudichaudii* | | | Flower | | | | | |
| *Ptilotus macrocephalus* | Resprouter | | Flower | | | | | |
| *Ptilotus parvifolius* | Obligate Seeder | | Flower | | | | | |
| *Ptilotus polystachyus* | Obligate Seeder | | Flower | | | | | |
| *Ranunculus pentandrus* | | | Fruit (achene) | | | | | |
| *Rhagodia spinescens* | Obligate Seeder | | Fruit | Animal - Ingestion | | | | |
| *Rorippa laciniata* | Obligate Seeder | | Seed | | | | | |
| *Rumex crystallinus* | | | Fruit | Animal - Passive | | | | |
| *Salsola australis* | Obligate Seeder | | Plant | Wind - Samara | Often whole plant wind dispersed with fruit falling later. | | | |
| *Santalum lanceolatum* | Resprouter | | | | | | | |
| *Santalum obtusifolium* | Resprouter | | Fruit. | | Hemi-parasitic on the roots of other plants. | 3-5 | | |
| *Scaevola spinescens* | Resprouter | | | | | | | |

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| *Sclerolaena bicornis* | Obligate Seeder | | Flower | Animal - Passive | | | | |
| *Sclerolaena birchii* | Obligate Seeder | | Flower | Animal - Passive | | | | |
| *Sclerolaena calcarata* | Obligate Seeder | | Flower | Animal - Passive | | | | |
| *Sclerolaena convexula* | Obligate Seeder | | Flower | Animal - Passive | | | | |
| *Sclerolaena diacantha* | Obligate Seeder | | Flower | Animal - Passive | | | | |
| *Sclerolaena eriacantha* | Obligate Seeder | | Flower | Animal - Passive | | | | |
| *Sclerolaena lanicuspis* | | | Flower | Animal - Passive | | | | |
| *Sclerolaena muricata* | Obligate Seeder | | Flower | Animal - Passive | | | | |
| *Sclerolaena parviflora* | | | Flower | Animal - Passive | | | | |
| *Sclerolaena patenticuspis* | | | Flower | Animal - Passive | | | | |
| *Sclerolaena tricuspis* | Obligate Seeder | | Flower | Animal - Passive | | | | |
| *Senecio lacustrinus* | | | | | | | | |
| *Senecio quadridentatus* | Obligate Seeder | Germination fire related. Germination 95%. | Fruit (achene) | | Probably wind-dispersed. Recruitment fire-related. | < 1yr | | 1-2 |
| *Senecio runcinifolius* | Obligate Seeder | | Fruit (achene) | | | | | |
| *Senna phyllodinea* | Resprouter | | Seed | | | | | |
| *Senna sp. 'artemisioides'* | Resprouter | | Seed | | | | | |
| *Senna sp. 'coriacea'* | Resprouter | | Seed | | | | | |
| *Senna sp. 'filifolia'* | Resprouter | | Seed | | | | | |

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| *Senna sp. 'petiolaris'* | Resprouter | | Seed | | | | | |
| *Senna sp. 'zygophylla'* | Resprouter | | Seed | | | | | |
| *Sida cunninghamii* | Obligate Seeder | | | | | | | |
| *Sida trichopoda* | Obligate Seeder | | | | | | | |
| *Solanum cleistogamum* | Obligate Seeder | | Fruit | Animal - Ingestion | | | | |
| *Solanum ellipticum* | Obligate Seeder | | Fruit | Animal - Ingestion | | | | |
| *Solanum esuriale* | Obligate Seeder | | Fruit | Animal - Ingestion | | | | |
| *Sonchus oleraceus* | Obligate Seeder. | | Fruit | Wind - Plume | | 1 | | 1-2 |
| *Spergularia rubra* | Obligate seeder | | | | | 1 | | <1 |
| *Sporobolus actinocladus* | Resprouter | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Sporobolus caroli* | Resprouter | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Sporobolus mitchellii* | Resprouter | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Swainsona murrayana* | Obligate Seeder | | Seed | | | | | |
| *Tecticornia tenuis* | Obligate Seeder | | Inflorescence | | | | | |
| *Tetragonia moorei* | | Common after good winter rains. | | | | | | |
| *Teucrium racemosum* | | | | | | | | |

| *Name* | *Fire Response* | *Notes* | *Germination* | *Diaspore* | *Dispersal* | *1 Juv* | *2 Juv* | *Longevity* |
|---|---|---|---|---|---|---|---|---|
| *Themeda triandra* | Resprouter | Primary dormancy usually breaks slowly with storage up to 12 m ormore. To break dormancy seeds need cold 4C for at least 1 month. Total germination 100 days. | Fruit (dry indehiscent 1 seeded) | | Dispersal by adhesion also by gravity. Coloniser of bare clay banks & slopes. | 1 | 1 | Indefinite |
| *Thyridia repens* | | | Seed | | | | | |
| *Tripogon loliiformis* | Obligate Seeder | | | | | | | |
| *Triraphis mollis* | Obligate Seeder | | Fruit (dry indehiscent 1 seeded) | | | | | |
| *Vittadinia arida* | | | Fruit | Wind - Plume | | | | |
| *Vittadinia cuneata* | Resprouter | | Fruit | Wind - Plume | | | | |
| *Vittadinia pterochaeta* | | | Fruit | Wind - Plume | | | | |
| *Wahlenbergia tumidifructa* | | | Seed | | | | | |

# Appendix 9 – Weed taxa found within Nocoleche Nature Reserve

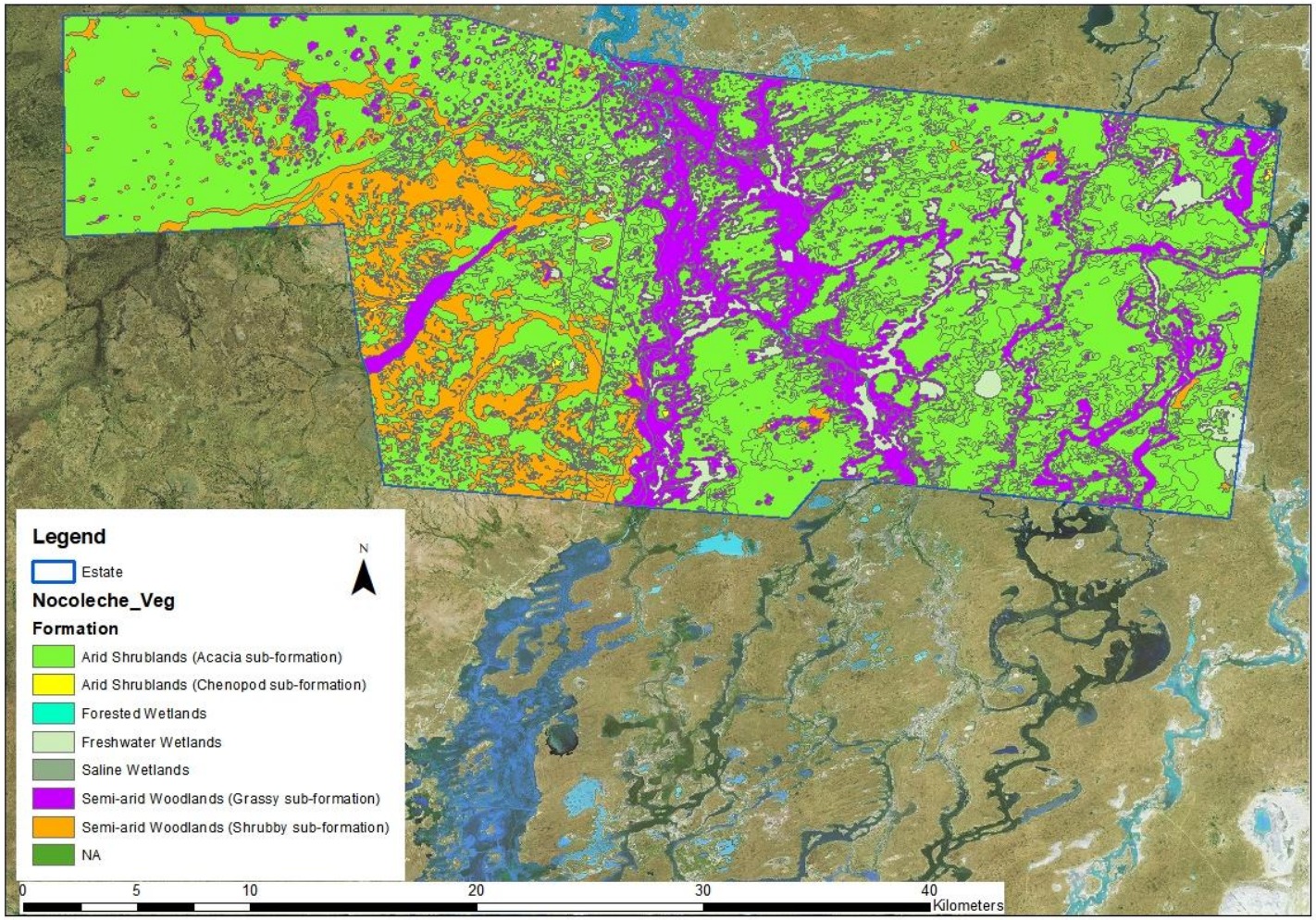
| *Weed* | *Height* | *Life History* | *Life Form* | *Threat* | *Habitat & Notes* | *Control* |
|---|---|---|---|---|---|---|
| *Acetosa vesicaria* | 1 | Annual | Herbs | Moderate | Usually where water accumulates primarily on heavier soils. Dispersed by fruit often in water | Chipping |
| *Arctotheca calendula* | 0.3 | Annual | Herbs | Moderate | Usually disturbed areas | Chipping or foliar spray. |
| *Argemone ochroleuca* | 1.5 | Annual | Herbs | Moderate | Often within drying dams and river and stream beds | Chipping |
| *Asphodelus fistulosus* | 0.8 | Annual | Herbs | High | Often in sand plain locations sandy or alkaline soils of low fertility. Mainly dispersed by wind blowing dead plants vehicles machinery animals wool clothing produce and water. | Isolated plants pulled. Chipping. Paraquat and picloram if applied before seeding. |
| *Brassica tournefortii* | 0.6 | Annual | Herbs | High | Usually a weed of fallow areas waste sites roadsides | Chipping or foliar spray. |
| *Carthamus lanatus* | 1 | Annual | Herbs | High | Pappus spread by wind. Prefers higher fertility sites. | Chipping and pulling. MCPA before flowering. |
| *Cenchrus ciliaris* | 1 | Perennial | Herbs | High | Summer growing with perennial rootsock. Flowers summer to autumn. Recruits and spreads during very wet summers. Prefers sandy soils especially red earths with higher phosphorus. Drought resistant. | Manual removal before seeding. |
| *Centaurea melitensis* | 1 | Annual | Herbs | Moderate | On fertile drier soils. Germinates in autumn flowers in into summer. | Best treated before seeding at rosette stage. |
| *Cirsium vulgare* | 1.5 | Biennial | Herbs | Low | Common weed of most soil types. | Chipping. |
| *Conyza bonariensis* | 1 | Annual | Herbs | Low | Active growth starts in spring to early autumn seeds produced over a long period. Dispersed by wind. In most communities usually on disturbed soil. | Pilling by hand chipping. |
| *Diplachne uninervia* | 0.7 | Annual | Herbs | Low | Weed of cultivation sites. | Wick wipe foliar spray. |

| *Weed* | *Height* | *Life History* | *Life Form* | *Threat* | *Habitat & Notes* | *Control* |
|---|---|---|---|---|---|---|
| *Emex australis* | 0.15 | Annual | Herbs | Moderate | Found in a wide range of soil types. Usually neutral to slightly alkaline soils. | Foliar spray. |
| *Eragrostis cilianensis* | 0.6 | Annual | Herbs | High | Mainly disturbed areas roadsides near water bodies | Foliar spray wick wipe. |
| *Erodium cicutarium* | 0.4 | Annual | Herbs | Moderate | Widely naturalised. | Chipping hand pulling rosettes before flowering. Foliar spray. |
| *Gnaphalium polycaulon* | 0.15 | Annual | Herbs | Low | Common in areas of water accumulation | Environmental weed. |
| *Heliotropium curassavicum* | 0.05 | Annual or Perennial | Herbs | Moderate | Similar to below. | Chipping. |
| *Heliotropium supinum* | 0.05 | Annual | Herbs | Moderate | Germinates after rain or flooding. Flowers mainly in summer to autumn. Dispersed by water movement over soil in floods. Seeds can pass through digestive track unharmed. Generally on heavier soils especially creek beds table drains etc. | Chipping. |
| *Hypochaeris glabra* | 0.4 | Annual | Herbs | Low | Achenes dispersed by wind. Common in many communities. | Environmental weed. |
| *Lycium ferocissimum* | 4 | Perennial | Medium Shrubs | High | Can germinate anytime of year with rapid root growth. 2 years before flowers but then can flower and fruit all year round. Seeds dispersed by birds and other animals. Breeding site for fruit flies fruit beetles tomato fly and house flies. Seeds maybe viable in soil for several years. | Physical removal and burning. Cut stumps sprayed or painted immediately. |
| *Lysimachia arvensis* | 0.3 | Annual | Herbs | Low | Usually in damp positions often along creekbanks. Found in a range of soil types. Poisonous to many animals including birds. | Hand weeding. Spraying partially affective on seedlings. |

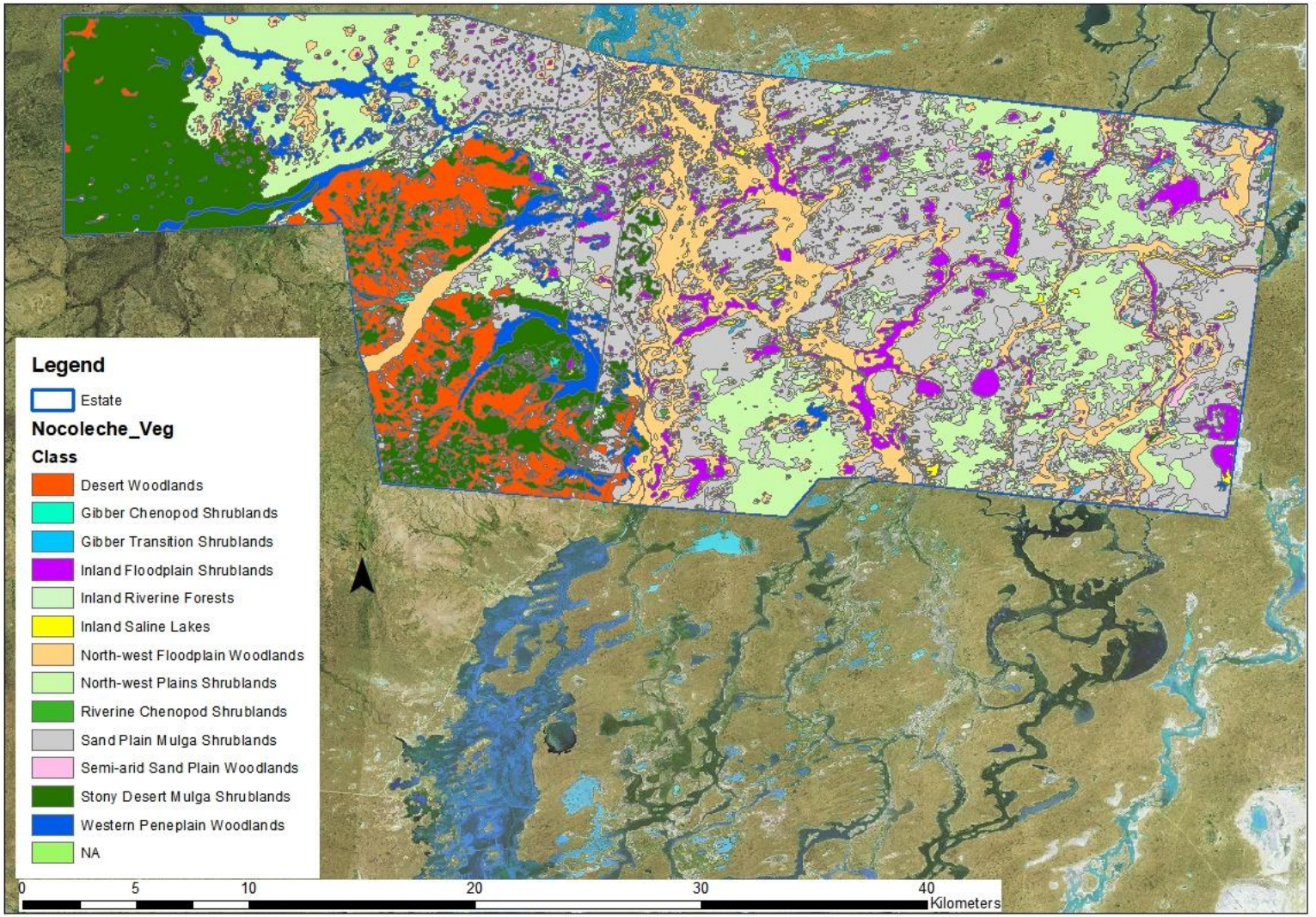
| *Weed* | *Height* | *Life History* | *Life Form* | *Threat* | *Habitat & Notes* | *Control* |
|---|---|---|---|---|---|---|
| *Malva parviflora* | 0.5 | Annual | Herbs | Moderate | Seeds germinate in spring. Flowers over spring and summer. | Chipping and removal of deep roots. Picloram. |
| *Medicago laciniata* | 0.2 | Annual | Herbs | Low | Across more fertile communities. Dispersed in mud on cars or feet via wind over soil. Prefers full sun and can tolerate saline soils. | Glyphosate. |
| *Medicago minima* | 0.9 | Annual | Herbs | Low | As above. | Glyphosate. |
| *Opuntia stricta* | 1.5 | Perennial | Low Shrubs | High | Found in all areas of NSW. Drought resistant with irritating spines. | Biological control. Heaping and burning. Spray with arsenic type preparations. |
| *Panicum gilvum* | 0.7 | Annual | Herbs | Moderate | Generally a weed of old cultivation sites. | Foliar spray wick wipe slashing. |
| *Polygonum arenastrum* | 0.4 | Perennial | Herbs | Low | Leaves can cause dermatitis and seeds enteritis in stock. | Foliar spray. |
| *Salvia verbenaca* | 0.7 | Perennial | Herbs | Moderate | Dispersed via seed. Found in various soil types but more common on heavier soils. | Pulling of isolated plants chipping or MCPA. |
| *Schismus barbatus* | 0.4 | Annual | Herbs | Moderate | | |
| *Solanum chenopdioides* | 1 | Perennial | Herbs | Low | Usually in disturbed areas on better soils. | Chipping foliar spray. |
| *Solanum nigrum* | 0.4 | Perennial | Low Shrubs | Low | Environmental weed | Chipping foliar spray. |
| *Sonchus oleraceus* | 1.1 | Annual | Herbs | Low | Environmental weed. Grows in cooler seasons and dies after flowering. Widespread weed of disturbed areas and occurs on most soil types. | Pulling of isolated plants. Chipping. MCPA. |
| *Spergularia diandra* | 0.15 | Annual | Herbs | Low | Flowers September to January. Has numerous seeds. Usually weed of waste areas on heavier soils. | Small and environmental weed. |
| *Tamarix aphylla* | 10 | Perennial | Low Tree | High | Generally around old habitation areas. Produces numerous seeds that can | Cutting Pulling out whole plant. Painting cut stems. |

| *Weed* | *Height* | *Life History* | *Life Form* | *Threat* | *Habitat & Notes* | *Control* |
|---|---|---|---|---|---|---|
| | | | | | spread over a wide area via wind and water but has a low rate of invasion. | |
| *Verbena supina* | 0.5 | Perennial | Herbs | Moderate | Flowers from October to June. Prolific seeder and very persistent. Usually in wasteland and neglected areas roadsides and waterlogged areas. | Older plants generally herbicide resistant. Chipping and removal of flowers. |
| *Veronica peregrina* | 0.2 | Annual | Herbs | Moderate | Often in swampy and disturbed sites. | Chipping pulling. Foliar spray. |
| *Xanthium occidentale* | 2 | Annual | Herbs | High | Seed can remain dormant for 3 years. Burrs dispersed on fur and wool. Seeds/burrs can float on water. Generally on high fertility soils often on watercourses and flood plains.Acts as a host for fungal diseases. Seedlings poisonous to animals Can cause dermatitis in people. | Hand pulling chipping if not too dense. Burrs collected and burnt. MCPA before flowering. |
| *Xanthium spinosum* | 1 | Annual | Herbs | High | As above. | As above. |

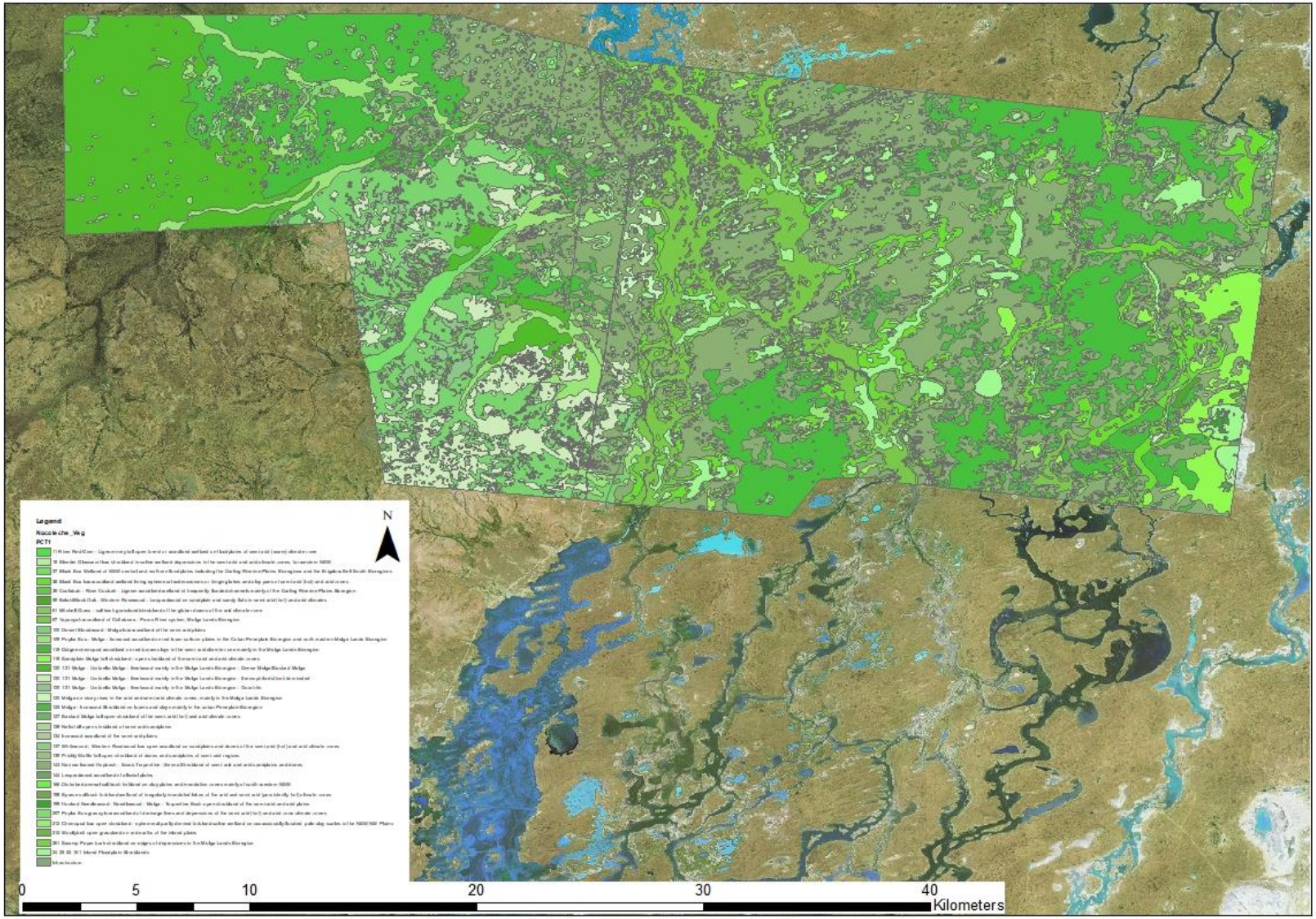
## Appendix 9 – Mapping of the TSR within Nocoleche NR.




**Complete mapping of Formations (Keith 2004) across Nocoleche NR and the intervening Travelling Stock Reserve.**




**Complete mapping of vegetation Class (Keith 2004) across Nocoleche NR and the intervening Travelling Stock Reserve.**




**Complete mapping of Plant Community Types across Nocoleche NR and the intervening Travelling Stock Reserve.**

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