





# Walter Newell Reserve Vegetation Management Plan



EAC - Ecological Evaluation Pty Ltd

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# 1. Reserve Details

**Reserve Name:** Walter Newell Reserve

**Local Government Area:** Alexandrina Council

**Location:** Ferguson Rd, Goolwa Beach

**Title Information:**

Allot. 190 in DP 55595 (CR 5857/385)

Allot. 78 in DP 55595 (CT 5821/585)

Allot. 177 in DP 20186 (CT 5546/3752)

Allot. 186 in DP 35374 (CT 5099/553)

**Council Assessment Number:**

A16397

A16396

A947

A947

Lots 78, 177 and 186 are owned by Council. Lot 190 is Crown Land dedicated to Council's care and control.

**Size:**

Approximately 4.3 hectares, plus two adjacent RMS sites on Ferguson Rd as follows: - RMS site 425 = 0.23 ha  
RMS site 426 = 0.22ha

**Class of Reserve:**

Council Urban Biodiversity Reserve

Figure 1: Reserve Location and Landscape Context



## 2. Introduction

This management plan has been developed to guide Alexandrina Council's management of Walter Newell Reserve for a 10 year period from 2014-2023. For the purposes of this Plan, Walter Newell Reserve is taken to include the adjacent roadside vegetation on both sides of Ferguson Road (Roadside Marker Sites 425 and 426) and the walking path on the south-eastern boundary of the reserve, linking Ferguson Road with Merrett Avenue.

Development of this management Plan is consistent with Action 2.2.1 of Council's Environmental Action Plan 2014-2018 which requires Council to prepare and implement site-specific management plans for Council reserves identified as being of high conservation priority.

The primary management objective for Walter Newell Reserve is protecting and enhancing its already significant biodiversity value; however, given the proximity of adjoining residential development, this plan also considers a number of other (potentially conflicting) management issues which commonly arise in the context of urban biodiversity reserves. These include fire risk and amenity values.

The plan describes:

- the location and conservation significance of the reserve;
- the goals and objectives for future management of the reserve;
- the issues that threaten the conservation significance of the reserve; and
- the priority management actions for the reserve including an estimated implementation timeline.

It is anticipated that by providing information about the conservation significance of the reserve, coupled with a description of priority management actions, this management plan will foster a greater level of community appreciation for Walter Newell Reserve, and thus encourage positive community involvement in the long-term management and conservation of the reserve.

## 3. Methodology

This Plan builds upon, and is an update to, the Bush for Life Action Plan prepared for Walter Newell Reserve by Trees for Life in 2005.

A field survey of Walter Newell Reserve was conducted over two days between 24<sup>th</sup> July and 6<sup>th</sup> August 2014. Assessment activities undertaken during the field survey are outlined below:

- Survey of the Reserve and two adjacent Roadsides using BushRAT methodology
- Monitoring of two existing BCM sites and establishment of one new BCM site.

The field survey was supplemented with flora and fauna searches of the Biological Databases of SA.

Some species may not have been recorded during the survey due to the time of year when some annuals and orchids are not visible.

## **4. Reserve Description**

### **4.1 Location**

Walter Newell Reserve is a triangular shaped, 4.3ha block of remnant vegetation situated within the Residential Zone of the township of Goolwa. The reserve comprises four allotments; three are owned by Council (Allotments 177, 186 and 78) and the fourth (Allotment 190) is Crown Land, under the care and control of Council.

Two adjoining Roadside Marker System (RMS) sites on Ferguson Rd are associated with the reserve, given the linkage they provide between Walter Newell Reserve and the privately owned land to the west. As illustrated in Figure 1 above this privately owned land on Ferguson and Golfview Roads forms a continuous (except for road separation) band of vegetation linking Walter Newell Reserve with the DEWNR-managed Tokuremoar Reserve and the Council-managed Crown Land reserves of the Goolwa Dune system. A range of conservation partners including Council, the private landowner, DEWNR, the Goolwa to Wellington Local Action Planning Association, Goolwa Coastcare and the Adelaide & Mount Lofty Ranges NRM Board are involved in the active conservation management of this vegetation corridor.

Walter Newell Reserve itself adjoins residential properties on all three sides. The northern side abuts the back fences of residential homes, including those contained within the Thornbury Park Retirement Estate. Ferguson Road runs along the south-western boundary, creating a small buffer between the reserve and the residential properties on the western side of Ferguson Rd. A fenced walking path along the south-eastern boundary creates a small buffer between the reserve and adjacent housing. This walking path provides an important pedestrian and cycle link between the residential development of Goolwa Beach and the shopping precinct and town centre of Goolwa.

### **4.2 Land-use history**

#### **4.2.1 Indigenous History**

Walter Newell Reserve falls within the traditional lands of the Ngarrindjeri people and is located within the boundaries of the Ngarrindjeri and Others Native Title Claim (SC1998/004) lodged in the National Native Title Tribunal in 1998.

Alexandrina Council is committed to working collaboratively with the Ngarrindjeri Regional Authority to uphold Ngarrindjeri rights and advance Ngarrindjeri interests when decisions are being made about their traditional country.

In accordance with the terms of the 2002 Kungun Ngarrindjeri Yunnan Agreement between Alexandrina Council and the Ngarrindjeri Nation, and consistent with Action 4.5.6 of Council's Environmental Action Plan 2014-2018, Council will seek to ensure that Ngarrindjeri knowledge and interests are incorporated into the future management of Walter Newell Reserve.

#### **4.2.2 European History**

Walter Newell Reserve was officially named in June 2013, having been formerly known as Ferguson Reserve.

Walter Newell was born in Goolwa in 1861 and was an Elected Member for the Goolwa and Sturt Wards of the District Council of Port Elliott and Goolwa from 1919 – 1927 and again from 1932 –



1945, when he passed away whilst holding office. He held the position of Chairman of the District Council of Port Elliott and Goolwa from 1938 – 1940.

Mr Newell had significant landholdings in the Goolwa Beach area, some parts of which remain under family ownership. The parcel of land on which Walter Newell Reserve is located was gifted to his daughter. In the early 1980s the land was rezoned residential and then purchased by a property developer in 1985 on the understanding that the allotments in the south-east corner of the property containing a patch of remnant Sheoak woodland would be retained as a natural reserve.

The site came under threat of being cleared for residential subdivision on two occasions before its protection was finally secured by Council in 2001.

The first subdivision proposal was received by Council in 1994. At that time, a report written by Elizabeth Byard of the State Government's Native Vegetation Management Branch concluded that "*the biological value and the conservation significance of the [remaining] vegetation is considered to be extremely high*". Council investigated options for acquiring the land but pressure to formally protect the site subsided when the developer withdrew the application.

The second subdivision proposal was received by Council in March 2000 for Allotment 190 and other land in the vicinity. At this time, Council had already acquired Allotments 78, 177 and 178 by way of open space contributions under the Development Act. Council was able to purchase Allotment 190 with the aid of \$60,000 funding from the Commonwealth Government's Natural Heritage Trust and \$30,000 funding from the State Government Planning and Development Fund.

A condition of the funding approval was that Allotment 190 become a Crown Land reserve vested in the care and control of Council. In 2006 the Crown Land dedication was finalised, and Allotment 190 was dedicated as a Conservation Reserve under the Crown Lands Act. A condition of the dedication is that no development be undertaken on the reserve without the prior written consent of the Minister.

The roadside vegetation along Ferguson Road was established as a Bush For Life site in February 1997 and expanded to include the entire reserve in 2002 after ownership of Allotment 190 was transferred to Council. Since this time a dedicated group of Bush For Life volunteers have been carefully assisting the restoration and regeneration of the reserve. This management plan replaces the Bush for Life Action Plan prepared for the reserve in October 2005.

### **4.3 Physical Description**

#### **4.3.1 Topography/Land Form**

Walter Newell Reserve and associated RMS sites in adjacent road reserves are located on relatively flat land at approximately 10 altitude. It is located within both the Goolwa and Coorong Environmental Associations (*Environments of South Australia*, Laut, P. et al, 1977), which are described as follows:

**Goolwa** - Low undulating plain on calcreted sands with numerous small depressions, bordering Lake Alexandrina

**Coorong** - Coastal dune complex rising 30-40m above the beach. The mobile active dunes are gradually moving north-east over older vegetated dunes. The association also includes the lagoon, coastal beaches and small mudflats.

#### 4.3.2 Soils

The soils throughout the site generally comprise of calcareous sands, with small limestone depressions. It was noted during the assessment that the areas comprising a higher density of Perennial Veldt Grass possibly comprise deeper sandy soils, with less limestone component, facilitating easy establishment for the weed. These observations are very general, and have been derived from a combination of information in Laut, P. et al (1977) and observations recorded during the field assessment.

#### 4.3.3 Climate

The Goolwa area experiences the typical Adelaide Mediterranean climate, with seasonal variations in rainfall and temperature: cool, wet winters alternate with hot, dry summers. The majority of rainfall occurs between May and September and average annual rainfall in the vicinity is estimated to be between 450 and 500 millimetres.

#### 4.3.4 Remnancy

The Walter Newell Reserve and associated RMS sites are located within the Hundred of Goolwa, which is estimated to retain approximately 14% of its original remnant vegetation cover, and is also situated within both the Goolwa and Coorong Environmental Associations, which in 2006 were estimated to retain approximately 9% and 27% respectively of their original remnant vegetation cover. These figures indicate that large areas have been cleared over time for agriculture and to facilitate residential development, and highlight the importance of retaining and protecting remnants from further degradation and/or fragmentation.

## 5. Assessment of Biodiversity Value

### 5.1 Vegetation

The Walter Newell Reserve is an example of a remnant of vegetation within an urban area that still retains significant biodiversity value. The biodiversity value of a remnant patch of vegetation is derived from the sum of its overall condition, conservation significance and landscape context. The paragraphs below map and describe the vegetation associations present within Walter Newell Reserve, including qualitative and quantitative assessments of condition.

Walter Newell Reserve is approximately 4.3 hectares in size and contains native vegetation in varying condition, ranging from relatively weed free to large open sections dominated by exotic pasture species. Numerous species of conservation significance have been recorded within the reserve, both in the current assessment and past surveys. There are two RSM sites included in this assessment, which comprise vegetation in moderate condition, and comprising several species of conservation significance, but with potentially threatening weed densities.

Generally the understorey comprises various small shrubs, less than 1m in height, with numerous native grasses, sedges and herbaceous species. There are some scattered clumps of larger shrubs such as *Acacia paradoxa* (Kangaroo Thorn), *Bursaria spinosa* (Sweet Bursaria) and *Acacia dodonaeifolia* (Hop-bush Wattle) within the reserve. A significant proportion of the original vegetation in the reserve has been disturbed over many decades resulting in a large proportion of introduced species, however there is a core area within the reserve that comprises good quality, intact remnant vegetation.

### 5.1.1 Vegetation Associations

The vegetation community within Walter Newell Reserve and the two associated RMS sites can be described as a Drooping Sheoak (*Allocasuarina verticillata*) Low woodland, using the NVIS Structural Formation Nomenclature, derived from Walker and Hopkins (1990). The projected foliage cover varies throughout the reserve including open areas, but is generally in the range of 10 – 30%. Before European settlement the projected foliage cover is likely to have been denser and the vegetation community may have been a Low open forest. As illustrated in Figure 2 below, the reserve can be divided into the following six zones for the purposes of outlining management priorities and actions:

<b>Management Zone</b>	<b>Description</b>	<b>Size (ha)</b>
<b>AREA 1</b>	Excellent quality bushland with few weeds	2.15
<b>AREA 2</b>	Excellent quality bushland but which is under threat from weed invasion	1.66
<b>AREA 3</b>	Previously cleared area dominated by pasture weeds, but exhibiting strong signs of regeneration	0.38
<b>AREA 4</b>	Cleared walkway with native species planted between fence and adjacent housing	0.17
<b>RMS 425</b>	Good quality bushland within the road reserve, where the native understorey is still present, but under threat from weed invasion	0.23
<b>RMS 426</b>	Good quality bushland within the road reserve, where the native understorey is still present, but under threat from weed invasion	0.22

Figure 2: Management zones

# Walter Newell Reserve Vegetation Management Plan



Allot. 190 in DP 55595  
(CR 5857/385)

Allot. 78 in DP 55595  
(CT 5821/585)


Allot. 177 in DP 20186  
(CT 5546/3752)

Allot. 186 in DP 35374  
(CT 5099/553)

 Area 1


 Area 2

 Area 3

 Area 4 (walking path)

 RMS 425

 RMS 426

 Fuel management zone

 BCM sites

 DCDB boundaries

 Roads



0 50 100 200 300 Meters

plan produced by EAC-Ecological Evaluation  
September 2014

**AREA 1: *Allocasuarina verticillata* (Drooping Sheoak) Low woodland**



Example of vegetation within Area 1



*Wurmbea dioica* ssp. *dioica* within Area 1



*Lepidosperma viscidum* with *Drosera micrantha* ssp. *planchonii* within Area 1

This management zone is generally located in the northern half of the reserve, and comprises vegetation in excellent condition, with weeds present in generally low densities.

Native species diversity is excellent in this association (see Section 5.1.3 for further discussion), with understorey dominated by *Bursaria spinosa* (Sweet Bursaria), *Acacia dodonaeifolia* (Hop-bush Wattle), a mixture of sedges such as *Lepidosperma* spp and *Gahnia duesta*, and grasses such as *Amphipogon carcinus* var. *carcinus* (Long Grey-beard Grass).

The weed densities for this area are low (5% according to BCM report), with the main weeds of concern being *Asparagus asparagoides* (Bridal Creeper), *Ehrharta calycina* (Perennial Veldt Grass), *Chrysanthemoides monilifera* ssp. *monilifera* (Boneseed), *Lycium ferocissimum* (Boxthorn) and *Senecio pterophorus* (African Daisy). Other weeds such as *Scabiosa atropurpurea* (Pincushion) and *Oxalis pes-caprae* (Soursob) are also of concern in this area.

The primary management objective for Area 1 is to reduce weed cover by targeting the main weeds of concerns, and in particular, to prevent the encroachment of weeds into intact areas of vegetation. See section 7.1.1 and 7.2 for further details.

## AREA 2: *Allocasuarina verticillata* (Drooping Sheoak) Low woodland



Example of vegetation within Area 2



*Chamaescilla corymbosa* var. *corymbosa* within Area 2

This management zone is generally located in the southern half of the reserve, and comprises vegetation that is considered to be in very good condition overall, when considering all condition attributes. However weeds of concern are present in higher densities than Area 1, and are posing a threat to the vegetation in this area.

Native species diversity is excellent in this association (see Section 5.1.3 for further discussion), with understorey dominated by *Bursaria spinosa* (Sweet Bursaria), *Acacia dodonaeifolia* (Hop-bush Wattle), *Acacia paradoxa* (Kangaroo Thorn), *Rhagodia candolleana* ssp. *candolleana* (Sea-berry Saltbush), a mixture of sedges such as *Lepidosperma* spp and *Gahnia duesta*, native grasses such as *Amphipogon carcinus* var. *carcinus* (Long Grey-beard Grass), and the pasture weed *Ehrharta calycina* (Perennial Veldt Grass).

The weed densities for this area are high (35% according to BCM report), and the main weeds of concern in addition to *Ehrharta calycina* (Perennial Veldt Grass) include *Asparagus asparagoides* (Bridal Creeper), *Chrysanthemoides monilifera* ssp. *monilifera* (Boneseed), *Lycium ferocissimum* (Boxthorn) and *Oxalis pes-caprae* (Soursob). *Scabiosa atropurpurea* (Pincushion) is also of concern in this area.

As for Area 1, the primary management objective for Area 2 is to reduce weed cover by targeting the main weeds of concern and in particular, to prevent encroachment of these weeds into Area 1. See section 7.1.1 and 7.2 for further details.

## AREA 3: *Allocasuarina verticillata* (Drooping Sheoak) Low woodland



Open slashed part of Area 3, with mixture of native and exotic grasses



Regeneration in Area 3, with regenerating Sheoaks, mixture of native and exotic grasses and

This management zone is located within a narrow strip along the eastern side of the reserve, and although traditionally maintained by mowing / slashing, is exhibiting strong signs of regeneration. Weeds are present in generally moderate densities.

Native species diversity is good in this association (see Section 5.1.3 for further discussion), with regenerating Drooping Sheoaks, and understorey dominated by a mixture of native grasses such as *Austrostipa* spp (Spear Grasses) and *Rytidosperma* sp. (Wallaby grasses) and the pasture weed *Ehrharta calycina* (Perennial Veldt Grass). Other understorey species are also beginning to regenerate, including *Lomandra densiflora* (Soft Tussock Mat-rush), *Astroloma humifusum* (Cranberry Heath), *Vittadinia* spp (New Holland Daisy) and *Scaevola albida* (Pale Fanflower).

The weed densities for this area are high (35% according to BCM report), with the main weeds of concern being *Ehrharta calycina* (Perennial Veldt Grass) and *Asparagus asparagoides* (Bridal Creeper), but with *Oxalis pes-caprae* (Soursob), *Scabiosa atropurpurea* (Pincushion) and *Gazania* sp. (Gazania) also of concern in this area. This area is subject to regular slashing for amenity and the management of fire risk the timing of which could be manipulated to encourage proliferation of the native grasses present, and to discourage growth of exotic grasses.

The key management objective for Area 3 is to protect existing native species diversity and cover and encourage further regeneration of native species by establishing a strategically timed slashing program (i.e. before seed set of exotic grasses, and after seed set of native grasses). See section 7.1.1 and 7.2 for further details.

#### **Area 4 – Walking path**



Section of walking path between Sexton St and Ferguson Rd.



Walking path from Sexton St, showing amenity plantings of local native species.

This management zone comprises the walking path located along the eastern boundary of the reserve. Weeds are present along the edges of the path, but are regularly maintained, and there are pockets of amenity plantings of local native species along the edges of the path.

The following native species have been planted along the path corridor: -

*Rhagodia candolleana* ssp *candolleana* (Sea-berry Saltbush)

*Olearia axillaris* (Twiggy Daisy-bush)

*Acacia paradoxa* (Kangaroo Thorn)

*Tetragonia implexicoma* (Bower Spinach)

*Myoporum insulare* (Common Boobialla)

The following exotic species have also been planted in the past: -

*Melaleuca armillaris* (Giant Honey Myrtle)

*Schinus anuera* (Mulga)

*Ornamental Geranium* (Geranium sp.)

The plant list could extend to incorporate planting of hardy species such as: -

*Olearia ramulosa* (Twiggy Daisy-bush)

*Dianella revoluta* var. *revoluta* (Black-Anther Flax-Lily)

*Acacia paradoxa* (Kangaroo Thorn)

*Eutaxia microphylla* (*Eutaxia microphylla*)

*Ficinia nodosa* (Knobby Club-rush)

*Bursaria spinosa* (Sweet Bursaria)

*Acacia spinescens* (Spiny Wattle)

*Correa reflexa* var *reflexa* (Common Correa)

*Hakea vittata* (Limestone Needlebush)

The key management objective for Area 4 is to maintain the amenity value and accessibility of the walkway via ongoing weed control and the replanting of suitable native species.

#### **RMS 425: *Allocasuarina verticillata* (Drooping Sheoak) Low woodland**



Northern (Golfview Rd) end of RMS 425



Southern (Orr St) end of RMS 425



Northern end of RMS 426, looking across at RMS 425 (RHS)



This management zone is located within the road reserve along the western side of Ferguson Rd, adjacent to a privately owned scrub block, between Orr St and Golfview Rd. There are native understorey species present within this area, however weeds such as *Asparagus asparagoides* (Bridal Creeper), *Ehrharta calycina* (Perennial Veldt Grass) and *Oxalis pes-caprae* (Soursob) are present in relatively high densities, and are posing a threat to this vegetation.

Native species diversity is considered to be moderate in this area (see Section 5.1.3 for further discussion), with understorey dominated by native species such as *Rhagodia candolleana* ssp. *candolleana* (Sea-berry Saltbush), *Kunzea pomifera* (Muntries), *Tetragonia implexicoma* (Bower Spinach), *Dianella brevicaulis* (Short-stem Flax-lily) and *Pimelea serpyllifolia* ssp. *serpyllifolia* (Thyme Riceflower), but with exotic species such as *Ehrharta calycina* (Perennial Veldt Grass), *Oxalis pes-caprae* (Soursob), *Asparagus asparagoides* (Bridal Creeper) and other introduced grasses (*Gramineae* sp. – possibly a combination of species such as *Briza* sp., *Vulpia* sp., *Avena* sp., *Lolium* sp. but difficult to identify due to time of year) also representing a significant portion of the understorey flora.

The primary management objective for RMS 425 is to retain and improve biodiversity values whilst maintaining fuel loads to acceptable levels via ongoing control of grassy and herbaceous weeds (such as Perennial Veldt Grass and Bridal Creeper). See section 7.1.1 and 7.2 for further details.

**RMS 426: *Allocasuarina verticillata* (Drooping Sheoak) Low woodland**



Northern (Willmet Rd) end of RMS 426



Northern (Willmet Rd) end of RMS 426



Southern (Bradford Rd) end of RMS 426

This management zone is located within the road reserve along the eastern side of Ferguson Rd, adjacent to Walter Newell Reserve, and extending to the north-west beyond the

boundary of the reserve, along the rear of several houses on Dittmar Court. There are native understorey species present within this area, however weeds such as, *Ehrharta calycina* (Perennial Veldt Grass), *Oxalis pes-caprae* (Soursob), *Cynodon dactylon* var. *dactylon* (Couch) and other introduced grasses (*Gramineae* sp. – possibly a combination of species such as *Briza* sp., *Vulpia* sp., *Avena* sp., *Lolium* sp. but difficult to identify due to time of year) are present in moderate to high densities, and are posing a significant threat to this vegetation.

Native species diversity is considered to be moderate in this area (see Section 5.1.3 for further discussion), with understorey dominated by native species such as *Rhagodia candolleana* ssp. *candolleana* (Sea-berry Saltbush), *Kunzea pomifera* (Muntries), *Dianella brevicaulis* (Short-stem Flax-lily), *Tetragonia implexicoma* (Bower Spinach), but with exotic species such as *Oxalis pes-caprae*, *Ehrharta calycina*, *Cynodon dactylon* var. *dactylon* and *Gramineae* sp. also representing a significant portion of the understorey flora.

As for RMS 425, the primary management objective for RMS 426 is to retain and improve biodiversity values whilst maintaining fuel loads to acceptable levels via ongoing control of grassy and herbaceous weeds (such as Perennial Veldt Grass and Bridal Creeper). See section 7.1.1 and 7.2 for further details.

### 5.1.2 Vegetation Condition

This Plan uses two methods to quantitatively assess the biological value and condition of vegetation within Walter Newell Reserve: BushRAT<sup>1</sup> and Bushland Condition Monitoring (BCM)<sup>2</sup>. In both methods, key indicators of bushland condition are scored and then compared to the score of an intact benchmark community of the same vegetation type. Council will use both BushRAT and BCM to monitor and evaluate the effects of on-ground management activities within Walter Newell Reserve at 5-year intervals, to determine whether the health of the reserve is improving, deteriorating or remaining stable.

#### BushRAT

BushRAT scores a variety of bushland condition attributes under the headings of vegetation condition, conservation value and landscape context over an area of approximately 1 hectare.

As discussed above, the score is then compared with a benchmark score for an intact example of the same remnant vegetation type. The scoring for the management zones using this method is summarised in the table below. The individual score sheets for each management zone are attached as Appendix 1.

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<sup>1</sup> (Department of Environment, Water and Natural Resources, 2013)

<sup>2</sup> (Croft et al, 2005)

Management zone (refer to map in Figure 2)	Assigned 'Benchmark Vegetation Community' (as per BCM)	Is the Benchmark Community the desired 'goal state'? (Y/N)	Size (ha)	Vegetation Condition Score	Conservation Significance Score	Landscap e Context Score	Unit Biodiversity Score
Area 1	*MDBSA 9.1	Y	2.15	65	6	8	79
Area 2	*MDBSA 9.1	Y	1.66	59	6	8	73
Area 3	*MDBSA 9.1	Y(modified)	0.38	41	4	8	53
Area 4	NA (maintained public accessway with amenity plantings)						
RMS 425	*MDBSA 9.1	Y(modified)	0.23	52	6	8	66
RMS 426	*MDBSA 9.1	Y(modified)	0.22	52	6	8	66

\*MDBSA 9.1 = Woodlands with an open grassy understorey & Grass and Mat-rush Sedgelands

### Bushland Condition Monitoring

The Bushland Condition Monitoring Method (Croft et al, 2005) was also used to assess vegetation within three smaller areas in the reserve; one in each of the three main management zones (Areas 1, 2 & 3). Two of these areas measure 30m x 30m, and were established previously in 2009, one located in the more intact vegetation of Area 1, and the other situated largely in Area 2, which has a higher level of weed invasion than Area 1. The third area measures 60m x 15m, and was established in Area 3 at the time of the Field Survey to facilitate monitoring of the regeneration occurring in this area (hence the long, rectangular shape of the monitoring area, reflecting the shape of regeneration). The attributes assessed using the BCM Method included 'Plant Species Diversity', 'Weed Abundance and Threat', Structural Diversity and Regeneration. The status of the condition of vegetation in each of the three BCM areas is described in the individual site report summaries located in Appendix 2- *BCM Reports*. The full BCM reports for each site are held by Council and can be viewed upon request.

#### 5.1.3 Plant species diversity

Plant species diversity is one of the primary indicators for bushland condition. The plant species diversity for all management zones with the exception of Area 4 is summarised below:

Management Zone	1	2	3	RMS 425	RMS 426
Plant species diversity (whole zone)	118	111	20	34	41
Plant species diversity	(excellent)	(excellent)	(good)	(excellent)	(excellent)

Plant species diversity is considered to be excellent in Management Zones 1, 2, 425 and 426, and good in Management Zone 3 as compared with the plant species diversity of an intact benchmark community (MDBSA 9.1 = Woodlands with an open grassy understorey & Grass and Mat-rush Sedgelands).

#### 5.1.4 Significant Flora

A total of 28 plant species of conservation significance have been recorded at the site. 18 of these were recorded during the recent field survey with the other 10 recorded in past surveys of the site. These 10 species have been included in this list below for reference, but were not included in the species diversity counts in section 5.1.3 above. The 10 species not recorded during the recent survey may not have been visible due to the time of year, or the presence of annual weed cover (eg, Soursob) that made it difficult to see certain species. The recent field survey identified 1 species with a state conservation rating. Eighteen species with regional ratings were recorded at the site during the recent survey, as per the table below. (It should also be noted however that regional ratings are currently outdated and under review, so hold limited value for interpretation of significance).

#### 5.1.5 Significant Plant Communities

There are no plant communities of conservation significance within the Walter Newell Reserve and associated RMS sites.

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Table 1: Flora species of conservation significance in management zones 1 – 3 and RMS 425 and 426

Native Species	Common name	Conservation status			Area 1	Area 2	Area 3	RMS 425	RMS 426
		AUS	SA	SL					
<i>Acacia cupularis</i>	Cup wattle			R	Green				
<i>Acacia dodonaeifolia</i>	Hop-bush Wattle		R	R	Green	Red	Blue		
<i>Acacia ligulata</i>	Umbrella Bush			K	Green	Red		Blue	
<i>Acrotriche affinis</i>	Ridged Ground-berry			R	Green	Red			
<i>Acrotriche cordata</i>	Blunt-leaf Ground-berry			R	Green	Red			
<i>Actites megalocarpa</i>	Coast Sow-thistle			K					
<i>Adriana quadripartita</i>	Coast Bitter-bush			U	Green	Red			
<i>Allocasuarina mackliniana</i> ssp. <i>Mackliniana</i>	Macklin's Oak-bush			K					
<i>Allocasuarina pusilla</i>	Dwarf Oak-bush			R	Green	Red			
<i>Amphipogon caricinus</i> var. <i>caricinus</i>	Long Grey-beard Grass			U	Green	Red			
<i>Austrostipa acrociliata</i>	Graceful Spear-grass			R	Green	Red			
<i>Austrostipa elegantissima</i>	Feather Spear-grass			U	Green	Red	Blue	Blue	
<i>Austrostipa mundula</i>	Neat Spear-grass			R	Green	Red			
<i>Caladenia latifolia</i>	Pink Caladenia			U					
<i>Caladenia verrucosa</i>	Yellow-club Spider-orchid			T					
<i>Calandrinia eremaea</i>	Dryland Purslane			U					
<i>Cryptandra hispidula</i>	Rough Cryptandra			U					
<i>Dampiera rosmarinifolia</i>	Rosemary Dampiera			R	Green	Red			
<i>Diuris palustris</i>	Little Donkey-orchid			V					
<i>Eucalyptus fasciculosa</i>	Pink Gum		R						
<i>Gahnia deusta</i>	Limestone Saw-sedge			R	Green	Red	Blue	Blue	
<i>Hakea vittata</i>	Limestone needlebush			K	Green	Red	Blue	Blue	
<i>Halgania cyanea</i>	Rough Blue-flower			R	Green	Red		Blue	
<i>Helichrysum leucopsideum</i>	Satin Everlasting			U	Green	Red			
<i>Hydrocotyle capillaris</i>	Thread Pennywort			R					
<i>Logania linifolia</i>	Flax-leaf Logania			R					
<i>Lomandra collina</i>	Sand Mat-rush			R	Green	Red			
<i>Lomandra juncea</i>	Desert Mat-rush			U	Green	Red		Blue	
<i>Lomandra sororia</i>	Sword Mat-rush			U					
<i>Millotia myosotidifolia</i>	Broad-leaf Millotia			U					
<i>Ophioglossum lusitanicum</i>	Austral Adder's-tongue			U	Green				
<i>Pomaderris paniculosa</i> ssp. <i>Paniculosa</i>	Mallee Pomaderris			U	Green	Red	Blue	Blue	
<i>Ptilotus spathulatus</i> forma <i>spathulatus</i>	Pussy-tails			R					
<i>Pultenaea tenuifolia</i>	Narrow-leaf Bush-pea			R	Green	Red			
<i>Veronica hillebrandii</i>	Rigid Speedwell			K	Green	Red	Blue		
<i>Vittadinia australasica</i> var. <i>australasica</i>	Sticky New Holland Daisy			R	Green	Red	Yellow		
<i>Vittadinia megacephala</i>	Giant New Holland Daisy			R	Green	Red			

## 5.2 Fauna

Throughout the Mt Lofty Ranges and Murray Darling Basin region, the diversity and abundance of native fauna sits at only a fraction of what it was prior to colonisation. Broad-scale vegetation clearance and introduction of exotic species have led both directly and indirectly to population declines.

Habitat loss is the most substantial threat to native animals both locally and globally. Feral animals are both competitors and predators of native animals, and habitat fragmentation makes it difficult for animals to move from one patch of vegetation to another. Additionally, alteration of remaining habitat such as the loss of understorey shrubs, logs, food plants, old trees with hollows, as well as disruptive human activities such as unsustainable tourism, recreational activities and industrial practices in important areas of habitat, also contribute to the demise of declining fauna populations.

The reserve sits amongst a developed residential area. There is regular foot-traffic (including at times dogs), along the tracks through the reserve, and around the periphery of the reserve, which may limit the diversity and numbers of native animals that utilise the area. Domestic and feral cats may also be detrimental to native wildlife populations, if not well managed. Nonetheless, the reserve and associated roadside vegetation provide an important habitat link to the privately owned remnants to the west and north-west that are contiguous with Tokuremoar Reserve and the Goolwa dune system. Education of local residents regarding the potential effects on the biodiversity value of the area, along with suggestions of good cat and dog management practices may be beneficial. Exclusion of dogs from the reserve area is recommended, and is discussed further in section 7.1.5.

Appendix 2 lists the fauna species that have been recorded within 10km of the Walter Newell Reserve study area and are listed in the Biological Databases of SA.

Even the more degraded parts of the reserve are likely to provide refuge and feeding 'corridor' habitat for Brush-tailed Possums (rated rare for SA), the Western Grey Kangaroo and some frog, bird, bat and reptile species. Three bird species of conservation significance are considered likely to use the habitat within the study area:

CLASS	SPECIES	COMMON NAME	SA	MM
AVES	<i>Phaps elegans</i>	Brush Bronzewing	U	U
AVES	<i>Acanthiza nana</i>	Yellow Thornbill	U	U
AVES	<i>Geopelia placida</i>	Peaceful Dove	U	U

MM = Murray Mallee bird region

If future budget allocations allow, a more comprehensive field-based fauna survey could be undertaken. This could include a bird survey as per the standard Birds Australia methodology, searches for scats (faeces) and a litter and fallen timber search for reptiles and frogs.

## 6. Reserve Management goals and objectives

### GOALS

- Area 1** Benchmark community.
- Area 2** Benchmark community.
- Area 3** Modified version of benchmark community: encouragement of regeneration to facilitate increased diversity and cover of native species, and reduced cover of exotic species; maintenance of fuel loads to acceptable levels; retention of access for maintenance, recreation and fire access.
- Area 4** Maintained walkway with amenity/screening plantings of local provenance.
- RMS 425** Modified version of benchmark community: encouragement of regeneration to facilitate increased diversity and cover of native species, and reduced cover of exotic species; maintenance of fuel loads to acceptable levels and maintenance of amenity value (primarily via reduced cover of exotic species and encouragement of native species regeneration).
- RMS 426** Modified version of benchmark community, but with modifications for maintenance of fuel loads to acceptable levels and maintenance of amenity value (primarily via reduced cover of exotic species and encouragement of native species regeneration); maintenance of access to walking tracks and signage for reserve.

### OBJECTIVES

- To protect areas of intact native vegetation.
- To restore degraded areas of native vegetation.
- To conserve and improve habitat for local fauna.
- To protect, and prevent the decline or loss of, threatened species.
- To support appropriate uses of the reserve and discourage inappropriate uses.
- To encourage community appreciation of reserve values and involvement in management.
- To develop and implement appropriate fire management strategies, to minimise the potential impact of fire on adjacent assets without unnecessarily jeopardising the achievement of conservation objectives for the reserve.
- To develop and implement improved techniques for vegetation management through systematic monitoring and regular review of management directions.

## 7. Native Vegetation Management Issues

### 7.1 Whole Reserve Management Issues and general strategies for remediation

#### 7.1.1 Weeds

Introduced weed species pose the biggest threat to biodiversity within Walter Newell Reserve. There is a high diversity, cover and abundance of certain weeds in some parts of the reserve and roadsides:

- Area 1 has the lowest diversity, cover and abundance of weeds;
- Area 2 has a high cover and abundance of Perennial Veldt Grass, Bridal Creeper and Soursob;
- Area 3 is has been subject to ongoing slashing but is exhibiting regeneration potential, and has high cover of Perennial Veldt Grass and moderate cover of Soursob;
- Area 4 is subject to ongoing maintenance for the walking path, so weeds are present (particularly along edges of the path and fence), but not allowed to proliferate.
- RMS 425 has high cover and abundance of Perennial Veldt Grass, Bridal Creeper and Soursob, and also *Gramineae* sp. (likely a mixture of pasture grasses);
- RMS 426 has high cover of Soursob, moderate cover and abundance of Perennial Veldt Grass and Bridal Creeper and also moderate cover of Couch.

All weed species recorded within each management zone can be seen in Table 3 on page 27.

Council will conduct an ongoing program of weed control throughout the reserve and roadsides, in order to reduce weed dominance and facilitate the growth of native species. Listed below are the weeds of major concern, and which are considered priority for management due to the threat they pose to the biodiversity of the vegetation within the reserve and road reserves. These weeds have been separated into three broad categories, based on the size of the infestation, overall abundance, level of invasiveness, likelihood of eradication and legal status (i.e. declared under the NRM Act 2004). The categories are (1) priority weeds for ongoing control, (2) priority weeds for short-term control, and (3) priority weeds for medium term control.

#### 1. Priority weeds for ongoing control

Weeds which are widespread across the site and unlikely/unable to be eradicated given limited resources but which are a high priority for ongoing control throughout the life of the Plan. Work will begin in areas of highest quality vegetation, working from intact bushland outwards towards areas of higher infestation. For this group of weeds, Council and Bush for Life will need to identify, and discuss collaborative work along the weed front on an annual basis.

#### **Perennial Veldt Grass (*Ehrharta calycina*)**

Grass introduced for pasture and soil stabilisation, but now a highly invasive weed of sandy or nutrient-poor soils. Capable of displacing all native groundcover and widely distributed in Area 2 of the reserve, and also in Area 3, RMS 425 and 426. Generally scattered plants occurring in Area 1. Potential for spread throughout the more intact Area 1 if not contained in the near future. Contributes to fire risk.



- High priority for control in Area 1 (removal, particularly in areas of lighter infestation) and within fuel management zones (slashing).
- Other areas of heavy infestation such as the remainder of Area 2 (outside of the fuel management zone) are a lower priority. Work in Area 2 will be limited to:
  - working along the weed front, with the aim of preventing any further encroachment into Area 1; and
  - undertaking control trials to determine the feasibility of more widespread control. Overclearance of weeds is always a risk in areas of heavy infestation, as it can create opportunities for other weeds to take over. These trials will target two small areas within Area 2; one in the southern corner of the reserve and another along the boundary of the Area 3 BCM site, and will combine spot spraying with the distribution of local provenance, native grass seeds.

#### **Bridal Creeper (*Asparagus asparagoides*)**

Weed of National Significance and declared under the NRM Act 2004 with respect to prohibition of movement on public roads, prohibition of sale, and requirement for landholders to control on their properties. Can dominate and smother the ground and mid-storey strata of many vegetation types, preventing growth and regeneration. It prefers shady habitats but can also be found in exposed coastal sites. This weed is present in moderate to high densities in Area 2, RMS 425 and RMS 426, and in low densities in Area 1. The weed was not recorded in Area 3. Dense stands contribute to fire risk.

- High priority for control in Area 1.
- Moderate priority for control in Area 2, RMS 425 and RMS 426, particularly in areas of lighter infestation initially
- Area 3 should be monitored for presence of bridal creeper and treated if found.

#### **Soursob (*Oxalis pes-caprae*)**

Has potential to form monoculture groundcover and smother native understorey species such as grass and herbaceous species. The weed propagates largely through its underground bulbs which makes it difficult to eradicate, as pulling up the stems leaves the bulbs behind. Soil in which the plant has grown is generally filled with small bulbs. Often found amongst native broadleaf herbaceous species, which makes large-scale treatment difficult. This weed was recorded in all five management zones, with the lowest density in Area 1, moderate density and cover in Area 3, and high density and cover in Area 2, RMS 425 and RMS 426.

- High priority for control in Area 1 targeting isolated patches within intact bushland first and then working along the weed front, pushing out towards Area 2.
- As per Veldt Grass, work in Area 2 will initially be limited to working along the weed front and in the control trial areas. If the control trials prove successful, more widespread control can occur in later years.

- If resources are available, Council may also undertake targeted spraying to reduce source coverage in RMS 425 and RMS 426 (medium/low priority) beginning in the portion of RMS 426 adjacent to Area 1.

## 2. Priority weeds for short-term control

Weeds that due to their low numbers, relative ease of removal and invasive potential are a high priority for immediate eradication. Whilst not necessarily the most damaging weeds in bushland, they could be removed within one or two seasons with minimal follow-up required in subsequent years, and removal now will save much time and effort in future years. Hence for this group of weeds, Council will organise a contractor to undertake a sweep of Areas 1, 2, RMS 425 and RMS 426 in 2015/16.

### **African Daisy (*Senecio pterophorus*)**

Invasive coloniser of disturbed habitats that hand-pulls easily but germinates readily by seed, requiring many return visits to eliminate a population. Scattered individuals only within Area 1 and Area 2 – eradication should be easy to achieve.

### **Boneseed (*Chrysanthemoides monilifera*)**

Weed of National Significance and declared under the NRM Act 2004 with respect to prohibition of movement on public roads, prohibition of sale, and requirement for landholders to control on their properties. Capable of completely dominating habitats. Dense stands crowd out native species and prevent regeneration. Only a few scattered boneseed plants were recorded in Areas 1 and 2 – eradication should be easy to achieve.

### **Boxthorn (*Lycium ferocissimum*)**

Introduced as a garden or hedge plant in the mid 1800s. Now a serious weed, spread by seed. Fruit is commonly eaten by foxes and birds and viable seeds are excreted. Often forms dense stands/thickets. A few scattered plants in Area 1, Area 2 and RMS 426, eradication should be easy to achieve.

### **Bulbil Watsonia (*Watsonia meriana* var. *bulbillifera*) (note: may be *Chasmanthe floribunda* – individuals too young to tell)**

Watsonia is a highly invasive bulb of woodlands, heaths and forests that dominates the groundlayer and soil. Declared under the NRM Act 2004 with respect to prohibition of movement on public roads, prohibition of sale, and requirement for landholders to control on their properties. A small number of individuals present in RMS sites 425 and 426, eradication should be achieved quickly.

## 3. Priority weeds for medium-term control

Weeds that are a medium term priority for eradication. These weeds are in relatively low numbers, are not considered as invasive as weeds included in category 2, and may take longer than 1-2 seasons to eradicate; however would be beneficial to be targeted for control in the medium term in order to prevent proliferation.

### **Gazania (*Gazania* sp.)**

Gazanias produce abundant wind-blown seeds and spread rapidly when there is suitable bare habitat for establishment such as graded roadsides. They also spread vegetatively, often in garden waste. The weed results in displacement of native ground cover species from native vegetation. Scattered individuals were recorded within Area 3, RMS 425 and 426.

### **Pincushion (*Scabiosa atropurpurea*)**

Fast-growing and readily invades disturbed areas. Often spread by slashing equipment. This weed was recorded for each management zone, in low density and cover for each, however is becoming quite widespread. High priority for ongoing control in Area 1 and medium priority for control in other areas, due to seemingly increasing densities.

Other weeds in this category include Wild Turnip (*Brassica tournefortii*), Acacia Cyclops (*Western Coastal Wattle*), False Caper (*Euphorbia terracina*), Capeweed (*Arctotheca calendula*), Horehound (*Marrubium vulgare*), African Lovegrass (*Eragrostis curvula*) and Feather Grass (*Pennisetum villosum*).

### Weed control methods

Weed control within the reserve will be undertaken by Council staff, contractors and Bushcare volunteers with good knowledge of native species, best practice herbicide methods and minimum disturbance weed control techniques.

Those looking for more information on best practice weed control techniques should consult the *Weed Control Handbook for Declared Plants in South Australia 2013*, and/or the local NRM Board

It is important to ensure weed control, particularly slashing and /or spraying of grassy weed species, is appropriately timed to facilitate encouragement of native grass regeneration, and suppress regrowth of the exotic species.

Monitoring and routine maintenance will always play an integral role in the ongoing maintenance of the site, especially as many weed propagules enter the site through a variety of mechanisms (birds, wind, water, garden waste), including from surrounding urban areas.

Table 2: Weed species recorded for all management zones

Weed Species	Common name	Management zone				
		Area 1	Area 2	Area 3	RMS 425	RMS 426
* <i>Acacia cyclops</i>	Western Coastal Wattle					
* <i>Acacia saligna</i>	Golden Wreath Wattle					
* <i>Anagallis arvensis</i>	Pimpernel					
* <i>Aptenia cordifolia</i>	Heart-leaf Iceplant					
* <i>Arctotheca calendula</i>	Capeweed					
* <i>Asparagus asparagoides</i>	Bridal Creeper					
* <i>Asphodelus fistulosus</i>	Onion Weed					
* <i>Avena barbata</i>	Bearded Oat					
* <i>Brachypodium distachyon</i>	False Brome					
* <i>Brassica tournefortii</i>	Wild Turnip					
* <i>Briza maxima</i>	Large Quaking-grass					
* <i>Cakile maritima</i>	Two-horned Sea Rocket					
* <i>Cenchrus clandestinum</i>	Kikuyu					
* <i>Chrysanthemoides monilifera</i> ssp. <i>monilifera</i>	Boneseed					
* <i>Conyza bonariensis</i>	Flax-leaf Fleabane					
* <i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch					
* <i>Echium plantagineum</i>	Salvation Jane					
* <i>Ehrharta calycina</i>	Perennial Veldt Grass					
* <i>Eragrostis curvula</i>	African Love-grass					
* <i>Erodium</i> sp.	Heron's-bill/Crowfoot					
* <i>Eucalyptus</i> sp. (planted)						
* <i>Euphorbia terracina</i>	False Caper					
* <i>Freesia cultivar</i>	Freesia					
* <i>Gazania</i> sp.	Gazania					
* <i>Geranium</i> sp.	Geranium					
* <i>Gomphocarpus cancellatus</i>	Broad-leaf Cotton-bush					
* <i>Gramineae</i> spp.	likely combination of <i>Briza</i> sp., <i>Vulpia</i> sp., <i>Avena</i> sp., <i>Lolium</i> sp.					
* <i>Heliotropium europaeum</i>	Common Heliotrope					
* <i>Hypochaeris glabra</i>	Smooth Cat's Ear					
* <i>Hypochaeris radicata</i>	Rough Cat's Ear					
* <i>Iris orientalis</i>	Oriental Iris					
* <i>Lagurus ovatus</i>	Hare's Tail Grass					
* <i>Lolium</i> sp.	Ryegrass					
* <i>Lycium ferocissimum</i>	African Boxthorn					
* <i>Malva parviflora</i>	Small-flower Marshmallow					
* <i>Marrubium vulgare</i>	Horehound					
* <i>Medicago polymorpha</i> var. <i>polymorpha</i>	Burr-medic					

<i>*Oenothera stricta</i> ssp. <i>stricta</i>	Common Evening Primrose					
<i>*Olea europaea</i> ssp. <i>europaea</i>	Olive					
<i>*Osteospermum fruticosum</i>	Bushy Daisy					
<i>*Oxalis pes-caprae</i>	Sour sob	Green	Red	Yellow	Blue	Light Blue
<i>*Passiflora</i> sp.	Passionfruit					
<i>*Pennisetum villosum</i>	Feather-top					
<i>*Plantago bellardii</i>	Hairy Plantain	Green	Red	Yellow		
<i>*Plantago coronopus</i>	Bucks-horn Plantain				Blue	Light Blue
<i>*Plantago lanceolata</i>	Ribwort				Blue	Light Blue
<i>*Polygonum aviculare</i>	Wireweed					
<i>*Rhamnus alaternus</i>	Blowfly Bush					
<i>*Romulea</i> sp.	Onion-grass	Green	Red	Yellow	Blue	Light Blue
<i>*Scabiosa atropurpurea</i>	Pincushion	Green	Red	Yellow	Blue	Light Blue
<i>*Senecio pterophorus</i>	African Daisy	Green	Red			
<i>*Solanum tuberosum</i>	Potato	Green				
<i>*Sonchus asper</i>	Rough Sow-thistle	Green	Red			
<i>*Sonchus oleraceus</i>	Common Sow-thistle	Green	Red		Blue	Light Blue
<i>*Sporobolus africanus</i>	Rat-tail Grass				Blue	Light Blue
<i>*Veronica persica</i>	Persian Speedwell					
<i>*Watsonia meriana</i> var. <i>Bulbillifera</i> / <i>Casmanthe floribunda</i>					Blue	Light Blue
<i>*Zaluzianskya divaricata</i>	Spreading Night-phlox					

Red text = weed species that were recorded in previous surveys but not recorded for the current survey. Some of these species were identified as a high priority for eradication in the 2005 Bush for Life Action Plan. Ongoing monitoring will be required to ensure that these species do not become re-established within the reserve.

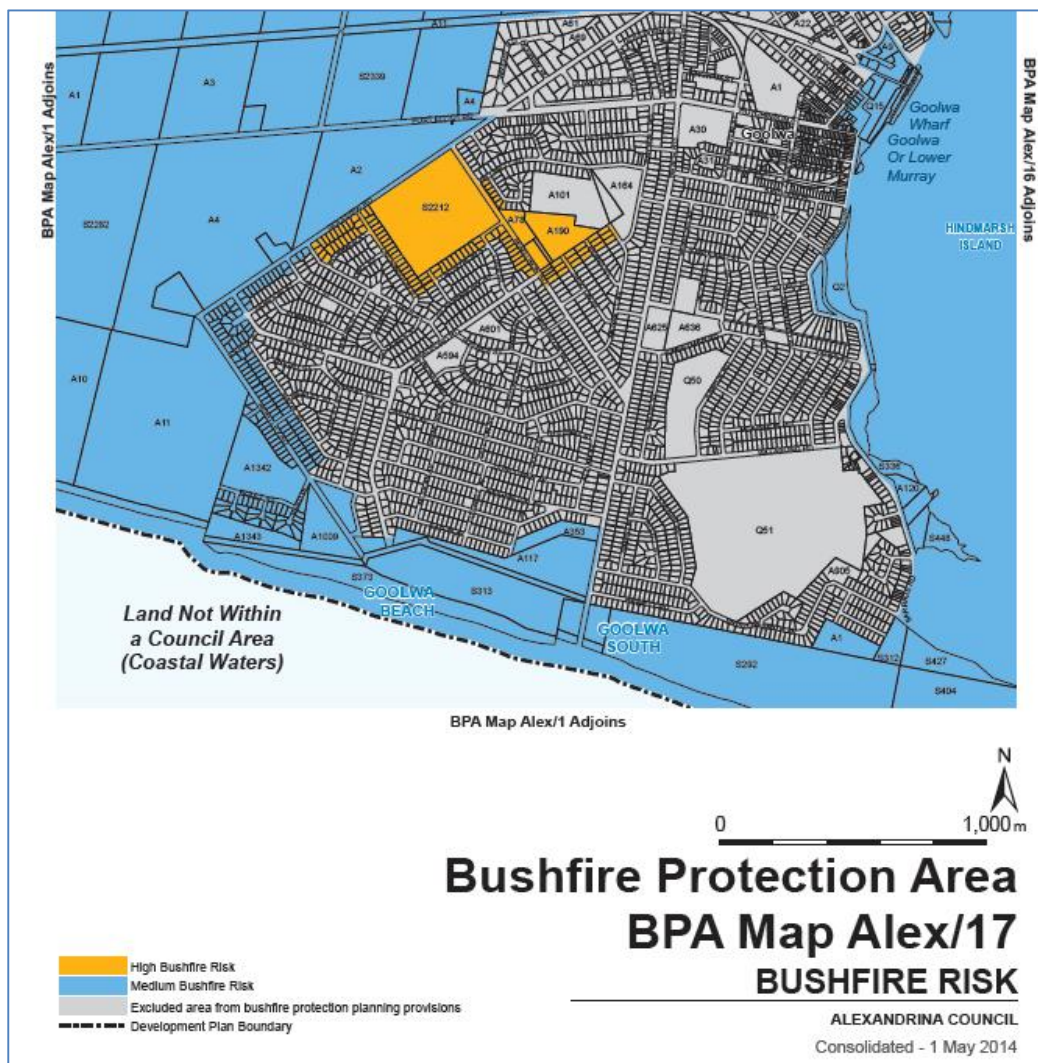
### 7.1.2 Fire

Whilst Council’s primary management objective for Walter Newell Reserve is the protection and enhancement of existing biodiversity values, the proximity of adjoining residential development requires us to integrate the management of fire risk into our activities at the reserve.

As illustrated in Figure 3 below, Walter Newell Reserve and some of the houses on the southern boundaries of the reserve are mapped as high fire risk areas on the relevant Bushfire Protection Map in Alexandrina Council’s Development Plan. The purpose of this map and accompanying principals of development control is to guide the kind of development that can occur in bushfire risk areas, rather than to guide the management of existing native vegetation, but the map does confirm that bushfire is considered a real risk within the vicinity of the reserve.

Houses to the south of the reserve have a higher risk rating than houses to the north because on days with the highest fire danger ratings, the prevailing winds are mostly like to come from the north or north-west.

Figure 3: Bushfire Protection Map



Pursuant to section 105G of the *Fire and Emergency Services Act 2005 (SA)*, Council is required to take reasonable steps to:

- (a) prevent or inhibit the outbreak of fire on Council land;
- (b) prevent or inhibit the spread of fire through the land;
- (c) protect property on the land from fire; and
- (d) minimise the threat to human life from a fire on the land.

In deciding what action to take to meet this requirement, Council must take into account:

- (a) the nature of the land;
- (b) whether the land is in country, metropolitan, township or other setting; and
- (c) the activities carried out on the land (including whether flammable or combustible materials or substances are used or stored on the land).

Council's Environmental Action Plan 2014-2018 also states that when reducing fuel load on Council land, we will aim to minimise harm to native vegetation and that our fuel reduction methods will be site-specific and appropriate to the significance of the vegetation and proximity to people and/or property.

Within Walter Newell Reserve, Council's management of fire risk will focus on:

- removing woody weeds throughout the entirety of the reserve;
- reducing the fuel load of exotic grasses, herbaceous weeds and fallen timber in a five metre strip around the perimeter of the reserve; and
- encouraging the regeneration of native undergrowth and suppressing the growth of grassy weeds in slashed areas via the establishment of a strategically time slashing program.

In a bushland setting such as this, reducing the fuel load at ground level is the highest priority for minimising fire risk. By focusing on the removal of grassy and herbaceous weeds (e.g. Perennial Veldt Grass and Bridal Creeper) that die off annually and increase the level of fire hazard, Council will be able to achieve the complementary aims of minimising fire risk, reducing the cover of environmental weeds and encouraging the regeneration of less flammable native vegetation. Native grasses (eg. Spear Grasses (*Austrostipa* spp) and *Rytidosperma* spp), by their tussocky nature, inter-tussock spaces and tendency to remain in active growth (i.e. green) for longer periods, are naturally pre-disposed to being of lower fire risk than the tall, dense introduced grass species that die off earlier in summer.

Taking all of this into account, Council will take the following action to reduce the fuel load and minimise fire risk at Walter Newell Reserve:

- RMS 425, RMS 426 and a five-metre fuel management zone on the eastern and northern boundaries of the reserve will be strategically brush cut up to twice a year (once before the seed set of exotic grasses and if necessary, again after the native grasses have set seed) to a maximum height of 10cm, taking care to avoid all native grasses, sedges and understorey species.
- Fallen timber within RMS 426, RMS 425 and within the 5m fuel management zone on the eastern & northern boundaries will be selectively removed in a way that seeks to balance the competing demands of retaining habitat value and managing fire risk. Dead trees which remain standing or which have become part of the landscape (i.e. are covered in vegetation/have begun to decompose) will not be removed.
- Any tree branches overhanging the fences of residential properties along the northern boundary of the reserve will be removed.
- Area 4 (the pedestrian laneway on the eastern boundary) will be put onto a minimum twice yearly maintenance schedule involving weed control and the trimming of branches which protrude into the pathway.
- Council will continue to slash Area 3 and the narrow strip along the northern boundary of the reserve (which is wider than 5 metres in some areas) but will do so in a strategically timed way so as to encourage the regeneration of native understorey and suppress the growth of grassy weeds.

If resources allow, after brush-cutting Council may also undertake follow-up spot spraying of exotic perennial grasses and broadleaf weeds (e.g. African Lovegrass and Soursob) along RMS 425 and RMS 426 to further contribute to the long-term reduction of fuel loads along Ferguson Road.

Over time, the reduction of exotic weed cover within the central areas of the reserve (being undertaken to improve biodiversity value) will also contribute to the reduction of overall fuel load within the reserve.

The above approach to minimising fire risk at Walter Newell Reserve has been developed by staff within Council's Environment and Fire Prevention teams.



Examples of weed invasion in 5-metre fuel management zone, that is not only posing a fire hazard, but also a threat to the biodiversity value of the vegetation.



Slashed area behind some dwellings in Thornbury Park.



Mixture of native and exotic grasses routinely slashed in Area 3



### 7.1.3 Access, fencing and encroachments

Public access to the reserve is facilitated by entry points on Ferguson Rd, via the fenced walking track along the eastern side of the reserve, and off the end of Sexton and Evans Streets (which intersect the walking track). The walking track is limited to pedestrian and cycling traffic by the narrow width of access points. There is a large vehicle-width gate at the end of Sexton St. Vehicle access to the reserve needs to be retained for the purpose of reserve maintenance, weed control works, and fire management.



Entry point to reserve from Ferguson Rd. Shows Bush For Life signage and current dog access requirements



Entry point to fenced walking track along eastern side of reserve from Ferguson Rd.



Gate into reserve located at the end of Sexton St. Access to fenced walking track from Sexton Street (left and right photos) is off both sides of Sexton St.



Action to educate local residents regarding encroachments (including dumping of garden refuse and other rubbish, and the removal of fire wood) will initially include education in the form of signage and brochures distributed to nearby residents, but may require follow up with penalties such as expiation notices if other actions are unsuccessful.

### 7.1.4 Trails, recreation and signage

There are several informal walking tracks through the reserve, which are used by local residents. Currently dog access is allowed throughout the reserve (with dogs on leads, and clean-up requirements) as can be seen in the photo below of the signage at the entrance point on Ferguson Rd.



Signage at entry point to reserve on Ferguson Rd.

However, due to the difficulty in ensuring compliance with these requirements, and the potential threat to wildlife and threatened flora species within the reserve, it is proposed that dog access be restricted to the walking track along the eastern side of the reserve. This will require the approval of Council, amended signage at the access points of the reserve, and community education to reflect these changes.

There are already Bush for Life signs at several locations around the reserve, but Council will consider the installation of updated signage at the four main entry points to the reserve, to incorporate requirements relating to the acknowledge of funding assistance received by Council to purchase Allotment 190:

These entry points are as follows: -

- Main reserve entry on Ferguson Rd
- Entrance to the walking track on Ferguson Rd
- Entrance to the walking track on Merrett Ave
- Entrance to the walking track on Sexton Street

These signs should also incorporate some interpretive information about the vegetation in the reserve, specify the no dog access requirements, and highlight the appropriate use and management of the reserve.

#### 7.1.5 Introduced fauna

Evidence of foxes and dogs was observed during the recent assessment of Walter Newell Reserve. European Rabbits (*Oryctolagus cuniculus*) and Brown Hares (*Lepus capensis*) may also be present. Domestic cats (*Felis catus*), which are a significant threat to native fauna, would be present in the area given the close proximity to residential properties. Feral cats may also be present. Mice (*Mus musculus*) are also likely to be present and introduced bird species are common.

Council and its conservation partners will monitor the reserve for evidence of Rabbits, Hares and Foxes. If present, appropriate control techniques which take into account the urban setting and the recreational use of the reserve will need to be considered by Council. Cats are difficult to control in peri-urban environments, given that they are generally people's pets; therefore a concerted public education is the recommended approach.

#### 7.1.6 Phytophthora

*Phytophthora cinnamomi* is an introduced root rot water-mould which has the potential to negatively impact on a range of native plant species. In addition to native flora, plants in commercial nurseries, horticulture and domestic gardens are also susceptible.

Phytophthora is spread either by water movement, the movement of soil or mud or through the movement of vegetative material. Any process that transports soil from an infested area has the potential to spread the disease and activities such as vehicle movement, soil disturbance or local flooding from infested areas are all high risk activities.

At this stage there are limited options for recovery of plant species or communities from the impacts of Phytophthora dieback or for eradication of the disease, which is listed as a key threatening process under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

According to DPTI's *Phytophthora (Dieback) Control Operational Instruction 21* (2008), the Walter Newell Reserve and roadsides are located in an area of 'moderate' potential threat for *Phytophthora* occurrence. It is stated in this document that '*Moderate Potential Threat Areas of the State occur between the 400mm and 500mm rainfall isohyets, with the exception of eastern Kangaroo Island*'. Goolwa is located in an area of between 400 and 500 mm annual rainfall, and thus in the moderate category. It is also stated that '*Within Moderate Potential Threat Areas of the State, High or Medium Risk sites have a greater potential to occur where:*

- *native vegetation containing susceptible species is present, and*
- *the land is prone to flooding or ponding, and/ or*
- *an infestation occurs in the vicinity'*

The vegetation within the reserves and roadsides of the study area are not considered to comprise susceptible species, and the land does not appear to be prone to flooding or ponding. The nearest suspected location is on Stuart Road approximately 2 kilometers north of the reserve. It is considered unlikely that the subject site is a risk area, or that any immediate actions need to be taken regarding this issue, however monitoring of possible *Phytophthora* symptoms in the vicinity of the site may trigger future action if necessary.

#### 7.1.7 Tenure and future protection of the reserve

It is Council's intention that Walter Newell Reserve be protected and managed as an Urban Biodiversity Reserve into perpetuity.

It is a guiding principal of Council's Environmental Action Plan 2014-2018 that Council land with high conservation values will only be sold or transferred where the transfer will result in long-term conservation benefits. However given its location within a Residential Zone of Councils Development Plan, there remains a theoretical possibility that the three parcels owned by Council (Allotments 78, 177 & 178) could be sold for residential development purposes at some future time. The fourth allotment (Allotment 190) is Crown Land under the care and control of Council and cannot be developed without written approval of the Minister for Planning.

In order to better highlight and promote the conservation value of the reserve and to provide a higher level of legislative protection against the risk of future development, Council will seek to have a Heritage Agreement registered over the whole of Walter Newell Reserve pursuant to Section 23 of the *Native Vegetation Act 1991*.

The future subdivision and/or development of a Heritage Agreement site cannot occur without approval from the Minister for Environment and Native Vegetation Council. It is unlikely such approval would be given at Walter Newell Reserve due to the significance of the vegetation.

### **7.2 Implementation Plan**

The tables below identify the specific management actions that Council and its conservation partners will aim to undertake over the 10 year period from 2014-2023. The suggested timings for implementation are estimates only. All management actions have been assigned a high, medium or low priority to assist in the prioritisation of management actions in the context of limited resources (time and money) being available to manage the reserve. Council and its conservation partners will likely need to adjust implementation of the timing and control recommendations contained in this plan according to seasonal and budgetary influences.

Table 3: Implementation Plan

Area 1	High priority	Medium priority	Low priority							
Issue/severity (L, M, H)	Proposed actions									
Priority Weeds	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Perennial Veldt Grass (H)		Contain spread. Prevent encroachment into intact areas. Remove light infestations				Prevent re-establishment; treat regrowth				
Bridal Creeper (H)		Remove light infestations				Prevent re-establishment, treat regrowth				
Soursob (L)		Contain spread. Prevent encroachment into intact areas. Remove light infestations				Prevent re-establishment, treat regrowth				
Boneseed (H) <i>GPS location 297804 6068227</i>		Eradicate		Prevent re-establishment – treat any regrowth, seedlings						
African Boxthorn (M) <i>GPS locations 297804 6068227 297874 6068187</i>		Eradicate		Prevent re-establishment – treat any regrowth, seedlings						
South African Daisy (L)		Eradicate		Prevent re-establishment – treat any regrowth, seedlings						
Other weeds	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Pincusion (H) Wild Turnip (L) False Caper (L)		Eradicate				Prevent re-establishment				

Area 2	High priority	Medium priority	Low priority							
Issue/severity (L, M, H)	Proposed actions									
Priority Weeds	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Perennial Veldt Grass (H)		Prevent encroachment into Area 1 and target areas of lighter infestation first. Undertake control trials.				begin work on more heavily infested weed front				
Bridal Creeper (H)		Remove light infestations along weed front				Begin work on more heavily infested areas			Prevent re-establishment along weed front.	
Boneseed (H)		Eradicate		Prevent re-establishment – treat any regrowth, seedlings						
African Boxthorn (M)		Eradicate		Prevent re-establishment – treat any regrowth, seedlings						
South African Daisy (M)		Eradicate		Prevent re-establishment – treat any regrowth, seedlings						
Soursob (M)			Spray late winter /early spring. Re-treat each year, reducing as weed declines			Spray early spring/late winter. Re-treat each year				
Other weeds	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Pincusion (M) Wild Turnip (L) False Caper (L)			Eradicate			Prevent re-establishment				

Area 3	High priority	Medium priority	Low priority							
Issue/severity (L, M, H)	Proposed actions									
Priority Weeds	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Perennial Veldt Grass (H)	Strategic slashing, before Veldt Grass seed set and again after native grass seed set, each year.									
Soursob (L)	Spray late winter /early spring. Re-treat each year, reducing as weed declines									
Other weeds	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Pincusion (M) Wild Turnip (L) False Caper (L) Capeweed (L) Gazania (M)	Eradicate							Prevent re-establishment		

Area 4	High priority	Medium priority	Low priority							
Issue/severity (L, M, H)	Proposed actions									
Maintenance	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Weed control	Spray along edges of path (twice yearly)									
Trim protruding branches	Trim back branches protruding into path (annually)									
Mulch				Between fence & houses				Between fence & houses		
Revegetation	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Planting of local provenance native species		Plant hardy species as per page 14-15 above								

RMS 425	High priority	Medium priority	Low priority							
Issue/severity (L, M, H)	Proposed actions									
Priority Weeds	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Perennial Veldt Grass (H)			Target areas of lighter infestation first			begin work on more heavily infested areas				
Bridal Creeper (H)			Remove light infestations			Begin work on more heavily infested areas		Prevent re-establishment		
Soursob (M)			Spray late winter /early spring. Re-treat each year, reducing as weed declines			Spray early spring/late winter. Re-treat each year				
Gramineae (L)			Slash/brushcut before seed set, or careful spot spraying (less as density declines and native species increase in density)							
Watsonia (M)		Eradicate		Prevent re-establishment – treat any regrowth, seedlings						
Other weeds (see Table 4 below for weed control methods)	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Pincusion (M) False Caper (L) Horehound (L) African Lovegrass (M)			Eradicate					Prevent re-establishment		

RMS 426	High priority	Medium priority	Low priority							
Issue/severity (L, M, H)	Proposed actions									
Priority Weeds	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Perennial Veldt Grass (H)			Target areas of lighter infestation first adjacent to Area 1			begin work on more heavily infested weed front				
Bridal Creeper (H)			Remove light infestations, adjacent to Area 1 first.			Begin work on more heavily infested areas		Prevent re-establishment		
African Boxthorn (M)		Eradicate		Prevent re-establishment						
Watsonia (M)		Eradicate		Prevent re-establishment						
Soursob (M)			Spray late winter /early spring before flowering for best results. Re-treat each year, reducing as weed declines			Spray early spring/late winter. Re-treat each year				
Couch (M)			Slash/brushcut before seed set, or careful spot spraying (less as density declines and native species increase)							
Gramineae (L)			Slash/brushcut before seed set, or careful spot spraying (less as density declines and native species increase)							
Other weeds	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Pincusion (M) Wild Turnip (L) False Caper (L) Feather Grass (H) African Lovegrass (M)			Eradicate					Prevent re-establishment		



Table 4: Whole of Reserve Actions

Whole of Reserve	<div style="display: flex; justify-content: space-around; align-items: center;"> <span style="border: 1px solid black; background-color: #f8d7da; padding: 2px;">High priority</span> <span style="border: 1px solid black; background-color: #fff3cd; padding: 2px;">Medium priority</span> <span style="border: 1px solid black; background-color: #d4edda; padding: 2px;">Low priority</span> </div>									
	Fire	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)
Weeds	Target exotic grasses and herbaceous weeds (particularly Perennial Veldt Grass and Bridal Creeper) within RMS 425, RMS 426 and within 5m fuel management zone to reduce fuel load on annual basis (reducing effort as weed densities reduce). See page 30 for details.									
Fallen Timber	Remove fallen timber within RMS 425, RMS 426 and within 5m fuel management zone									
Community education	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Signage		Update signage at reserve entrances								
Educational brochure drop to nearby residents (re value of reserve, responsible pet ownership, volunteering opportunities)	Brochure drop re value of reserve resopnsbility pet ownership									
Brochure provided to new landowners at time of sale		Targeted Brochure provision to new landowners								
Access	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
Exclude dog access within reserve		Seek approval of Council								
Monitoring	Year 1 (2014)	Year 2 (2015)	Year 3 (2016)	Year 4 (2017)	Year 5 (2018)	Year 6 (2019)	Year 7 (2020)	Year 8 (2021)	Year 9 (2022)	Year 10 (2023)
BCM site	BCM Monitoring					BCM monitoring				
BushRAT re-score	BushRAT Score					BushRAT re-score				

## 8. Monitoring

All criteria that were measured during the assessment of the Walter Newell Reserve are repeatable, and if monitored will show changes over time.

Council will use both BushRAT and BCM to monitor the effects of environmental influences and evaluate the impact of on-ground management works on remnant vegetation within Walter Newell Reserve at 5-year intervals (i.e. in 2019), and again at the commencement of the next 10 year planning cycle in 2024, to determine whether the health of the reserve is improving, deteriorating or remaining stable.

Council may also choose to undertake additional monitoring of the three existing BCM sites, or create additional photo-points, after particular management actions, such as weed control have occurred, to monitor the success of these actions.

BushRAT baseline data collected for each Management Zone will be used to evaluate changes to the condition and conservation value of vegetation within each of these Zones. (Note: this excludes Management Zone 4 which is a maintained public accessway with largely amenity plantings, and the use of BushRAT and BCM monitoring would not be applicable).

## 9. References

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## Appendix 1 – BushRAT scoresheets for management zones

NVBMU Biodiversity Rapid Assessment Summary Scoresheet																																															
SITE: Walter Newell Reserve - Area 1		RECORDER: PS, MM      DATE: 24/7/14																																													
DESCRIPTION: <i>Allocasuarina verticillata</i> Low woodland		BCM CODE: MDBSA 9.1																																													
VEGETATION CONDITION SCORE:	score	LANDSCAPE CONTEXT SCORE:	score																																												
Native Plant Species Richness	15	2 pts if site is the only substantial connection between 2 or more remnants <sup>1</sup>																																													
Weed Score	8	>20 ha, 1 pt if site is degraded																																													
Native Plant Life Forms	10	(scattered trees in part, fragmented etc)	0																																												
Regeneration	4	<b>Site Shape Score</b>																																													
Native:exotic Understorey Biomass	10	3 pts if Cleared perimeter:Area (km/km <sup>2</sup> )<6,																																													
Bare Ground	3	2 pts if P:A 6 to<12, 1pt if P:A 12 to <18	0																																												
Tree Health	5	<b>Size of remnant<sup>1</sup> patch (incl. native veg on adjacent properties) score</b>																																													
Tree Hollows	3	Patch size less than 2 ha 0 pts																																													
Fallen timber	3	Patch size 2-5 ha 1 pt																																													
Grazing Evidence	4	Patch size 5-10 ha 2 pts																																													
<b>TOTAL (ADD UP ALL POINTS)</b>	<b>65</b>	Patch size 10-20 ha 3 pts																																													
If community is naturally treeless		Patch size 20-100 ha 4 pts																																													
multiply TOTAL by 1.4		Patch size 100-500 ha 5 pts																																													
<b>ADJUSTED TOTAL SCORE</b>	<b>65</b>	Patch size >500 ha 6 pts	<b>5</b>																																												
CONSERVATION SIGNIFICANCE SCORE:	score	Distance to core area of more than 50 hectares score																																													
2 pts for each State-R, 4 pts for each State-V, 6 pts for each State-E or Nationally-V, 8 pts for each Nationally-E plant community present.	0	>3km 0 pts																																													
2 pts for each State-R, 4 pts for each State-V, 6 pts for each State-E or Nationally-V, 8 pts for each Nationally-E plant species present <sup>2</sup> .	2	1-3km 1 pt																																													
1 pt for each State-R, 2 pts for each State-V, 3 pts for each State-E or Nationally-V, 4 pts for each Nationally-E fauna species for which suitable habitat is present. Double points for a sighting. <sup>3</sup>	1	<1km 2 pts																																													
% native vegetation remaining in IBRA Assoc. 0-2% = 5 pts; >2-5% = 4 pts; >5-10% = 3 pts; >10-20%= 2 pts; >20-50%= 1 pt; >50% = 0 pts	3	contiguous 3 pts	<b>3</b>																																												
1 pt if Site contains a riparian zone,		<b>LANDSCAPE CONTEXT SCORE</b>	<b>8</b>																																												
2 pts if contains swamp (+/- riparian zone)	0	<b>Sum adjusted Vegetation Condition, Conservation significance and Landscape Context Scores for the</b>  <b>UNIT BIODIVERSITY SCORE</b>																																													
<b>CONSERVATION SIGNIFICANCE SCORE</b>	<b>6</b>																																														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;">Cleared perimeter(m)</th> <th style="width: 20%;">Size(ha)</th> <th style="width: 30%;">P:A Ratio</th> <th style="width: 20%;"></th> </tr> <tr> <td>976</td> <td style="text-align: center;">4.3</td> <td>22.70</td> <td></td> </tr> <tr> <th style="background-color: #e0e0e0;">Total no. native species</th> <th style="background-color: #e0e0e0;">Adjust for Spring<sup>4</sup></th> <th style="background-color: #e0e0e0;">Environmental Association</th> <th></th> </tr> <tr> <td>118</td> <td></td> <td>Goolwa / Coorong</td> <td></td> </tr> <tr> <th style="background-color: #e0e0e0;">Weed species</th> <th style="background-color: #e0e0e0;">Cover</th> <th style="background-color: #e0e0e0;">Invasive Threat Category</th> <th style="background-color: #e0e0e0;">C x I</th> </tr> <tr> <td><i>*Asparagus asparagoides</i></td> <td style="text-align: center;">1</td> <td>5</td> <td style="text-align: center;">5</td> </tr> <tr> <td><i>*Chrysanthemoides monilifera ssp. monilifera</i></td> <td style="text-align: center;">1</td> <td>4</td> <td style="text-align: center;">4</td> </tr> <tr> <td><i>*Ehrharta calycina</i></td> <td style="text-align: center;">2</td> <td>4</td> <td style="text-align: center;">8</td> </tr> <tr> <td><i>*Lycium ferocissimum</i></td> <td style="text-align: center;">1</td> <td>4</td> <td style="text-align: center;">4</td> </tr> <tr> <td><i>*Senecio pterophorus</i></td> <td style="text-align: center;">1</td> <td>3</td> <td style="text-align: center;">3</td> </tr> <tr> <td colspan="3" style="background-color: #e0e0e0;"><b>Total Cover x Threat Invasion</b></td> <td style="text-align: center;"><b>24</b></td> </tr> </table>				Cleared perimeter(m)	Size(ha)	P:A Ratio		976	4.3	22.70		Total no. native species	Adjust for Spring <sup>4</sup>	Environmental Association		118		Goolwa / Coorong		Weed species	Cover	Invasive Threat Category	C x I	<i>*Asparagus asparagoides</i>	1	5	5	<i>*Chrysanthemoides monilifera ssp. monilifera</i>	1	4	4	<i>*Ehrharta calycina</i>	2	4	8	<i>*Lycium ferocissimum</i>	1	4	4	<i>*Senecio pterophorus</i>	1	3	3	<b>Total Cover x Threat Invasion</b>			<b>24</b>
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<b>Total Cover x Threat Invasion</b>			<b>24</b>																																												

## NVBMU Biodiversity Rapid Assessment Summary Scoresheet

<b>SITE:</b> Walter Newell Reserve - Area 2	<b>RECORDER:</b> PS, MM	<b>DATE:</b> 24/7/14
<b>DESCRIPTION:</b> <i>Allocasuarina verticillata</i> Low woodland	<b>BCM CODE:</b> MDBSA 9.1	

<b>VEGETATION CONDITION SCORE:</b>	<b>score</b>	<b>LANDSCAPE CONTEXT SCORE:</b>	<b>score</b>
Native Plant Species Richness	15	2 pts if site is the only substantial connection between 2 or more remnants <sup>1</sup>	
Weed Score	4	>20 ha, 1 pt if site is degraded (scattered trees in part, fragmented etc)	0
Native Plant Life Forms	10	<b>Site Shape Score</b>	
Regeneration	4	3 pts if Cleared perimeter:Area (km/km <sup>2</sup> )<6,	
Native:exotic Understorey Biomass	8	2 pts if P:A 6 to<12, 1pt if P:A 12 to <18	0
Bare Ground	3	<b>Size of remnant<sup>1</sup> patch (incl. native veg on adjacent properties) score</b>	
Tree Health	5	Patch size less than 2 ha 0 pts	
Tree Hollows	3	Patch size 2-5 ha 1 pt	
Fallen timber	3	Patch size 5-10 ha 2 pts	
Grazing Evidence	4	Patch size 10-20 ha 3 pts	
<b>TOTAL (ADD UP ALL POINTS)</b>	<b>59</b>	Patch size 20-100 ha 4 pts	
If community is naturally treeless multiply TOTAL by 1.4		Patch size 100-500 ha 5 pts	
<b>ADJUSTED TOTAL SCORE</b>	<b>59</b>	Patch size >500 ha 6 pts	5

<b>CONSERVATION SIGNIFICANCE SCORE:</b>	<b>score</b>	<b>LANDSCAPE CONTEXT SCORE</b>	<b>score</b>
2 pts for each State-R, 4 pts for each State-V, 6 pts for each State-E or Nationally-V, 8 pts for each Nationally-E plant community present.	0	<b>Distance to core area of more than 50 hectares score</b>	
2 pts for each State-R, 4 pts for each State-V, 6 pts for each State-E or Nationally-V, 8 pts for each Nationally-E plant species present <sup>2</sup> .	2	>3km 0 pts	
1 pt for each State-R, 2 pts for each State-V, 3 pts for each State-E or Nationally-V, 4 pts for each Nationally-E fauna species for which suitable habitat is present. Double points for a sighting. <sup>3</sup>	1	1-3km 1 pt	
% native vegetation remaining in IBRA Assoc. 0-2% = 5 pts; >2-5% = 4 pts; >5-10% = 3 pts; >10-20%= 2 pts; >20-50%= 1 pt; >50% = 0 pts	3	<1km 2 pts	3
1 pt if Site contains a riparian zone, 2 pts if contains swamp (+/- riparian zone)	0	contiguous 3 pts	8
<b>CONSERVATION SIGNIFICANCE SCORE</b>	<b>6</b>	<div style="border: 1px solid black; padding: 5px;"> <p>Sum adjusted Vegetation Condition, Conservation significance and Landscape Context Scores for the</p> <p><b>UNIT BIODIVERSITY SCORE</b></p> <p style="text-align: right; border: 1px solid black; padding: 2px;"><b>73</b></p> </div>	

<b>Cleared perimeter(m)</b>	<b>Size(ha)</b>	<b>P:A Ratio</b>	
976	4.3	22.70	
<b>Total no. native species</b>	<b>Adjust for Spring<sup>4</sup></b>	<b>Environmental Association</b>	
111		Goolwa / Coorong	
<b>Weed species</b>	<b>Cover</b>	<b>Invasive Threat Category</b>	<b>C x I</b>
* <i>Asparagus asparagoides</i>	2	5	10
* <i>Chrysanthemoides monilifera ssp. monilifera</i>	1	4	4
* <i>Ehrharta calycina</i>	3	4	12
* <i>Lycium ferocissimum</i>	1	4	4
* <i>Oxalis pes-caprae</i>	3	3	9
<b>Total Cover x Threat Invasion</b>			<b>39</b>

## NVBMU Biodiversity Rapid Assessment Summary Scoresheet

<b>SITE: Walter Newell Reserve - Area 3 (regeneration area)</b>	<b>RECORDER: PS, MM</b>	<b>DATE: 24/7/14</b>
<b>DESCRIPTION: <i>Allocasuarina verticillata</i> Low woodland</b>	<b>BCM CODE: MDBSA 9.1</b>	

VEGETATION CONDITION SCORE:	score	LANDSCAPE CONTEXT SCORE:	score
Native Plant Species Richness	10	2 pts if site is the only substantial connection between 2 or more remnants <sup>1</sup>	
Weed Score	7	>20 ha, 1 pt if site is degraded (scattered trees in part, fragmented etc)	0
Native Plant Life Forms	7	<b>Site Shape Score</b>	
Regeneration	2	3 pts if Cleared perimeter:Area (km/km <sup>2</sup> )<6,	
Native:exotic Understorey Biomass	3	2 pts if P:A 6 to<12, 1pt if P:A 12 to <18	0
Bare Ground	3	<b>Size of remnant<sup>1</sup> patch (incl. native veg on adjacent properties) score</b>	
Tree Health	5	Patch size less than 2 ha 0 pts	
Tree Hollows	0	Patch size 2-5 ha 1 pt	
Fallen timber	0	Patch size 5-10 ha 2 pts	
Grazing Evidence	4	Patch size 10-20 ha 3 pts	
<b>TOTAL (ADD UP ALL POINTS)</b>	<b>41</b>	Patch size 20-100 ha 4 pts	
If community is naturally treeless		Patch size 100-500 ha 5 pts	
multiply TOTAL by 1.4		Patch size >500 ha 6 pts	5
<b>ADJUSTED TOTAL SCORE</b>	<b>41</b>	<b>Distance to core area of more than 50 hectares score</b>	

CONSERVATION SIGNIFICANCE SCORE:	score	LANDSCAPE CONTEXT SCORE	score
2 pts for each State-R, 4 pts for each State-V, 6 pts for each State-E or Nationally-V, 8 pts for each Nationally-E plant community present.	0	>3km 0 pts	
2 pts for each State-R, 4 pts for each State-V, 6 pts for each State-E or Nationally-V, 8 pts for each Nationally-E plant species present <sup>2</sup> .	0	1-3km 1 pt	
1 pt for each State-R, 2 pts for each State-V, 3 pts for each State-E or Nationally-V, 4 pts for each Nationally-E fauna species for which suitable habitat is present. Double points for a sighting. <sup>3</sup>	1	<1km 2 pts	
% native vegetation remaining in IBRA Assoc. 0-2% = 5 pts; >2-5% = 4 pts; >5-10% = 3 pts; >10-20%= 2 pts; >20-50%= 1 pt; >50% = 0 pts	3	contiguous 3 pts	3
1 pt if Site contains a riparian zone,		<b>LANDSCAPE CONTEXT SCORE</b>	<b>8</b>
2 pts if contains swamp (+/- riparian zone)	0	<p><b>Sum adjusted Vegetation Condition, Conservation significance and Landscape Context Scores for the</b></p> <p><b>UNIT BIODIVERSITY SCORE</b></p> <p style="text-align: right;"><b>53</b></p>	
<b>CONSERVATION SIGNIFICANCE SCORE</b>	<b>4</b>		

Cleared perimeter(m)	Size(ha)	P:A Ratio	
976	4.3	22.70	
Total no. native species	Adjust for Spring <sup>4</sup>	Environmental Association	
20		Goolwa / Coorong	
Weed species	Cover	Invasive Threat Category	C x I
* <i>Ehrharta calycina</i>	3	4	12
* <i>Euphorbia terracina</i>	1	3	3
* <i>Gazania sp.</i>	1	3	3
* <i>Oxalis pes-caprae</i>	2	3	6
* <i>Scabiosa atropurpurea</i>	1	2	2
<b>Total Cover x Threat Invasion</b>			<b>26</b>

## NVBMU Biodiversity Rapid Assessment Summary Scoresheet

<b>SITE:</b> Walter Newell Reserve - RMS 425 (west side of rd)	<b>RECORDER:</b> PS, MM	<b>DATE:</b> 24/7/14
<b>DESCRIPTION:</b> <i>Allocasuarina verticillata</i> Low woodland	<b>BCM CODE:</b> MDBSA 9.1	

VEGETATION CONDITION SCORE:	score	LANDSCAPE CONTEXT SCORE:	score
Native Plant Species Richness	13	2 pts if site is the only substantial connection between 2 or more remnants <sup>1</sup>	
Weed Score	3	>20 ha, 1 pt if site is degraded (scattered trees in part, fragmented etc)	0
Native Plant Life Forms	10	<b>Site Shape Score</b>	
Regeneration	5	3 pts if Cleared perimeter:Area (km/km <sup>2</sup> )<6,	
Native:exotic Understorey Biomass	6	2 pts if P:A 6 to<12, 1pt if P:A 12 to <18	0
Bare Ground	3	<b>Size of remnant<sup>1</sup> patch (incl. native veg on adjacent properties) score</b>	
Tree Health	5	Patch size less than 2 ha 0 pts	
Tree Hollows	0	Patch size 2-5 ha 1 pt	
Fallen timber	3	Patch size 5-10 ha 2 pts	
Grazing Evidence	4	Patch size 10-20 ha 3 pts	
<b>TOTAL (ADD UP ALL POINTS)</b>	<b>52</b>	Patch size 20-100 ha 4 pts	
If community is naturally treeless		Patch size 100-500 ha 5 pts	
multiply TOTAL by 1.4		Patch size >500 ha 6 pts	5
<b>ADJUSTED TOTAL SCORE</b>	<b>52</b>	<b>Distance to core area of more than 50 hectares score</b>	

CONSERVATION SIGNIFICANCE SCORE:	score	LANDSCAPE CONTEXT SCORE	score
2 pts for each State-R, 4 pts for each State-V, 6 pts for each State-E or Nationally-V, 8 pts for each Nationally-E plant community present.	0	>3km 0 pts	
2 pts for each State-R, 4 pts for each State-V, 6 pts for each State-E or Nationally-V, 8 pts for each Nationally-E plant species present <sup>2</sup> .	2	1-3km 1 pt	
1 pt for each State-R, 2 pts for each State-V, 3 pts for each State-E or Nationally-V, 4 pts for each Nationally-E fauna species for which suitable habitat is present. Double points for a sighting. <sup>3</sup>	1	<1km 2 pts	
% native vegetation remaining in IBRA Assoc. 0-2% = 5 pts; >2-5% = 4 pts; >5-10% = 3 pts; >10-20%= 2 pts; >20-50%= 1 pt; >50% = 0 pts	3	contiguous 3 pts	3
1 pt if Site contains a riparian zone,		<b>LANDSCAPE CONTEXT SCORE</b>	<b>8</b>
2 pts if contains swamp (+/- riparian zone)	0	<b>Sum adjusted Vegetation Condition, Conservation significance and Landscape Context Scores for the</b>  <b>UNIT BIODIVERSITY SCORE</b>	
<b>CONSERVATION SIGNIFICANCE SCORE</b>	<b>6</b>		

Cleared perimeter(m)	Size(ha)	P:A Ratio	
344	0.23	149.57	
Total no. native species	Adjust for Spring <sup>4</sup>	Environmental Association	
34		Goolwa	
Weed species	Cover	Invasive Threat Category	C x I
* <i>Asparagus asparagoides</i>	3	5	15
* <i>Ehrharta calycina</i>	3	4	12
* <i>Euphorbia terracina</i>	1	3	3
* <i>Gazania sp.</i>	1	3	3
* <i>Oxalis pes-caprae</i>	3	3	9
<b>Total Cover x Threat Invasion</b>			<b>42</b>



## NVBMU Biodiversity Rapid Assessment Summary Scoresheet

<b>SITE:</b> Walter Newell Reserve - RMS 426 (east side of rd)	<b>RECORDER:</b> PS, MM	<b>DATE:</b> 24/7/14
<b>DESCRIPTION:</b> <i>Allocasuarina verticillata</i> Low woodland	<b>BCM CODE:</b> MDBSA 9.1	

VEGETATION CONDITION SCORE:	score	LANDSCAPE CONTEXT SCORE:	score
Native Plant Species Richness	15	2 pts if site is the only substantial connection between 2 or more remnants <sup>1</sup>	
Weed Score	5	>20 ha, 1 pt if site is degraded (scattered trees in part, fragmented etc)	0
Native Plant Life Forms	9	<b>Site Shape Score</b>	
Regeneration	1	3 pts if Cleared perimeter:Area (km/km <sup>2</sup> )<6,	
Native:exotic Understorey Biomass	6	2 pts if P:A 6 to<12, 1pt if P:A 12 to <18	0
Bare Ground	3	<b>Size of remnant<sup>1</sup> patch (incl. native veg on adjacent properties) score</b>	
Tree Health	5	Patch size less than 2 ha 0 pts	
Tree Hollows	0	Patch size 2-5 ha 1 pt	
Fallen timber	4	Patch size 5-10 ha 2 pts	
Grazing Evidence	4	Patch size 10-20 ha 3 pts	
<b>TOTAL (ADD UP ALL POINTS)</b>	<b>52</b>	Patch size 20-100 ha 4 pts	
If community is naturally treeless		Patch size 100-500 ha 5 pts	
multiply TOTAL by 1.4		Patch size >500 ha 6 pts	5
<b>ADJUSTED TOTAL SCORE</b>	<b>52</b>	<b>Distance to core area of more than 50 hectares score</b>	

CONSERVATION SIGNIFICANCE SCORE:	score	LANDSCAPE CONTEXT SCORE	score
2 pts for each State-R, 4 pts for each State-V, 6 pts for each State-E or Nationally-V, 8 pts for each Nationally-E plant community present.	0	>3km 0 pts	
2 pts for each State-R, 4 pts for each State-V, 6 pts for each State-E or Nationally-V, 8 pts for each Nationally-E plant species present <sup>2</sup> .	2	1-3km 1 pt	
1 pt for each State-R, 2 pts for each State-V, 3 pts for each State-E or Nationally-V, 4 pts for each Nationally-E fauna species for which suitable habitat is present. Double points for a sighting. <sup>3</sup>	1	<1km 2 pts	
% native vegetation remaining in IBRA Assoc. 0-2% = 5 pts; >2-5% = 4 pts; >5-10% = 3 pts; >10-20%= 2 pts; >20-50%= 1 pt; >50% = 0 pts	3	contiguous 3 pts	3
1 pt if Site contains a riparian zone,		<b>LANDSCAPE CONTEXT SCORE</b>	<b>8</b>
2 pts if contains swamp (+/- riparian zone)	0	<div style="border: 2px solid black; padding: 10px; text-align: center;"> <p><b>Sum adjusted Vegetation Condition, Conservation significance and Landscape Context Scores for the</b></p> <p><b>UNIT BIODIVERSITY SCORE</b></p> <p><b>66</b></p> </div>	
<b>CONSERVATION SIGNIFICANCE SCORE</b>	<b>6</b>		

Cleared perimeter(m)	Size(ha)	P:A Ratio	
464	0.22	210.91	
Total no. native species	Adjust for Spring <sup>4</sup>	Environmental Association	
41		Goolwa / Coorong	
Weed species	Cover	Invasive Threat Category	C x I
* <i>Asparagus asparagoides</i>	1	5	5
* <i>Cynodon dactylon</i> var. <i>dactylon</i>	3	2	6
* <i>Ehrharta calycina</i>	2	4	8
* <i>Lycium ferocissimum</i>	1	4	4
* <i>Oxalis pes-caprae</i>	3	3	9
<b>Total Cover x Threat Invasion</b>			<b>32</b>

## Appendix 2 – BCM reports

# Bushland Condition Monitoring

## ASSESSMENT SITE REPORT

Site: GOO-AXOO-2-1

Region: SA Murray Darling Basin

Property: Walter Newell Reserve

Surveyed on: 6/08/2014

by Paula Sanders & Mel McCallum

Australian map grid reference:

297920 E

6068180 N

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Permanent stake location: Walk straight into scrub off end of Sexton St 14m across clear area from gate. 34m along walking track into reserve. Look for small stake close to ground with yellow flagging tape. Photo point is at 135°. Permanent corner marker is in the NE corner.

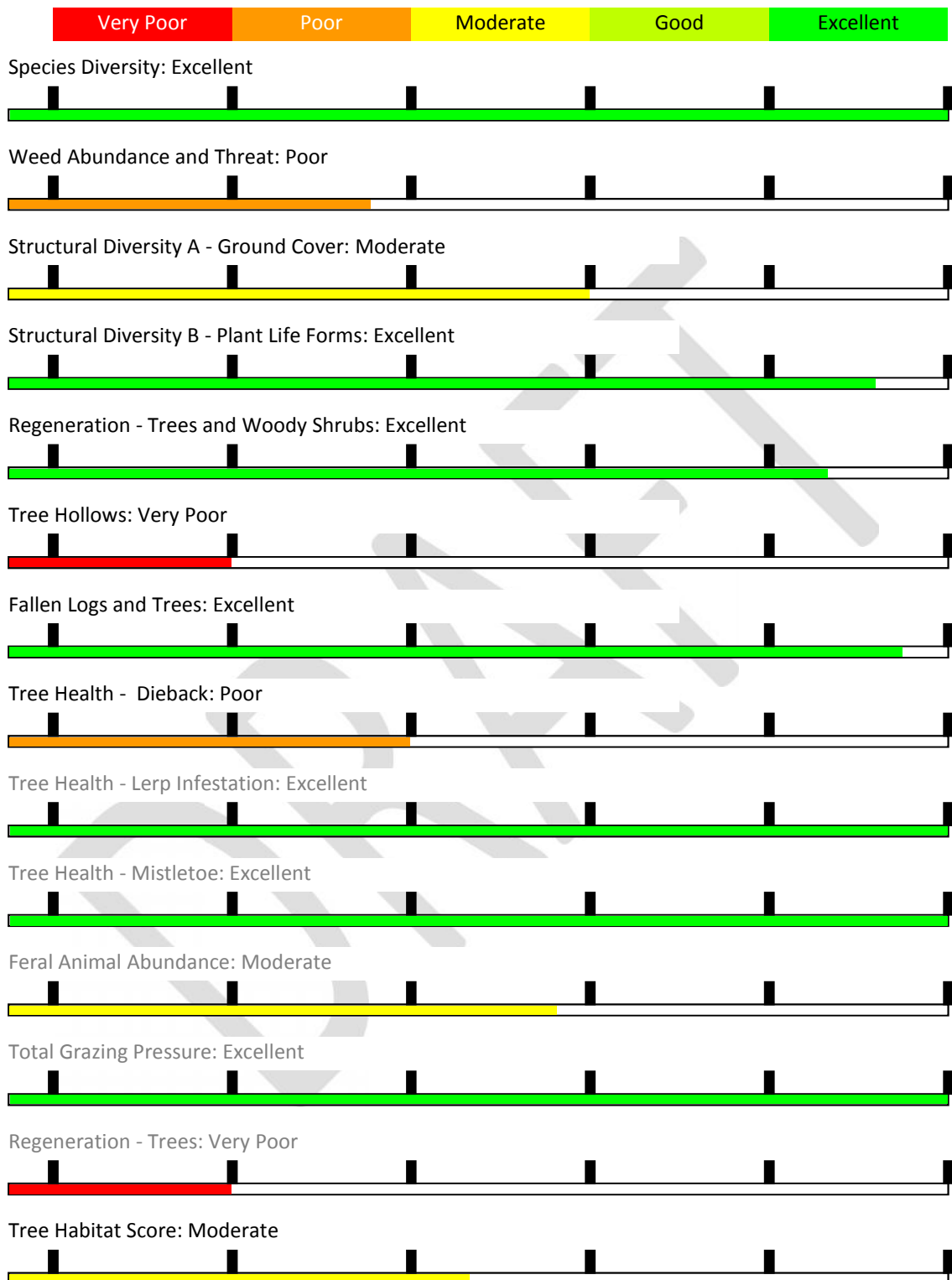
Vegetation community type: MDBSA9.1 - Woodlands with an open grassy understorey

Vegetation association: *Allocasuarina verticillata*, Low woodland

Understorey: Open shrub layer of *Acacia paradoxa*, *A. dodonaeifolia* over *\*Ehrharta calycina*, *Lepidosperma carphoides*, *Gahnia deusta*, *Amphipogon carcinus* var. *carcinus*.



## Habitat Condition Indicator Values



# Bushland Condition Monitoring

## ASSESSMENT SITE REPORT

Site: GOO-AX00-2-2

Region: SA Murray Darling Basin Property: Walter Newell Reserve

Surveyed on: 6/08/2014 by Paula Sanders & Mel McCallum

Australian map grid reference: 297897 E 6068213 N

Permanent stake location: From Sexton St, there is a track worn by walkers heading into the bushland. There is a large *Allocasuarina* tree on the left side about 50m in. The permanent stake is around 9m northeast of this tree, on other side of the track. Photopoint at 154°.

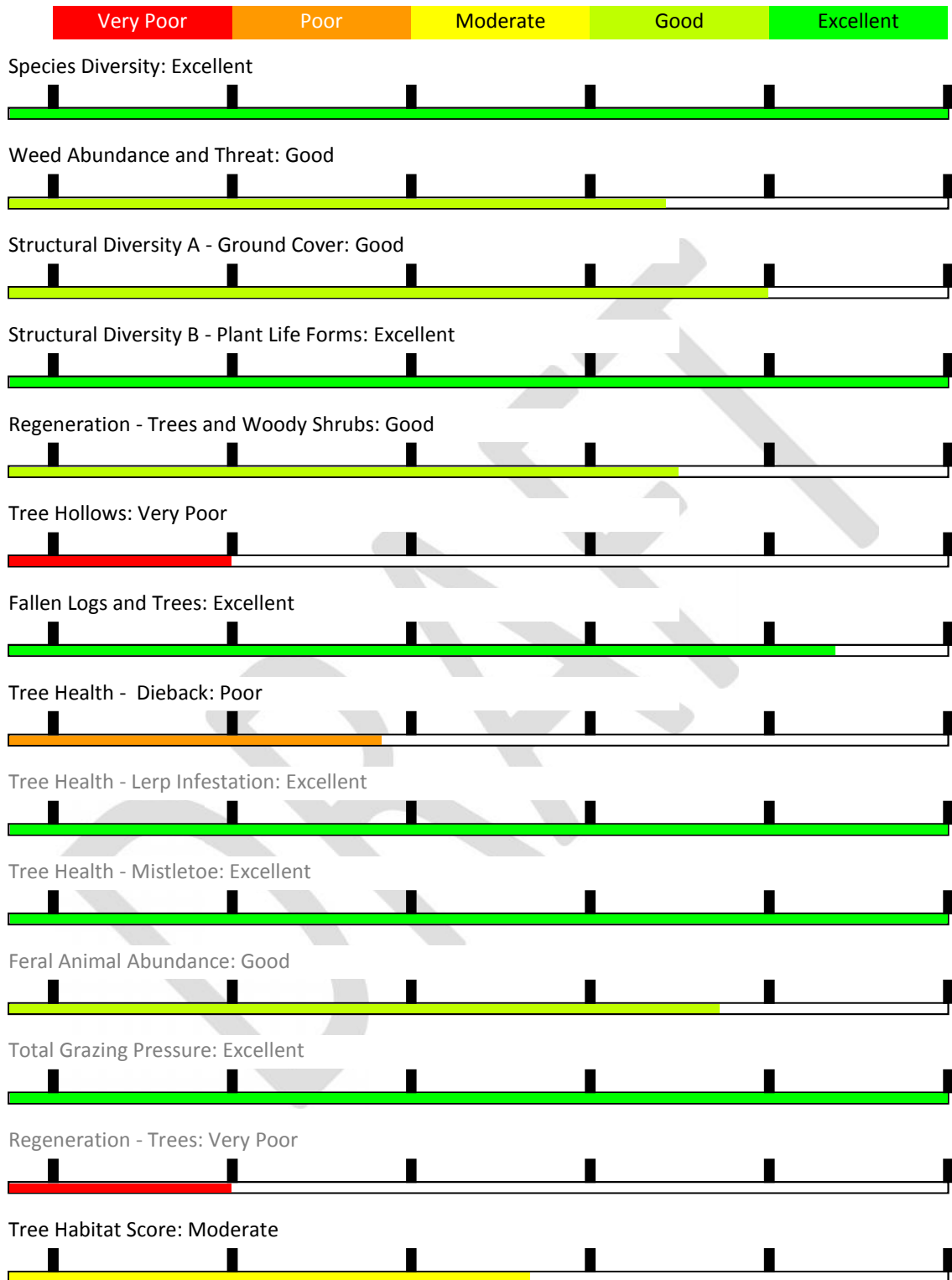
Vegetation community type: MDBSA9.1 - Woodlands with an open grassy understorey

Vegetation association: *Allocasuarina verticillata*, Low woodland

Understorey: Some clumps of *Cassyltha*. Dominated by good quality native sclerophyllous shrubs *Acacia* spp, *Pomaderris paniculosa* over *Lomandra densiflora* and other native grasses. Dense vegetation not as much grazing as site 1.



## Habitat Condition Indicator Values



# Bushland Condition Monitoring

## ASSESSMENT SITE REPORT

Site: GOO-AXOO-2-3

Region: SA Murray Darling Basin Property: Walter Newell Reserve

Surveyed on: 6/08/2014 by Paula Sanders & Mel McCallum

Australian map grid reference: 297993 E 6068189 N

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Permanent stake location: Site location is parallel with main walking track and approximately 20 meters from fence near Evans Rd. Photo sighter post is in the NE corner and bearing is in a South direction at 194°. Sides: 60m at 210 degrees

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Vegetation community type: MDBSA9.1 - Woodlands with an open grassy understorey

Vegetation association: *Allocasuarina verticillata*, Very low open woodland

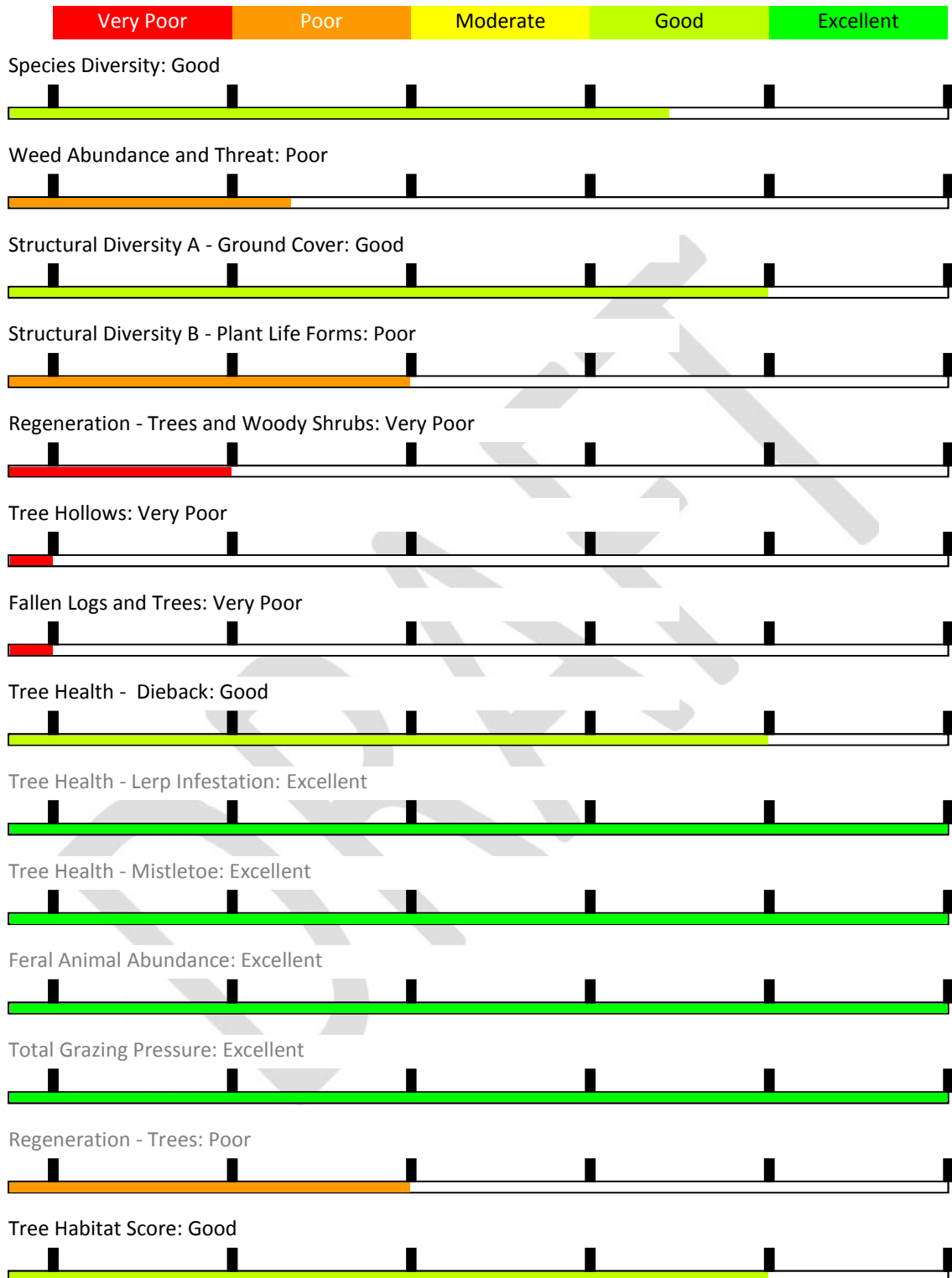
Understorey: Regenerating - Understorey ground layer was dominated by the exotic herb *Oxalis pes-caprae* and mixed native and exotic Graminae species. *Lomandra densiflora* and other small sclerophyllous shrubs *Calytrix tetragona*, *Astroloma humifusum*.



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Post or visit: 260 Franklin Street, Adelaide SA 5000 [www.ncssa.asn.au](http://www.ncssa.asn.au)

## Habitat Condition Indicator Values



## Appendix 2 – Fauna search

CLASS	SPECIES	COMMON NAME	INDIG ?	AUS	SA	NO. RECORDS
AMPHIBIA	<i>Crinia parinsignifera</i>	Murray Valley Froglet	Y			1
AMPHIBIA	<i>Crinia signifera</i>	Common Froglet	Y			45
AMPHIBIA	<i>Limnodynastes dumerilii</i>	Banjo Frog	Y			13
AMPHIBIA	<i>Limnodynastes tasmaniensis</i>	Spotted Marsh Frog	Y			27
AMPHIBIA	<i>Litoria ewingii</i>	Brown Tree Frog	Y			22
AVES	<i>Acanthagenys rufogularis</i>	Spiny-cheeked Honeyeater	Y			7
AVES	<i>Acanthiza chrysoorhoa</i>	Yellow-rumped Thornbill	Y			18
AVES	<i>Acanthiza lineata</i>	Striated Thornbill	Y			3
AVES	<i>Acanthiza nana</i>	Yellow Thornbill	Y			8
AVES	<i>Acanthiza pusilla</i>	Brown Thornbill	Y			3
AVES	<i>Accipiter cirrocephalus</i>	Collared Sparrowhawk	Y			3
AVES	<i>Accipiter fasciatus</i>	Brown Goshawk	Y			2
AVES	<i>Acrocephalus australis</i>	Australian Reed Warbler	Y			22
AVES	<i>Actitis hypoleucos</i>	Common Sandpiper	Y		Rare	13
AVES	<i>Alauda arvensis</i>	Eurasian Skylark	N			17
AVES	<i>Anas castanea</i>	Chestnut Teal	Y			26
AVES	<i>Anas gracilis</i>	Grey Teal	Y			49
AVES	<i>Anas platyrhynchos</i>	Mallard (Northern Mallard)	N			6
AVES	<i>Anas rhynchotis</i>	Australasian Shoveler	Y		Rare	22
AVES	<i>Anhinga novaehollandiae</i>	Australasian Darter	Y		Rare	2
AVES	<i>Anthochaera carunculata</i>	Red Wattlebird	Y			37
AVES	<i>Anthochaera chrysoptera</i>	Little Wattlebird	Y			7
AVES	<i>Anthus australis</i>	Australian Pipit	Y			9
AVES	<i>Apus pacificus</i>	Pacific Swift (Fork-tailed Swift)	Y			5
AVES	<i>Ardea alba</i>	Great Egret	Y			35
AVES	<i>Ardea ibis</i>	Cattle Egret	Y		Rare	3
AVES	<i>Artamus cinereus</i>	Black-faced Woodswallow	Y			1
AVES	<i>Artamus cyanopterus</i>	Dusky Woodswallow	Y			2
AVES	<i>Aythya australis</i>	Hardhead	Y			18
AVES	<i>Barnardius zonarius barnardi (NC)</i>	Australian Ringneck, (Ring-necked Parrot)	Y			1
AVES	<i>Biziura lobata</i>	Musk Duck	Y		Rare	31
AVES	<i>Botaurus poiciloptilus</i>	Australasian Bittern	Y	Endangered	Vulnerable	2
AVES	<i>Cacatua sanguinea</i>	Little Corella	Y			27
AVES	<i>Cacatua tenuirostris</i>	Long-billed Corella	Y			2
AVES	<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo	Y			4
AVES	<i>Cacomantis pallidus</i>	Pallid Cuckoo	Y			4
AVES	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Y			18
AVES	<i>Calidris alba</i>	Sanderling	Y		Rare	1
AVES	<i>Calidris ferruginea</i>	Curlew Sandpiper	Y			13
AVES	<i>Calidris ruficollis</i>	Red-necked Stint	Y			17
AVES	<i>Calyptorhynchus funereus</i>	Yellow-tailed Black Cockatoo	Y		Vulnerable	2
AVES	<i>Carduelis carduelis</i>	European Goldfinch	N			27
AVES	<i>Cereopsis novaehollandiae</i>	Cape Barren Goose	Y		Rare	1
AVES	<i>Chalcites basalis</i>	Horsfield's Bronze Cuckoo	Y			6
AVES	<i>Charadrius ruficapillus</i>	Red-capped Plover	Y			5
AVES	<i>Chenonetta jubata</i>	Maned (Australian Wood Duck)	Y			2
AVES	<i>Chlidonias hybrida</i>	Whiskered Tern	Y			28
AVES	<i>Chloris chloris</i>	European (Common) Greenfinch	N			1



AVES	<i>Chroicocephalus novaehollandiae</i>	Silver Gull	Y			88
AVES	<i>Cincloramphus cruralis</i>	Brown Songlark	Y			6
AVES	<i>Circus approximans</i>	Swamp Harrier	Y			25
AVES	<i>Cisticola exilis</i>	Golden-headed Cisticola	Y			10
AVES	<i>Cladorhynchus leucocephalus</i>	Banded Stilt	Y		Vulnerable	2
AVES	<i>Colluricincla harmonica</i>	Grey Shrikethrush	Y			4
AVES	<i>Columba livia</i>	Feral Pigeon [Rock Dove]	N			10
AVES	<i>Coracina novaehollandiae</i>	Black-faced Cuckooshrike	Y			16
AVES	<i>Corvus mellori</i>	Little Raven	Y			55
AVES	<i>Cracticus torquatus</i>	Grey Butcherbird	Y			6
AVES	<i>Cygnus atratus</i>	Black Swan	Y			102
AVES	<i>Dacelo novaeguineae</i>	Laughing Kookaburra	Y			1
AVES	<i>Daphoenositta chrysoptera</i>	Varied Sittella	Y			3
AVES	<i>Daption capense</i>	Cape Petrel	Y			1
AVES	<i>Dicaeum hirundinaceum</i>	Mistletoebird	Y			5
AVES	<i>Egretta garzetta</i>	Little Egret	Y		Rare	3
AVES	<i>Egretta novaehollandiae</i>	White-faced Heron	Y			39
AVES	<i>Elanus axillaris</i>	Black-shouldered Kite	Y			24
AVES	<i>Elanus scriptus</i>	Letter-winged Kite	Y		Rare	1
AVES	<i>Elseyonis melanops</i>	Black-fronted Dotterel	Y			21
AVES	<i>Eolophus roseicapilla</i>	Galah	Y			31
AVES	<i>Epthianura albifrons</i>	White-fronted Chat	Y			24
AVES	<i>Erythronyx cinctus</i>	Red-kneed Dotterel	Y			11
AVES	<i>Falco berigora</i>	Brown Falcon	Y			9
AVES	<i>Falco hypoleucos</i>	Grey Falcon	Y		Rare	1
AVES	<i>Falco longipennis</i>	Australian Hobby	Y			2
AVES	<i>Falco subniger</i>	Black Falcon	Y			1
AVES	<i>Fulica atra</i>	Eurasian Coot	Y			47
AVES	<i>Gallinago hardwickii</i>	Latham's Snipe	Y		Rare	3
AVES	<i>Gallinula tenebrosa</i>	Dusky Moorhen	Y			22
AVES	<i>Gavicalis virescens</i>	Singing Honeyeater	Y			57
AVES	<i>Gelochelidon nilotica</i>	Gull-billed Tern	Y			3
AVES	<i>Geopelia placida</i>	Peaceful Dove	Y			6
AVES	<i>Gliciphila melanops</i>	Tawny-crowned Honeyeater	Y			1
AVES	<i>Glossopsitta concinna</i>	Musk Lorikeet	Y			8
AVES	<i>Glossopsitta porphyrocephala</i>	Purple-crowned Lorikeet	Y			4
AVES	<i>Grallina cyanoleuca</i>	Magpielark	Y			52
AVES	<i>Gymnorhina tibicen</i>	Australian Magpie	Y			63
AVES	<i>Haliastur sphenurus</i>	Whistling Kite	Y			10
AVES	<i>Hieraaetus morphnoides</i>	Little Eagle	Y			2
AVES	<i>Himantopus leucocephalus</i>	White-headed Stilt	Y			33
AVES	<i>Hirundo neoxena</i>	Welcome Swallow	Y			70
AVES	<i>Lalage tricolor</i>	White-winged Triller	Y			2
AVES	<i>Lathamus discolor</i>	Swift Parrot	Y	Endangered	Endangered	1
AVES	<i>Lewinia pectoralis</i>	Lewin's Rail	Y		Vulnerable	1
AVES	<i>Limosa lapponica</i>	Bar-tailed Godwit	Y		Rare	3
AVES	<i>Malurus cyaneus</i>	Superb Fairywren	Y			39
AVES	<i>Malurus lamberti</i>	Variegated Fairywren	Y			1
AVES	<i>Manorina melanocephala</i>	Noisy Miner	Y			1
AVES	<i>Megalurus gramineus</i>	Little Grassbird	Y			34
AVES	<i>Melanodryas cucullata</i>	Hooded Robin	Y		ssp	1

AVES	<i>Melithreptus brevirostris</i>	Brown-headed Honeyeater	Y			4
AVES	<i>Melithreptus gularis</i>	Black-chinned Honeyeater	Y		ssp	4
AVES	<i>Microcarbo melanoleucos</i>	Little Pied Cormorant	Y			36
AVES	<i>Microeca fascinans</i>	Jacky Winter	Y		ssp	3
AVES	<i>Milvus migrans</i>	Black Kite	Y			1
AVES	<i>Monarcha melanopsis</i>	Black-faced Monarch	Y			1
AVES	<i>Motacilla citreola</i>	Citrine Wagtail	Y			1
AVES	<i>Motacilla tschutschensis</i>	Eastern Yellow Wagtail	Y			1
AVES	<i>Myiagra inquieta</i>	Restless Flycatcher	Y		Rare	1
AVES	<i>Neochmia temporalis</i>	Red-browed Finch	Y			8
AVES	<i>Neophema chrysogaster</i>	Orange-bellied Parrot	Y	Critically Endangered	Endangered	1
AVES	<i>Neophema elegans</i>	Elegant Parrot	Y		Rare	2
AVES	<i>Numenius phaeopus</i>	Whimbrel	Y		Rare	3
AVES	<i>Nycticorax caledonicus</i>	Nankeen Night Heron	Y			2
AVES	<i>Oceanites oceanicus</i>	Wilson's Storm Petrel	Y			1
AVES	<i>Ocyphaps lophotes</i>	Crested Pigeon	Y			50
AVES	<i>Oxyura australis</i>	Blue-billed Duck	Y		Rare	9
AVES	<i>Pachycephala pectoralis</i>	Australian Golden Whistler (Golden Whistler)	Y			3
AVES	<i>Pachycephala rufiventris</i>	Rufous Whistler	Y			3
AVES	<i>Pachyptila belcheri</i>	Slender-billed Prion	Y			2
AVES	<i>Pachyptila turtur</i>	Fairy Prion	Y			1
AVES	<i>Pachyptila vittata</i>	Broad-billed Prion	Y			1
AVES	<i>Pardalotus punctatus</i>	Spotted Pardalote	Y			2
AVES	<i>Pardalotus striatus</i>	Striated Pardalote	Y			5
AVES	<i>Passer domesticus</i>	House Sparrow	N			57
AVES	<i>Petrochelidon ariel</i>	Fairy Martin	Y			3
AVES	<i>Petrochelidon nigricans</i>	Tree Martin	Y			14
AVES	<i>Petroica goodenovii</i>	Red-capped Robin	Y			1
AVES	<i>Petroica phoenicea</i>	Flame Robin	Y		Vulnerable	4
AVES	<i>Phalacrocorax carbo</i>	Great Cormorant	Y			55
AVES	<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant	Y			33
AVES	<i>Phalacrocorax varius</i>	[Australian] Pied Cormorant	Y			20
AVES	<i>Phaps chalcoptera</i>	Common Bronzewing	Y			2
AVES	<i>Phaps elegans</i>	Brush Bronzewing	Y			4
AVES	<i>Phylidonyris novaehollandiae</i>	New Holland Honeyeater	Y			39
AVES	<i>Platalea flavipes</i>	Yellow-billed Spoonbill	Y			7
AVES	<i>Platalea regia</i>	Royal Spoonbill	Y			22
AVES	<i>Platycercus elegans</i>	Crimson Rosella	Y			7
AVES	<i>Platycercus elegans 'adelaidae' (NC)</i>	'Adelaide Rosella'	Y			2
AVES	<i>Podiceps cristatus</i>	Great Crested Grebe	Y		Rare	11
AVES	<i>Poliiocephalus poliocephalus</i>	Hoary-headed Grebe	Y			35
AVES	<i>Pomatostomus superciliosus</i>	White-browed Babbler	Y			5
AVES	<i>Porphyrio porphyrio</i>	Purple Swamphen	Y			47
AVES	<i>Porzana fluminea</i>	Australian Crake (Australian Spotted Crake)	Y			17
AVES	<i>Porzana pusilla</i>	Baillon's Crake	Y			3
AVES	<i>Porzana tabuensis</i>	Spotless Crake	Y		Rare	6
AVES	<i>Psephotus haematonotus</i>	Red-rumped Parrot	Y			11
AVES	<i>Pterodroma lessonii</i>	White-headed Petrel	Y			12
AVES	<i>Ptilotula penicillata</i>	White-plumed Honeyeater	Y			11
AVES	<i>Purnella albifrons</i>	White-fronted Honeyeater	Y			1

AVES	<i>Recurvirostra novaehollandiae</i>	Red-necked Avocet	Y			7
AVES	<i>Rhipidura albiscapa</i>	Grey Fantail	Y			14
AVES	<i>Rhipidura leucophrys</i>	Willie Wagtail	Y			58
AVES	<i>Rostratula australis</i>	Australian Painted-snipe	Y	Endangered	Vulnerable	1
AVES	<i>Sericornis frontalis</i>	White-browed Scrubwren	Y			11
AVES	<i>Smicrornis brevirostris</i>	Weebill	Y			2
AVES	<i>Spilopelia chinensis</i>	Spotted Dove	N			51
AVES	<i>Stagonopleura guttata</i>	Diamond Firetail	Y		Vulnerable	1
AVES	<i>Stercorarius parasiticus</i>	Parasitic Jaeger (Arctic Jaeger)	Y			1
AVES	<i>Sterna hirundo</i>	Common Tern	Y		Rare	4
AVES	<i>Sternula nereis</i>	Fairy Tern	Y	Vulnerable	Endangered	3
AVES	<i>Stictonetta naevosa</i>	Freckled Duck	Y		Vulnerable	14
AVES	<i>Sturnus vulgaris</i>	Common Starling	N			69
AVES	<i>Tachybaptus novaehollandiae</i>	Australasian Grebe	Y			24
AVES	<i>Tadorna tadornoides</i>	Australian Shelduck	Y			14
AVES	<i>Thalasseus bergii</i>	Greater Crested Tern	Y			45
AVES	<i>Thalassoica antarctica</i>	Antarctic Petrel	Y			1
AVES	<i>Thinornis rubricollis</i>	Hooded Plover (Hooded Dotterel)	Y		Vulnerable	4
AVES	<i>Threskiornis moluccus</i>	Australian White Ibis	Y			50
AVES	<i>Threskiornis spinicollis</i>	Straw-necked Ibis	Y			13
AVES	<i>Todiramphus pyrrhopygius</i>	Red-backed Kingfisher	Y			1
AVES	<i>Tribonyx ventralis</i>	Black-tailed Nativehen	Y			18
AVES	<i>Trichoglossus haematodus</i>	Rainbow Lorikeet	Y			18
AVES	<i>Tringa glareola</i>	Wood Sandpiper	Y		Rare	4
AVES	<i>Tringa nebularia</i>	Common Greenshank	Y			27
AVES	<i>Tringa stagnatilis</i>	Marsh Sandpiper	Y			4
AVES	<i>Turdus merula</i>	Common Blackbird	N			40
AVES	<i>Vanellus miles</i>	Masked Lapwing	Y			46
AVES	<i>Vanellus tricolor</i>	Banded Lapwing	Y			4
AVES	<i>Zosterops lateralis</i>	Silvereeye	Y			33
MAMMALIA	<i>Hydromys chrysogaster</i>	Water Rat	Y			1
MAMMALIA	<i>Lepus europaeus</i>	European Brown Hare	N			4
MAMMALIA	<i>Macropus fuliginosus</i>	Western Grey Kangaroo	Y			2
MAMMALIA	<i>Oryctolagus cuniculus</i>	Rabbit (European Rabbit)	N			2
MAMMALIA	<i>Trichosurus vulpecula</i>	Common Brushtail Possum	Y		Rare	1
REPTILIA	<i>Aprasia striolata</i>	Lined Worm-lizard	Y			1

## APPENDIX 3 – Flora search

FAMILY NAME	SPECIES	COMMON NAME	INDIG?	CONSERVATION STATUS		No. Records
				AUS	SA	
MALVACEAE	<i>Abutilon cryptopetalum ssp.</i>		Y			2
LEGUMINOSAE	<i>Acacia acinacea</i>	Wreath Wattle	Y			2
LEGUMINOSAE	<i>Acacia cupularis</i>	Cup Wattle	Y			7
LEGUMINOSAE	<i>Acacia cyclops</i>	Western Coastal Wattle	Y			9
LEGUMINOSAE	<i>Acacia dodonaefolia</i>	Hop-bush Wattle	Y		Rare	15
LEGUMINOSAE	<i>Acacia dodonaefolia X Acacia paradoxa</i>		Y			3
LEGUMINOSAE	<i>Acacia ligulata (NC)</i>	Umbrella Bush	Y			1
LEGUMINOSAE	<i>Acacia longifolia ssp.</i>	Sallow Wattle	Y			10
LEGUMINOSAE	<i>Acacia longifolia ssp. sophorae</i>	Coastal Wattle	Y			10
LEGUMINOSAE	<i>Acacia montana</i>	Mallee Wattle	Y		Rare	1
LEGUMINOSAE	<i>Acacia paradoxa</i>	Kangaroo Thorn	Y			9
LEGUMINOSAE	<i>Acacia pycnantha</i>	Golden Wattle	Y			10
LEGUMINOSAE	<i>Acacia saligna</i>	Golden Wreath Wattle	N			9
LEGUMINOSAE	<i>Acacia simmonsiana</i>	Hall's Wattle	Y		Rare	2
LEGUMINOSAE	<i>Acacia sp.</i>	Wattle	Y			2
LEGUMINOSAE	<i>Acacia spinescens</i>	Spiny Wattle	Y			7
ROSACEAE	<i>Acaena echinata</i>	Sheep's Burr	Y			6
ROSACEAE	<i>Acaena echinata var. (NC)</i>	Sheep's Burr	Y			1
ROSACEAE	<i>Acaena echinata var. echinata (NC)</i>	Sheep's Burr	Y			1
ROSACEAE	<i>Acaena novae-zelandiae</i>	Biddy-biddy	Y			1
ROSACEAE	<i>Acaena ovina</i>	Downy Sheep's Burr	Y			1
ROSACEAE	<i>Acaena sp.</i>	Sheep's Burr	Y			1
ROSACEAE	<i>Acaena X anserovina</i>	Hybrid Burr	Y			1
ORCHIDACEAE	<i>Acianthus pusillus</i>	Mosquito Orchid	Y			1
EPACRIDACEAE	<i>Acrotriche affinis</i>	Ridged Ground-berry	Y			13
EPACRIDACEAE	<i>Acrotriche cordata</i>	Blunt-leaf Ground-berry	Y			4
EPACRIDACEAE	<i>Acrotriche cordata X Acrotriche patula</i>	Hybrid Ground-berry	Y			1
EPACRIDACEAE	<i>Acrotriche depressa</i>	Native Currant	Y			4
EUPHORBIACEAE	<i>Adriana klotzschii (NC)</i>	Coast Bitter-bush	Y			1
EUPHORBIACEAE	<i>Adriana quadripartita</i>	Coast Bitter-bush	Y			1
GRAMINEAE	<i>Agrostis billardieri var. (NC)</i>	Blown-grass	Y			1
GRAMINEAE	<i>Aira caryophyllea</i>	Silvery Hair-grass	N			1
GRAMINEAE	<i>Aira cupaniana</i>	Small Hair-grass	N			2
GRAMINEAE	<i>Aira sp.</i>	Hair-grass	N			1
CASUARINACEAE	<i>Allocasuarina muelleriana ssp. muelleriana</i>	Common Oak-bush	Y			1
CASUARINACEAE	<i>Allocasuarina striata</i>	Stalked Oak-bush	Y			2
CASUARINACEAE	<i>Allocasuarina verticillata</i>	Drooping Sheoak	Y			14
RHODOMELACEAE	<i>Amansia pinnatifida</i>		Y			1
RHODOMELACEAE	<i>Amansia serrata</i>		Y			1
GRAMINEAE	<i>Ammophila arenaria</i>	Marram Grass	N			1
GRAMINEAE	<i>Amphipogon caricinus var. caricinus</i>	Long Grey-beard Grass	Y			2
LORANTHACEAE	<i>Amyema pendula ssp. pendula</i>	Drooping Mistletoe	Y			1
LORANTHACEAE	<i>Amyema preissii</i>	Wire-leaf Mistletoe	Y			1
PRIMULACEAE	<i>Anagallis arvensis</i>	Pimpernel	N			4

CERAMIACEAE	<i>Anotrichium crinitum</i>		Y			1
UMBELLIFERAE	<i>Apium annuum</i>	Annual Celery	Y			1
UMBELLIFERAE	<i>Apium prostratum</i> var. <i>filiforme</i>	Native Celery	Y			1
UMBELLIFERAE	<i>Apium prostratum</i> var. <i>prostratum</i>	Native Celery	Y			2
COMPOSITAE	<i>Arctotheca calendula</i>	Cape Weed	N			2
COMPOSITAE	<i>Argentipallium obtusifolium</i>	Blunt Everlasting	Y			1
COMPOSITAE	<i>Artemisia arborescens</i>	Silver Wormwood	N			1
LILIACEAE	<i>Arthropodium fimbriatum</i>	Nodding Vanilla-lily	Y			1
LILIACEAE	<i>Arthropodium</i> sp.	Vanilla-lily	Y			1
LILIACEAE	<i>Arthropodium strictum</i>	Common Vanilla-lily	Y			6
LILIACEAE	<i>Asparagus asparagoides</i> f.		N			22
LILIACEAE	<i>Asparagus asparagoides</i> f. <i>asparagoides</i>	Bridal Creeper	N			2
LILIACEAE	<i>Asparagus declinatus</i>		N			12
RUBIACEAE	<i>Asperula conferta</i>	Common Woodruff	Y			2
LILIACEAE	<i>Asphodelus fistulosus</i>	Onion Weed	N			3
COMPOSITAE	<i>Aster subulatus</i>	Aster-weed	N			1
EPACRIDACEAE	<i>Astroloma conostephioides</i>	Flame Heath	Y			1
EPACRIDACEAE	<i>Astroloma humifusum</i>	Cranberry Heath	Y			8
CHENOPODIACEAE	<i>Atriplex cinerea</i>	Coast Saltbush	Y			1
CHENOPODIACEAE	<i>Atriplex paludosa</i> ssp. <i>paludosa</i>	Marsh Saltbush	Y			1
CHENOPODIACEAE	<i>Atriplex semibaccata</i>	Berry Saltbush	Y			3
GRAMINEAE	<i>Austrofestuca littoralis</i>	Coast Fescue	Y			2
KALLYMENIACEAE	<i>Austrophyllis harveyana</i>		Y			2
GRAMINEAE	<i>Austrostipa acrocliata</i>	Graceful Spear-grass	Y			6
GRAMINEAE	<i>Austrostipa breviglumis</i>	Cane Spear-grass	Y		Rare	4
GRAMINEAE	<i>Austrostipa drummondii</i>	Cottony Spear-grass	Y			1
GRAMINEAE	<i>Austrostipa echinata</i>	Spiny Spear-grass	Y		Rare	3
GRAMINEAE	<i>Austrostipa elegantissima</i>	Feather Spear-grass	Y			5
GRAMINEAE	<i>Austrostipa eremophila</i>	Rusty Spear-grass	Y			4
GRAMINEAE	<i>Austrostipa flavescens</i>	Coast Spear-grass	Y			9
GRAMINEAE	<i>Austrostipa mollis</i>	Soft Spear-grass	Y			2
GRAMINEAE	<i>Austrostipa mundula</i>	Neat Spear-grass	Y			3
GRAMINEAE	<i>Austrostipa nodosa</i>	Tall Spear-grass	Y			2
GRAMINEAE	<i>Austrostipa scabra</i> ssp. <i>falcata</i>	Slender Spear-grass	Y			1
GRAMINEAE	<i>Austrostipa semibarbata</i>	Fibrous Spear-grass	Y			3
GRAMINEAE	<i>Austrostipa</i> sp.	Spear-grass	Y			6
GRAMINEAE	<i>Austrostipa tenuifolia</i>		Y		Rare	1
GRAMINEAE	<i>Avellinia michelii</i>	Avellinia	N			1
GRAMINEAE	<i>Avena barbata</i>	Bearded Oat	N			22
AZOLLACEAE	<i>Azolla filiculoides</i>	Pacific Azolla	Y			1
CERAMIACEAE	<i>Ballia callitricha</i>		Y			1
PROTEACEAE	<i>Banksia marginata</i>	Silver Banksia	Y			1
CYPERACEAE	<i>Baumea arthropophylla</i>	Swamp Twig-rush	Y			1
CYPERACEAE	<i>Baumea juncea</i>	Bare Twig-rush	Y			1
PITTOSPORACEAE	<i>Billardiera cymosa</i> (NC)	Sweet Apple-berry	Y			4
PITTOSPORACEAE	<i>Billardiera cymosa</i> ssp. <i>cymosa</i>	Sweet Apple-berry	Y			1
PITTOSPORACEAE	<i>Billardiera versicolor</i>	Yellow-flower Apple-berry	Y			2
COMPOSITAE	<i>Blennospora drummondii</i>	Dwarf Button-flower	Y			1
CYPERACEAE	<i>Bolboschoenus medianus</i>	Marsh Club-rush	Y			2
RUTACEAE	<i>Boronia coerulescens</i> ssp.	Blue Boronia	Y			1

	<i>coerulescens</i>					
EPACRIDACEAE	<i>Brachyloma ericoides</i> ssp. <i>ericoides</i>	Brush Heath	Y			2
GRAMINEAE	<i>Brachypodium distachyon</i>	False Brome	N			2
COMPOSITAE	<i>Brachyscome lineariloba</i>	Hard-head Daisy	Y			2
CRUCIFERAE	<i>Brassica rapa</i> ssp. <i>rapa</i>	Turnip Rape	N			1
CRUCIFERAE	<i>Brassica tournefortii</i>	Wild Turnip	N			5
GRAMINEAE	<i>Briza maxima</i>	Large Quaking-grass	N			8
GRAMINEAE	<i>Briza minor</i>	Lesser Quaking-grass	N			2
GRAMINEAE	<i>Bromus diandrus</i>	Great Brome	N			5
GRAMINEAE	<i>Bromus</i> sp.	Brome	Y			1
GOODENIACEAE	<i>Brunonia australis</i>	Blue Pincushion	Y			2
BORAGINACEAE	<i>Buglossoides arvensis</i>	Sheepweed	N			1
UMBELLIFERAE	<i>Bupleurum semicompositum</i>	Hare's Ear	N			1
LILIACEAE	<i>Burchardia umbellata</i>	Milkmaids	Y			5
PITTIOSPORACEAE	<i>Bursaria spinosa</i> ssp. <i>spinosa</i>	Sweet Bursaria	Y			12
LILIACEAE	<i>Caesia calliantha</i>	Blue Grass-lily	Y			3
CRUCIFERAE	<i>Cakile maritima</i> ssp. <i>maritima</i>	Two-horned Sea Rocket	N			5
ORCHIDACEAE	<i>Caladenia latifolia</i>	Pink Caladenia	Y			3
ORCHIDACEAE	<i>Caladenia verrucosa</i>	Yellow-club Spider-orchid	Y			1
PORTULACACEAE	<i>Calandrinia corrigioloides</i>	Strap Purslane	Y			1
PORTULACACEAE	<i>Calandrinia eremaea</i>	Dryland Purslane	Y			1
PORTULACACEAE	<i>Calandrinia granulifera</i>	Pigmy Purslane	Y			2
MYRTACEAE	<i>Callistemon rugulosus</i>	Scarlet Bottlebrush	Y			7
MYRTACEAE	<i>Callistemon rugulosus</i> var. <i>rugulosus</i> (NC)	Scarlet Bottlebrush	Y			3
MYRTACEAE	<i>Callistemon teretifolius</i>	Needle Bottlebrush	Y			1
CUPRESSACEAE	<i>Callitris gracilis</i>	Southern Cypress Pine	Y			3
DELESSERIACEAE	<i>Caloglossa leprieurii</i>		Y			3
MYRTACEAE	<i>Calytrix tetragona</i>	Common Fringe-myrtle	Y			7
CRUCIFERAE	<i>Camelina sativa</i>	False Flax	N			1
COMPOSITAE	<i>Carduus tenuiflorus</i>	Slender Thistle	N			1
AIZOACEAE	<i>Carpobrotus rossii</i>	Native Pigface	Y			1
AIZOACEAE	<i>Carpobrotus rossii</i> (NC)	Native Pigface	Y			6
COMPOSITAE	<i>Cassinia complanata</i>	Sticky Cassinia	Y			4
COMPOSITAE	<i>Cassinia</i> sp.	Cassinia	Y			1
COMPOSITAE	<i>Cassinia uncatata</i> (NC)	Sticky Cassinia	Y			2
LAURACEAE	<i>Cassytha glabella</i> f. <i>dispar</i>	Slender Dodder-laurel	Y			8
LAURACEAE	<i>Cassytha melantha</i>	Coarse Dodder-laurel	Y			1
GRAMINEAE	<i>Cenchrus clandestinus</i>	Kikuyu	N			2
GRAMINEAE	<i>Cenchrus longisetus</i>	Feather-top	N			1
COMPOSITAE	<i>Centaurea aspera</i>	Rough Star-thistle	N			1
COMPOSITAE	<i>Centaurea calcitrapa</i>	Star Thistle	N			1
GENTIANACEAE	<i>Centaurium</i> sp.	Centaury	N			3
GENTIANACEAE	<i>Centaurium tenuiflorum</i>	Branched Centaury	N			1
UMBELLIFERAE	<i>Centella asiatica</i>	Asian Centella	Y			1
COMPOSITAE	<i>Centipeda crateriformis</i> ssp. <i>compacta</i>	Desert Sneezeweed	Y			1
CENTROLEPIDACEAE	<i>Centrolepis polygyna</i>	Wiry Centrolepis	Y			1
CERATOPHYLLACEAE	<i>Ceratophyllum demersum</i>	Hornwort	Y		Rare	1
LILIACEAE	<i>Chamaescilla corymbosa</i> var. <i>corymbosa</i>	Blue Squill	Y			2

DELESSERIACEAE	<i>Chauviniella coriifolia</i>		Y			1
ADIANTACEAE	<i>Cheilanthes austrotenuifolia</i>	Annual Rock-fern	Y			3
PITTOSPORACEAE	<i>Cheiranthra alternifolia</i>	Hand-flower	Y			2
CHENOPODIACEAE	<i>Chenopodium album</i>	Fat Hen	N			2
CHENOPODIACEAE	<i>Chenopodium glaucum</i>	Glaucous Goosefoot	N			15
RHODOMELACEAE	<i>Chiracanthia arborea</i>		Y			1
GRAMINEAE	<i>Chloris truncata</i>	Windmill Grass	Y			1
COMPOSITAE	<i>Chondrilla juncea</i>	Skeleton Weed	N			1
CYPERACEAE	<i>Chorizandra enodis</i>	Black Bristle-rush	Y			1
COMPOSITAE	<i>Chrysanthemoides monilifera ssp. monilifera</i>	Boneseed	N			2
COMPOSITAE	<i>Chrysocephalum apiculatum</i>	Common Everlasting	Y			3
COMPOSITAE	<i>Chrysocephalum apiculatum (NC)</i>	Common Everlasting	Y			1
COMPOSITAE	<i>Chrysocephalum baxteri</i>	White Everlasting	Y			1
COMPOSITAE	<i>Cirsium vulgare</i>	Spear Thistle	N			1
RHODOMELACEAE	<i>Cladurus elatus</i>		Y			1
RANUNCULACEAE	<i>Clematis microphylla</i>	Old Man's Beard	Y			9
RANUNCULACEAE	<i>Clematis microphylla var. microphylla (NC)</i>	Old Man's Beard	Y			7
CODIACEAE	<i>Codium muelleri</i>		Y			1
POLYGALACEAE	<i>Comesperma polygaloides</i>	Mauve Milkwort	Y			2
POLYGALACEAE	<i>Comesperma volubile</i>	Love Creeper	Y			2
CONVOLVULACEAE	<i>Convolvulus angustissimus ssp.</i>		Y			1
CONVOLVULACEAE	<i>Convolvulus angustissimus ssp. peninsularum</i>	Grassland Bindweed	Y			1
CONVOLVULACEAE	<i>Convolvulus erubescens (NC)</i>	Australian Bindweed	Y			6
CONVOLVULACEAE	<i>Convolvulus remotus</i>	Grassy Bindweed	Y			3
COMPOSITAE	<i>Conyza bonariensis</i>	Flax-leaf Fleabane	N			1
RUTACEAE	<i>Correa eburnea</i>		Y		Vulnerable	1
RUTACEAE	<i>Correa reflexa var. reflexa (NC)</i>	Common Correa	Y			1
RUTACEAE	<i>Correa reflexa var. scabridula</i>	Common Correa	Y			1
ORCHIDACEAE	<i>Corybas expansus</i>	Dune Helmet-orchid	Y		Vulnerable	2
COMPOSITAE	<i>Cotula coronopifolia</i>	Water Buttons	N			4
COMPOSITAE	<i>Craspedia variabilis</i>	Billy-buttons	Y			1
DELESSERIACEAE	<i>Crassilingua marginifera</i>		Y			1
CRASSULACEAE	<i>Crassula colligata ssp. lamprosperma</i>		Y			1
CRASSULACEAE	<i>Crassula colorata var. acuminata</i>	Dense Crassula	Y			1
CRASSULACEAE	<i>Crassula decumbens var. decumbens</i>	Spreading Crassula	Y			1
CRASSULACEAE	<i>Crassula helmsii</i>	Swamp Crassula	Y			4
CRASSULACEAE	<i>Crassula sieberiana ssp. tetramera (NC)</i>	Australian Stonecrop	Y			2
RHAMNACEAE	<i>Cryptandra tomentosa</i>	Heath Cryptandra	Y			1
RHAMNACEAE	<i>Cryptandra tomentosa (NC)</i>	Heath Cryptandra	Y			4
LEGUMINOSAE	<i>Cullen australasicum</i>	Tall Scurf-pea	Y			1
GRACILARIACEAE	<i>Curdiea angustata</i>		Y			1
COMPOSITAE	<i>Cymbonotus preissianus</i>	Austral Bear's-ear	Y			1
GRAMINEAE	<i>Cynodon dactylon var. dactylon</i>	Couch	N			1
CYPERACEAE	<i>Cyperus laevigatus</i>	Bore-drain Sedge	Y			1
DRYOPTERIDACEAE	<i>Cyrtomium falcatum</i>	Holly Fern	N			1
ORCHIDACEAE	<i>Cyrtostylis robusta</i>	Robust Gnat-orchid	Y			6
CYTOSEIRACEAE	<i>Cystophora congesta</i>		Y			1
CYTOSEIRACEAE	<i>Cystophora grevillei</i>		Y			1
CYTOSEIRACEAE	<i>Cystophora moniliformis</i>		Y			1

CYTOSEIRACEAE	<i>Cystophora torulosa</i>		?			1
GRAMINEAE	<i>Dactylis glomerata</i>	Cocksfoot	N			1
GOODENIACEAE	<i>Dampiera dysantha</i>	Shrubby Dampiera	Y			2
GOODENIACEAE	<i>Dampiera rosmarinifolia</i>	Rosemary Dampiera	Y			14
GOODENIACEAE	<i>Dampiera sp.</i>	Dampiera	Y			2
GRAMINEAE	<i>Danthonia sp. (NC)</i>	Wallaby-grass	Y			3
DASYACEAE	<i>Dasya villosa</i>		Y			1
UMBELLIFERAE	<i>Daucus glochidiatus</i>	Native Carrot	Y			3
LEGUMINOSAE	<i>Daviesia benthamii ssp. humilis</i>	Mallee Bitter-pea	Y		Rare	2
LEGUMINOSAE	<i>Daviesia brevifolia</i>	Leafless Bitter-pea	Y			2
LEGUMINOSAE	<i>Daviesia pectinata</i>	Zig-zag Bitter-pea	Y		Rare	8
LILIACEAE	<i>Dianella brevicaulis</i>	Short-stem Flax-lily	Y			9
LILIACEAE	<i>Dianella brevicaulis/revoluta var.</i>	Black-anther Flax-lily	Y			1
LILIACEAE	<i>Dianella longifolia var. ? (NC)</i>	Pale Flax-lily	Y			1
LILIACEAE	<i>Dianella revoluta (NC)</i>		Y			6
LILIACEAE	<i>Dianella revoluta var. revoluta</i>	Black-anther Flax-lily	Y			6
CONVOLVULACEAE	<i>Dichondra repens</i>	Kidney Weed	Y			2
GRAMINEAE	<i>Digitaria sanguinalis</i>	Crab Grass	N			1
LEGUMINOSAE	<i>Dillwynia hispida</i>	Red Parrot-pea	Y			5
LEGUMINOSAE	<i>Dillwynia sericea</i>	Showy Parrot-pea	Y			1
LEGUMINOSAE	<i>Dipogon lignosus</i>	Lavatory Creeper	N			1
RHODOMELACEAE	<i>Dipterosiphonia dendritica</i>		Y			1
GRAMINEAE	<i>Distichlis distichophylla</i>	Emu-grass	Y			4
COMPOSITAE	<i>Dirtrichia graveolens</i>	Stinkweed	N			2
ORCHIDACEAE	<i>Diuris palustris</i>	Little Donkey-orchid	Y			3
SAPINDACEAE	<i>Dodonaea baueri</i>	Crinkled Hop-bush	Y			10
SAPINDACEAE	<i>Dodonaea humilis</i>	Dwarf Hop-bush	Y			2
SAPINDACEAE	<i>Dodonaea viscosa ssp.</i>	Sticky Hop-bush	Y			1
SAPINDACEAE	<i>Dodonaea viscosa ssp. spatulata</i>	Sticky Hop-bush	Y			2
DROSERACEAE	<i>Drosera glanduligera</i>	Scarlet Sundew	Y			1
DROSERACEAE	<i>Drosera macrantha ssp. planchonii</i>	Climbing Sundew	Y			9
DROSERACEAE	<i>Drosera sp.</i>	Sundew	Y			1
DROSERACEAE	<i>Drosera whittakeri</i>		Y			1
DROSERACEAE	<i>Drosera whittakeri (NC)</i>	Scented Sundew	Y			5
BORAGINACEAE	<i>Echium plantagineum</i>	Salvation Jane	N			3
ALARIACEAE	<i>Ecklonia radiata</i>		Y			5
COMPOSITAE	<i>Eclipta platyglossa</i>	Yellow Twin-heads	Y			1
ECTOCARPACEAE	<i>Ectocarpus siliculosus</i>		Y			1
GRAMINEAE	<i>Ehrharta calycina</i>	Perennial Veldt Grass	N			3
GRAMINEAE	<i>Ehrharta longiflora</i>	Annual Veldt Grass	N			8
GRAMINEAE	<i>Ehrharta sp.</i>	Veldt Grass	N			1
GRAMINEAE	<i>Ehrharta villosa var. maxima</i>	Pyp Grass	N			4
CHENOPODIACEAE	<i>Einadia nutans ssp.</i>	Climbing Saltbush	Y			1
CHENOPODIACEAE	<i>Einadia nutans ssp. nutans</i>	Climbing Saltbush	Y			3
CYPERACEAE	<i>Eleocharis acuta</i>	Common Spike-rush	Y			1
CYPERACEAE	<i>Eleocharis gracilis</i>	Slender Spike-rush	Y			2
GRAMINEAE	<i>Elymus scaber var. scaber (NC)</i>	Native Wheat-grass	Y			3
POLYGONACEAE	<i>Emex australis</i>	Three-corner Jack	N			2
CHENOPODIACEAE	<i>Enchylaena tomentosa var.</i>	Ruby Saltbush	Y			3
CHENOPODIACEAE	<i>Enchylaena tomentosa var. tomentosa</i>	Ruby Saltbush	Y			7
GRAMINEAE	<i>Enneapogon nigricans</i>	Black-head Grass	Y			1



ONAGRACEAE	<i>Epilobium billardierianum</i> ssp. <i>billardierianum</i>	Robust Willow-herb	Y			2
ONAGRACEAE	<i>Epilobium billardierianum</i> ssp. <i>cinereum</i>	Variable Willow-herb	Y			1
ONAGRACEAE	<i>Epilobium pallidiflorum</i>	Showy Willow-herb	Y			2
GRAMINEAE	<i>Eragrostis brownii</i>	Bentham's Love-grass	Y			2
GRAMINEAE	<i>Eragrostis curvula</i>	African Love-grass	N			1
GERANIACEAE	<i>Erodium botrys</i>	Long Heron's-bill	N			1
MYRTACEAE	<i>Eucalyptus angulosa</i>	Coast Ridge-fruited Mallee	Y			3
MYRTACEAE	<i>Eucalyptus calycogona</i> ssp. <i>calycogona</i>	Square-fruit Mallee	Y			4
MYRTACEAE	<i>Eucalyptus cneorifolia</i>	Kangaroo Island Narrow-leaf Mallee	Y			1
MYRTACEAE	<i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i>	Coastal White Mallee	Y			3
MYRTACEAE	<i>Eucalyptus fasciculosa</i>	Pink Gum	Y		Rare	11
MYRTACEAE	<i>Eucalyptus gracilis</i>	Yorrell	Y			2
MYRTACEAE	<i>Eucalyptus incrassata</i>	Ridge-fruited Mallee	Y			12
MYRTACEAE	<i>Eucalyptus leptophylla</i>	Narrow-leaf Red Mallee	Y			5
MYRTACEAE	<i>Eucalyptus leptophylla</i> (NC)	Narrow-leaf Red Mallee	Y			2
MYRTACEAE	<i>Eucalyptus obliqua</i>	Messmate Stringybark	Y			1
MYRTACEAE	<i>Eucalyptus odorata</i>	Peppermint Box	Y			18
MYRTACEAE	<i>Eucalyptus odorata</i> (NC)	Peppermint Box	Y			1
MYRTACEAE	<i>Eucalyptus oleosa</i> (NC)	Red Mallee	Y			1
MYRTACEAE	<i>Eucalyptus oleosa</i> ssp. <i>ampliata</i>	Red Mallee	Y			3
MYRTACEAE	<i>Eucalyptus phenax</i> ssp. <i>compressa</i>	Kangaroo Island Mallee	Y		Rare	1
MYRTACEAE	<i>Eucalyptus phenax</i> ssp. <i>phenax</i>	White Mallee	Y			4
MYRTACEAE	<i>Eucalyptus porosa</i>	Mallee Box	Y			1
MYRTACEAE	<i>Eucalyptus socialis</i> ssp. <i>viridans</i>	Beaked Red Mallee	Y			2
MYRTACEAE	<i>Eucalyptus</i> sp.		Y			10
MYRTACEAE	<i>Eucalyptus viminalis</i> ssp. <i>cygnetensis</i>	Rough-bark Manna Gum	Y			1
EUPHORBIACEAE	<i>Euphorbia paralias</i>	Sea Spurge	N			4
EUPHORBIACEAE	<i>Euphorbia terracina</i>	False Caper	N			8
SCROPHULARIACEAE	<i>Euphrasia collina</i> ssp. <i>osbornii</i>	Osborn's Eyebright	Y	Endangered	Endangered	2
LEGUMINOSAE	<i>Eutaxia microphylla</i>	Common Eutaxia	Y			3
SANTALACEAE	<i>Exocarpos sparteus</i>	Slender Cherry	Y			8
SANTALACEAE	<i>Exocarpos syrticola</i>	Coast Cherry	Y			2
CYPERACEAE	<i>Ficinia nodosa</i>	Knobby Club-rush	Y			5
CYPERACEAE	<i>Gahnia deusta</i>	Limestone Saw-sedge	Y			17
CYPERACEAE	<i>Gahnia filum</i>	Thatching Grass	Y			1
CYPERACEAE	<i>Gahnia lanigera</i>	Black Grass Saw-sedge	Y			2
CYPERACEAE	<i>Gahnia radula</i>	Thatch Saw-sedge	Y		Rare	1
RUBIACEAE	<i>Galium compactum</i>	Compact Bedstraw	Y			1
RUBIACEAE	<i>Galium murale</i>	Small Bedstraw	N			1
GERANIACEAE	<i>Geranium potentilloides</i> var. <i>potentilloides</i>	Downy Geranium	Y			1
GERANIACEAE	<i>Geranium</i> sp.	Geranium	Y			2
CYSTOCLONIACEAE	<i>Gloiophyllis barkeriae</i>		Y			1
LEGUMINOSAE	<i>Glycine clandestina</i> var. (NC)	Twining Glycine	Y			1
LEGUMINOSAE	<i>Glycine rubiginosa</i>	Twining Glycine	Y			1
ASCLEPIADACEAE	<i>Gomphocarpus cancellatus</i>	Broad-leaf Cotton-bush	N			1
ASCLEPIADACEAE	<i>Gomphocarpus fruticosus</i>	Narrow-leaf Cotton-bush	N			1

HALORAGACEAE	<i>Gonocarpus mezianus</i>	Broad-leaf Raspwort	Y			8
GOODENIACEAE	<i>Goodenia blackiana</i>	Native Primrose	Y			1
GOODENIACEAE	<i>Goodenia geniculata</i>	Bent Goodenia	Y			5
GOODENIACEAE	<i>Goodenia ovata</i>	Hop Goodenia	Y			1
GOODENIACEAE	<i>Goodenia pinnatifida</i>	Cut-leaf Goodenia	Y			1
GOODENIACEAE	<i>Goodenia varia</i>	Sticky Goodenia	Y			3
GOODENIACEAE	<i>Goodenia willisiana</i>	Silver Goodenia	Y			1
GRAMINEAE	<i>Gramineae sp.</i>	Grass Family	Y			18
PROTEACEAE	<i>Grevillea ilicifolia complex</i>	Holly-leaf Grevillea	Y			1
PROTEACEAE	<i>Grevillea ilicifolia ssp. ilicifolia</i>	Holly-leaf Grevillea	Y			1
PROTEACEAE	<i>Grevillea lavandulacea ssp. lavandulacea</i>	Spider-flower	Y			2
PROTEACEAE	<i>Grevillea lavandulacea var.</i>	Spider-flower	Y			3
PROTEACEAE	<i>Grevillea lavandulacea var. sericea (NC)</i>	Spider-flower	Y			2
CERAMIACEAE	<i>Griffithsia gunniana</i>		Y			1
PROTEACEAE	<i>Hakea carinata</i>	Erect Hakea	Y			1
PROTEACEAE	<i>Hakea mitchellii</i>	Heath Needlebush	Y			7
PROTEACEAE	<i>Hakea rugosa</i>	Dwarf Hakea	Y			5
PROTEACEAE	<i>Hakea vittata</i>	Limestone Needlebush	Y			7
BORAGINACEAE	<i>Halgania cyanea</i>	Rough Blue-flower	Y			4
CERAMIACEAE	<i>Haloplegma preissii</i>		Y			1
DELESSERIACEAE	<i>Haraldiophyllum erosum</i>		Y			1
LEGUMINOSAE	<i>Hardenbergia violacea</i>	Native Lilac	Y			2
COMPOSITAE	<i>Helichrysum leucopsidium</i>	Satin Everlasting	Y			5
BORAGINACEAE	<i>Heliotropium curassavicum</i>	Smooth Heliotrope	N			1
BORAGINACEAE	<i>Heliotropium supinum</i>	Creeping Heliotrope	N			1
COMPOSITAE	<i>Helminthotheca echioides</i>	Ox-tongue	N			1
AMARANTHACEAE	<i>Hemichroa pentandra</i>	Trailing Hemichroa	Y			1
DELESSERIACEAE	<i>Hemineura frondosa</i>		Y			1
DELESSERIACEAE	<i>Heterodoxia denticulata</i>		Y			2
DILLENIAEAE	<i>Hibbertia devitata</i>	Smooth Guinea-flower	Y			3
DILLENIAEAE	<i>Hibbertia riparia</i>	Bristly Guinea-flower	Y			1
DILLENIAEAE	<i>Hibbertia riparia (NC)</i>	Guinea-flower	Y			3
DILLENIAEAE	<i>Hibbertia sericea</i>	Silky Guinea-flower	Y			4
DILLENIAEAE	<i>Hibbertia sericea var. (NC)</i>	Silky Guinea-flower	Y			3
DILLENIAEAE	<i>Hibbertia sericea var. scabrifolia (NC)</i>	Rough-leaf Guinea-flower	Y			1
CRUCIFERAE	<i>Hirschfeldia incana</i>	Hoary Mustard	N			1
GRAMINEAE	<i>Hordeum glaucum</i>	Blue Barley-grass	N			1
GRAMINEAE	<i>Hordeum sp.</i>		N			1
LEGUMINOSAE	<i>Hovea trisperma</i>	Common Hovea	N			1
VIOLACEAE	<i>Hybanthus floribundus ssp. floribundus</i>	Shrub Violet	Y			1
UMBELLIFERAE	<i>Hydrocotyle capillaris</i>	Thread Pennywort	Y			1
UMBELLIFERAE	<i>Hydrocotyle sp.</i>	Pennywort	Y			1
UMBELLIFERAE	<i>Hydrocotyle verticillata</i>	Shield Pennywort	Y			6
DELESSERIACEAE	<i>Hymenena affinis</i>		Y			1
GRAMINEAE	<i>Hypparrhenia hirta</i>	Tambookie Grass	N			1
GUTTIFERAE	<i>Hypericum perforatum</i>	St John's Wort	N			1
COMPOSITAE	<i>Hypochaeris glabra</i>	Smooth Cat's Ear	N			4
COMPOSITAE	<i>Hypochaeris radicata</i>	Rough Cat's Ear	N			3
DELESSERIACEAE	<i>Hypoglossum armatum</i>		Y			1

HYPOXIDACEAE	<i>Hypoxis glabella</i> var. <i>glabella</i>	Tiny Star	Y			1
CONVOLVULACEAE	<i>Ipomoea indica</i>	Purple Morning-glory	N			1
IRIDACEAE	<i>Iris albicans</i>	Flag Iris	N			1
CYPERACEAE	<i>Isolepis cernua</i>	Nodding Club-rush	Y			2
CYPERACEAE	<i>Isolepis fluitans</i>	Floating Club-rush	Y			1
CYPERACEAE	<i>Isolepis inundata</i>	Swamp Club-rush	Y			1
COMPOSITAE	<i>Ixodia achillaeoides</i> ssp. <i>alata</i>	Hills Daisy	Y			1
CORALLINACEAE	<i>Jania affinis</i>		Y			1
JUNCACEAE	<i>Juncus acutus</i>	Sharp Rush	N			2
JUNCACEAE	<i>Juncus bufonius</i>	Toad Rush	Y			1
JUNCACEAE	<i>Juncus kraussii</i>	Sea Rush	Y			2
LEGUMINOSAE	<i>Kennedia prostrata</i>	Scarlet Runner	Y			6
MYRTACEAE	<i>Kunzea pomifera</i>	Muntries	Y			8
GRAMINEAE	<i>Lachnagrostis aemula</i>	Blown-grass	Y			1
GRAMINEAE	<i>Lachnagrostis billardierei</i> ssp. <i>billardierei</i>	Coast Blown-grass	Y			2
GRAMINEAE	<i>Lachnagrostis filiformis</i>	Common Blown-grass	Y			2
GRAMINEAE	<i>Lachnagrostis robusta</i>	Tall Blown-grass	Y		Rare	1
COMPOSITAE	<i>Lagenophora huegelii</i>	Coarse Bottle-daisy	Y			1
GRAMINEAE	<i>Lagurus ovatus</i>	Hare's Tail Grass	N			17
STERCULIACEAE	<i>Lasiopetalum baueri</i>	Slender Velvet-bush	Y			5
MALVACEAE	<i>Lawrenzia glomerata</i>	Clustered Lawrenzia	Y			1
MALVACEAE	<i>Lawrenzia spicata</i>	Salt Lawrenzia	Y			2
MALVACEAE	<i>Lawrenzia squamata</i>	Thorny Lawrenzia	Y			1
LEATHESIAEAE	<i>Leathesia difformis</i>		Y			1
CERAMIACEAE	<i>Lejolisia aegagropila</i>		Y			1
RHODOMELACEAE	<i>Lenormandia latifolia</i>		Y			1
RHODOMELACEAE	<i>Lenormandia marginata</i>		Y			1
CRUCIFERAE	<i>Lepidium sativum</i>	Garden Cress	N			1
RESTIONACEAE	<i>Lepidobolus drapetocoleus</i>	Scale Shedder	Y			1
CYPERACEAE	<i>Lepidosperma carphoides</i>	Black Rapier-sedge	Y			8
CYPERACEAE	<i>Lepidosperma concavum</i>	Spreading Sword-sedge	Y			8
CYPERACEAE	<i>Lepidosperma concavum/congestum/laterale</i>	Sword-sedge	Y			1
CYPERACEAE	<i>Lepidosperma congestum</i>		Y			3
CYPERACEAE	<i>Lepidosperma congestum</i> (NC)	Clustered Sword-sedge	Y			3
CYPERACEAE	<i>Lepidosperma curtisiae</i>	Little Sword-sedge	Y			1
CYPERACEAE	<i>Lepidosperma gladiatum</i>	Coast Sword-sedge	Y			1
CYPERACEAE	<i>Lepidosperma viscidum</i>	Sticky Sword-sedge	Y			4
COMPOSITAE	<i>Leptorhynchus scaber</i>	Annual Buttons	Y		Rare	1
COMPOSITAE	<i>Leptorhynchus squamatus</i> ssp. <i>squamatus</i>	Scaly Buttons	Y			2
MYRTACEAE	<i>Leptospermum laevigatum</i>	Coast Tea-tree	N			18
MYRTACEAE	<i>Leptospermum myrsinoides</i>	Heath Tea-tree	Y			2
EPACRIDACEAE	<i>Leucopogon costatus</i>	Twiggy Beard-heath	Y			1
EPACRIDACEAE	<i>Leucopogon hirsutus</i>	Hairy Beard-heath	Y		Rare	1
EPACRIDACEAE	<i>Leucopogon parviflorus</i>	Coast Beard-heath	Y			4
EPACRIDACEAE	<i>Leucopogon</i> sp.	Beard-heath	Y			1
STYLIDIACEAE	<i>Levenhookia dubia</i>	Hairy Stylewort	Y			2
UMBELLIFERAE	<i>Lilaeopsis polyantha</i>	Australian Lilaeopsis	Y			1
LIMONIACEAE	<i>Limonium binervosum</i>	Dwarf Sea-lavender	N			1
SCROPHULARIACEAE	<i>Limosella australis</i>	Australian Mudwort	Y			1
LINACEAE	<i>Linum marginale</i>	Native Flax	Y			7

CAMPANULACEAE	<i>Lobelia anceps</i>	Angled Lobelia	Y		4
CAMPANULACEAE	<i>Lobelia gibbosa (NC)</i>	Tall Lobelia	Y		1
LOGANIACEAE	<i>Logania linifolia</i>	Flax-leaf Logania	Y		4
LOGANIACEAE	<i>Logania minor</i>	Spoon-leaf Logania	Y		3
LILIACEAE	<i>Lomandra collina</i>	Sand Mat-rush	Y		12
LILIACEAE	<i>Lomandra densiflora</i>	Soft Tussock Mat-rush	Y		10
LILIACEAE	<i>Lomandra effusa</i>	Scented Mat-rush	Y		4
LILIACEAE	<i>Lomandra glauca (NC)</i>	Pale Mat-rush	Y		2
LILIACEAE	<i>Lomandra juncea</i>	Desert Mat-rush	Y		5
LILIACEAE	<i>Lomandra leucocephala ssp. robusta</i>	Woolly Mat-rush	Y		2
LILIACEAE	<i>Lomandra micrantha ssp.</i>	Small-flower Mat-rush	Y		4
LILIACEAE	<i>Lomandra micrantha ssp. micrantha</i>	Small-flower Mat-rush	Y		3
LILIACEAE	<i>Lomandra micrantha ssp. tuberculata</i>	Small-flower Mat-rush	Y		1
LILIACEAE	<i>Lomandra multiflora ssp. dura</i>	Hard Mat-rush	Y		9
LILIACEAE	<i>Lomandra sororia</i>	Sword Mat-rush	Y		2
LEGUMINOSAE	<i>Lotus australis</i>	Austral Trefoil	Y		1
JUNCACEAE	<i>Luzula meridionalis</i>	Common Wood-rush	Y		2
SOLANACEAE	<i>Lycium ferocissimum</i>	African Boxthorn	N		1425
LABIATAE	<i>Lycopus australis</i>	Australian Gipsywort	Y		2
LORANTHACEAE	<i>Lysiana exocarpi ssp. exocarpi</i>	Harlequin Mistletoe	Y		4
LABIATAE	<i>Marrubium vulgare</i>	Horehound	N		1
LEGUMINOSAE	<i>Medicago polymorpha var. polymorpha</i>	Burr-medic	N		3
LEGUMINOSAE	<i>Medicago sativa</i>	Lucerne	N		1
LEGUMINOSAE	<i>Medicago truncatula</i>	Barrel Medic	N		3
MYRTACEAE	<i>Melaleuca acuminata ssp. acuminata</i>	Mallee Honey-myrtle	Y		2
MYRTACEAE	<i>Melaleuca brevifolia</i>	Short-leaf Honey-myrtle	Y		1
MYRTACEAE	<i>Melaleuca decussata</i>	Totem-poles	Y		2
MYRTACEAE	<i>Melaleuca halmaturorum</i>	Swamp Paper-bark	Y		5
MYRTACEAE	<i>Melaleuca lanceolata</i>	Dryland Tea-tree	Y		9
MYRTACEAE	<i>Melaleuca lanceolata ssp. lanceolata (NC)</i>	Dryland Tea-tree	Y		1
MYRTACEAE	<i>Melaleuca sp.</i>	Tea-tree	Y		11
MYRTACEAE	<i>Melaleuca uncinata</i>	Broombush	Y		4
LEGUMINOSAE	<i>Melilotus indicus</i>	King Island Melilot	N		2
LABIATAE	<i>Mentha spicata f. B (B.Copley 1119)</i>	Spearmint	N		1
AIZOACEAE	<i>Mesembryanthemum crystallinum</i>	Common Iceplant	N		1
CORALLINACEAE	<i>Metagoniolithon chara</i>		Y		2
ORCHIDACEAE	<i>Microtis arenaria</i>	Notched Onion-orchid	Y		1
COMPOSITAE	<i>Millotia muelleri</i>	Common Bow-flower	Y		2
SCROPHULARIACEAE	<i>Mimulus repens</i>	Creeping Monkey-flower	Y		1
COMPOSITAE	<i>Minuria leptophylla</i>	Minnie Daisy	Y		1
IRIDACEAE	<i>Moraea setifolia</i>	Thread Iris	N		2
Major Group only - Mosses	<i>Moss sp.</i>		Y		1
POLYGONACEAE	<i>Muehlenbeckia adpressa</i>	Climbing Lignum	Y		2
POLYGONACEAE	<i>Muehlenbeckia gunnii</i>	Coastal Climbing Lignum	Y		14
LILIACEAE	<i>Muscari armeniacum</i>	Grape Hyacinth	N		1
MYOPORACEAE	<i>Myoporum insulare</i>	Common Boobialla	Y		3

MYOPORACEAE	<i>Myoporum platycarpum</i> ssp. <i>perbellum</i>	Mallee Sandalwood	Y			1
BORAGINACEAE	<i>Myosotis</i> sp.	Forget-me-not	Y			2
HALORAGACEAE	<i>Myriophyllum amphibium</i>	Broad Milfoil	Y		Rare	1
HALORAGACEAE	<i>Myriophyllum caput-medusae</i>	Coarse Milfoil	Y			2
HALORAGACEAE	<i>Myriophyllum salsugineum</i>	Lake Milfoil	Y			1
BORAGINACEAE	<i>Neatostema apulum</i>	Hairy Sheepweed	N			1
GRAMINEAE	<i>Neurachne alopecuroidea</i>	Fox-tail Mulga-grass	Y			3
SOLANACEAE	<i>Nicotiana glauca</i>	Tree Tobacco	N			1
DELESSERIACEAE	<i>Nitospinoso pristoidea</i>		Y			1
NIZYMENIACEAE	<i>Nizymania australis</i>		Y			1
NYMPHAEACEAE	<i>Nymphaea alba</i>	White Water-lily	N			1
ONAGRACEAE	<i>Oenothera stricta</i> ssp. <i>stricta</i>	Common Evening Primrose	N			3
OLEACEAE	<i>Olea europaea</i> ssp.	Olive	N			16
OLEACEAE	<i>Olea europaea</i> ssp. <i>europaea</i>	Olive	N			1
COMPOSITAE	<i>Olearia axillaris</i>	Coast Daisy-bush	Y			14
COMPOSITAE	<i>Olearia decurrens</i>	Winged Daisy-bush	Y			3
COMPOSITAE	<i>Olearia floribunda</i>	Heath Daisy-bush	Y			2
COMPOSITAE	<i>Olearia pannosa</i> ssp. <i>pannosa</i>	Silver Daisy-bush	Y	Vulnerable	Vulnerable	8
COMPOSITAE	<i>Olearia passerinoides</i> ssp. <i>glutescens</i>	Sticky Daisy-bush	Y		Rare	4
COMPOSITAE	<i>Olearia ramulosa</i>	Twiggy Daisy-bush	Y			9
RUBIACEAE	<i>Opercularia turpis</i>	Twiggy Stinkweed	Y			4
OPHIOGLOSSACEAE	<i>Ophioglossum lusitanicum</i>	Austral Adder's-tongue	Y			3
CACTACEAE	<i>Opuntia puberula</i>		N			1
CACTACEAE	<i>Opuntia</i> sp.		N			2
CACTACEAE	<i>Opuntia stricta</i>	Erect Prickly Pear	N			3
LILIACEAE	<i>Ornithogalum arabicum</i>	Star Of Africa	N			1
RHODOMELACEAE	<i>Osmundaria prolifera</i>		Y			1
OXALIDACEAE	<i>Oxalis perennans</i>	Native Sorrel	Y			2
OXALIDACEAE	<i>Oxalis perennans</i> (NC)	Native Sorrel	Y			4
OXALIDACEAE	<i>Oxalis pes-caprae</i>	Soursob	N			4
OXALIDACEAE	<i>Oxalis purpurea</i>	One-o'clock	N			2
OXALIDACEAE	<i>Oxalis</i> sp.	Sorrel	Y			1
COMPOSITAE	<i>Ozothamnus retusus</i>	Notched Bush-everlasting	Y			7
COMPOSITAE	<i>Ozothamnus turbinatus</i>	Coast Bush-everlasting	Y			6
DICTYOTACEAE	<i>Pachydictyon polycladum</i>		Y			1
GRAMINEAE	<i>Parapholis incurva</i>	Curly Ryegrass	N			1
LEGUMINOSAE	<i>Paraserianthes lophantha</i>	Cape Leeuwin Wattle	Y			3
GRAMINEAE	<i>Paspalum vaginatum</i>	Salt-water Couch	N			1
MALVACEAE	<i>Pavonia hastata</i>	Pink Pavonia	N			1
GERANIACEAE	<i>Pelargonium australe</i>	Austral Stork's-bill	Y			1
GRAMINEAE	<i>Phalaris minor</i>	Lesser Canary-grass	N			12
RUTACEAE	<i>Philotheca pungens</i>	Prickly Wax-flower	Y			2
COMPOSITAE	<i>Picnomon acarna</i>	Soldier Thistle	N			2
COMPOSITAE	<i>Picris squarrosa</i>	Squat Picris	Y		Rare	1
THYMELAEACEAE	<i>Pimelea curviflora</i> var. <i>sericea</i>	Curved Riceflower	Y			1
THYMELAEACEAE	<i>Pimelea glauca</i>	Smooth Riceflower	Y			12
THYMELAEACEAE	<i>Pimelea humilis</i>	Low Riceflower	Y			2
THYMELAEACEAE	<i>Pimelea phyllicoides</i>	Heath Riceflower	Y			1
THYMELAEACEAE	<i>Pimelea serpyllifolia</i> ssp. <i>serpyllifolia</i>	Thyme Riceflower	Y			26

THYMELAEACEAE	<i>Pimelea sp.</i>	Riceflower	Y			2
THYMELAEACEAE	<i>Pimelea stricta</i>	Erect Riceflower	Y			10
PINACEAE	<i>Pinus halepensis</i>	Aleppo Pine	N			4
GRAMINEAE	<i>Piptatherum miliaceum</i>	Rice Millet	N			1
PLANTAGINACEAE	<i>Plantago bellardii</i>	Hairy Plantain	N			5
PLANTAGINACEAE	<i>Plantago coronopus ssp.</i>	Bucks-horn Plantain	N			1
PLANTAGINACEAE	<i>Plantago coronopus ssp. coronopus</i>	Bucks-horn Plantain	N			4
PLANTAGINACEAE	<i>Plantago hispida</i>	Hairy Plantain	Y			3
PLANTAGINACEAE	<i>Plantago lanceolata var.</i>	Ribwort	N			2
PLANTAGINACEAE	<i>Plantago sp.</i>	Plantain	Y			1
PLANTAGINACEAE	<i>Plantago varia</i>	Variable Plantain	Y			1
GRAMINEAE	<i>Poa crassicaudex</i>	Thick-stem Tussock-grass	Y			1
GRAMINEAE	<i>Poa labillardieri var. labillardieri</i>	Common Tussock-grass	Y			1
GRAMINEAE	<i>Poa poiformis var. poiformis</i>	Coast Tussock-grass	Y			1
GRAMINEAE	<i>Poa sp.</i>	Meadow-grass/Tussock-grass	Y			1
COMPOSITAE	<i>Podolepis tepperi</i>	Delicate Copper-wire Daisy	Y			1
COMPOSITAE	<i>Podotheca angustifolia</i>	Sticky Long-heads	Y			1
GRAMINEAE	<i>Polypogon monspeliensis</i>	Annual Beard-grass	N			3
RHODOMELACEAE	<i>Polysiphonia crassiuscula</i>		Y			1
RHAMNACEAE	<i>Pomaderris oraria (NC)</i>	Coast Pomaderris	Y			3
RHAMNACEAE	<i>Pomaderris paniculosa ssp. paniculosa</i>	Mallee Pomaderris	Y			6
RHAMNACEAE	<i>Pomaderris paniculosa ssp. paralia</i>	Coast Pomaderris	Y			1
EUPHORBIACEAE	<i>Poranthera microphylla</i>	Small Poranthera	Y			1
EUPHORBIACEAE	<i>Poranthera triandra</i>	Three-petal Poranthera	Y			1
POTAMOGETONACEAE	<i>Potamogeton crispus</i>	Curly Pondweed	Y			1
POTAMOGETONACEAE	<i>Potamogeton pectinatus</i>	Fennel Pondweed	Y			3
ORCHIDACEAE	<i>Prasophyllum elatum</i>	Tall Leek-orchid	Y			1
LABIATAE	<i>Prostanthera aspalathoides</i>	Scarlet Mintbush	Y			7
ORCHIDACEAE	<i>Pterostylis biseta</i>	Two-bristle Greenhood	Y			1
ORCHIDACEAE	<i>Pterostylis curta</i>	Blunt Greenhood	Y		Rare	1
ORCHIDACEAE	<i>Pterostylis dolichochila</i>	Mallee Shell-orchid	Y			1
ORCHIDACEAE	<i>Pterostylis nana</i>	Dwarf Greenhood	Y			1
ORCHIDACEAE	<i>Pterostylis nutans</i>	Nodding Greenhood	Y			1
AMARANTHACEAE	<i>Ptilotus erubescens</i>	Hairy-tails	Y		Rare	1
AMARANTHACEAE	<i>Ptilotus spathulatus</i>	Pussy-tails	Y			1
AMARANTHACEAE	<i>Ptilotus spathulatus f. spathulatus (NC)</i>	Pussy-tails	Y			1
GRAMINEAE	<i>Puccinellia stricta</i>	Australian Saltmarsh-grass	Y			2
LEGUMINOSAE	<i>Pultenaea canaliculata</i>	Soft Bush-pea	Y			2
LEGUMINOSAE	<i>Pultenaea densifolia</i>	Dense Bush-pea	Y			7
LEGUMINOSAE	<i>Pultenaea tenuifolia</i>	Narrow-leaf Bush-pea	Y			12
LEGUMINOSAE	<i>Pultenaea trinervis</i>	Three-nerve Bush-pea	Y			2
ORCHIDACEAE	<i>Pyrorchis nigricans</i>	Black Fire-orchid	Y			1
COMPOSITAE	<i>Reichardia tingitana</i>	False Sowthistle	N			8
LEGUMINOSAE	<i>Retama raetam</i>	White Weeping Broom	N			1
CHENOPODIACEAE	<i>Rhagodia candolleana ssp.</i>	Sea-berry Saltbush	Y			5
CHENOPODIACEAE	<i>Rhagodia candolleana ssp. candolleana</i>	Sea-berry Saltbush	Y			10

RHAMNACEAE	<i>Rhamnus alaternus</i>	Blowfly Bush	N			5
COMPOSITAE	<i>Rhodanthe pygmaea</i>	Pigmy Daisy	Y			2
IRIDACEAE	<i>Romulea rosea var. australis</i>	Common Onion-grass	N			3
ROSACEAE	<i>Rosa canina</i>	Dog Rose	N			1
LABIATAE	<i>Rosmarinus officinalis</i>	Rosemary	N			1
ROSACEAE	<i>Rubus fruticosus aggregate</i>	Blackberry	N			2
POLYGONACEAE	<i>Rumex bidens</i>	Mud Dock	Y			1
POLYGONACEAE	<i>Rumex crispus</i>	Curled Dock	N			1
GRAMINEAE	<i>Rytidosperma caespitosum</i>	Common Wallaby-grass	Y			6
GRAMINEAE	<i>Rytidosperma setaceum</i>	Small-flower Wallaby-grass	Y			1
GRAMINEAE	<i>Rytidosperma sp.</i>		Y			1
CARYOPHYLLACEAE	<i>Sagina maritima</i>	Sea Pearlwort	?			2
LABIATAE	<i>Salvia verbenaca var.</i>	Wild Sage	N			2
LABIATAE	<i>Salvia verbenaca var. verbenaca</i>	Wild Sage	N			1
LABIATAE	<i>Salvia verbenaca var. vernalis</i>	Wild Sage	N			5
PRIMULACEAE	<i>Samolus repens</i>	Creeping Brookweed	Y			6
ROSACEAE	<i>Sanguisorba minor ssp. muricata</i>	Sheep's Burnet	N			2
SANTALACEAE	<i>Santalum acuminatum</i>	Quandong	Y			7
CHENOPODIACEAE	<i>Sarcocornia blackiana</i>	Thick-head Samphire	Y			1
CHENOPODIACEAE	<i>Sarcocornia quinqueflora</i>	Beaded Samphire	Y			4
DIPSACACEAE	<i>Scabiosa atropurpurea</i>	Pincushion	N			14
GOODENIACEAE	<i>Scaevola aemula</i>	Fairy Fanflower	Y			2
GOODENIACEAE	<i>Scaevola albida</i>	Pale Fanflower	Y			5
GOODENIACEAE	<i>Scaevola albida var. (NC)</i>		Y			2
GOODENIACEAE	<i>Scaevola linearis ssp. confertifolia</i>	Bundled Fanflower	Y			2
CYPERACEAE	<i>Schoenoplectus pungens</i>	Spiky Club-rush	Y			1
CYPERACEAE	<i>Schoenoplectus validus</i>	River Club-rush	Y			1
CYPERACEAE	<i>Schoenus apogon</i>	Common Bog-rush	Y			1
CYPERACEAE	<i>Schoenus breviculmis</i>	Matted Bog-rush	Y			4
CYPERACEAE	<i>Schoenus deformis</i>	Small Bog-rush	Y			3
CYPERACEAE	<i>Schoenus nitens</i>	Shiny Bog-rush	Y			3
COMPOSITAE	<i>Scorzonera laciniata var. laciniata</i>	Scorzonera	N			2
GOODENIACEAE	<i>Selliera radicans</i>	Shiny Swamp-mat	Y			1
COMPOSITAE	<i>Senecio cunninghamii var. cunninghamii</i>	Shrubby Groundsel	Y			2
COMPOSITAE	<i>Senecio glomeratus ssp. glomeratus</i>	Swamp Groundsel	Y			1
COMPOSITAE	<i>Senecio glomeratus ssp. longifructus</i>	Swamp Groundsel	Y			1
COMPOSITAE	<i>Senecio glossanthus</i>	Annual Groundsel	Y			2
COMPOSITAE	<i>Senecio halophilus</i>		Y			1
COMPOSITAE	<i>Senecio macrocarpus</i>	Large-fruit Groundsel	Y	Vulnerable	Vulnerable	1
COMPOSITAE	<i>Senecio phelleus</i>	Woodland Groundsel	Y			1
COMPOSITAE	<i>Senecio pinnatifolius (NC)</i>	Variable Groundsel	Y			1
COMPOSITAE	<i>Senecio pinnatifolius var. maritimus</i>	Variable Groundsel	Y			1
COMPOSITAE	<i>Senecio pinnatifolius var. pinnatifolius</i>		Y			1
COMPOSITAE	<i>Senecio quadridentatus</i>	Cotton Groundsel	Y			2
COMPOSITAE	<i>Senecio spanomerus</i>		Y			1
COMPOSITAE	<i>Senecio squarrosus</i>	Squarrose Groundsel	Y			1
CARYOPHYLLACEAE	<i>Silene gallica var. gallica</i>	French Catchfly	N			1
CARYOPHYLLACEAE	<i>Silene nocturna</i>	Mediterranean Catchfly	N			2

COMPOSITAE	<i>Siloxerus multiflorus</i>	Small Wrinklewort	Y			4
SOLANACEAE	<i>Solanum linnaeanum</i>	Apple Of Sodom	N			2
SOLANACEAE	<i>Solanum nigrum</i>	Black Nightshade	N			2
COMPOSITAE	<i>Solidago canadensis</i>	Golden Rod	N			1
COMPOSITAE	<i>Sonchus asper ssp.</i>	Rough Sow-thistle	N			1
COMPOSITAE	<i>Sonchus asper ssp. asper</i>	Rough Sow-thistle	N			2
COMPOSITAE	<i>Sonchus hydrophilus</i>	Native Sow-thistle	Y			3
COMPOSITAE	<i>Sonchus oleraceus</i>	Common Sow-thistle	N			7
COMPOSITAE	<i>Sonchus oleraceus (NC)</i>	Common Sow-thistle	N			1
COMPOSITAE	<i>Sonchus sp.</i>	Sow-thistle	Y			2
RHODOMELACEAE	<i>Sonderella linearis</i>		Y			1
IRIDACEAE	<i>Sparaxis sp.</i>	Sparaxis	N			1
CARYOPHYLLACEAE	<i>Spergularia marina</i>	Salt Sand-spurrey	Y			2
CARYOPHYLLACEAE	<i>Spergularia media</i>	Coast Sand-spurrey	N			1
GRAMINEAE	<i>Spinifex hirsutus</i>	Rolling Spinifex	Y			1
GRAMINEAE	<i>Spinifex sericeus (NC)</i>	Rolling Spinifex	Y			3
GRAMINEAE	<i>Sporobolus virginicus</i>	Salt Couch	Y			1
RHAMNACEAE	<i>Spyridium coactilifolium</i>	Butterfly Spyridium	Y	Vulnerable	Vulnerable	2
RHAMNACEAE	<i>Spyridium eriocephalum (NC)</i>	Heath Spyridium	Y			1
RHAMNACEAE	<i>Spyridium eriocephalum var. eriocephalum</i>	Heath Spyridium	Y			1
RHAMNACEAE	<i>Spyridium eriocephalum var. glabrisepalum</i>	Macgillivray Spyridium	Y	Vulnerable	Endangered	1
RHAMNACEAE	<i>Spyridium phylloides</i>	Narrow-leaf Spyridium	Y			5
RHAMNACEAE	<i>Spyridium subochreatum</i>		Y			2
GRAMINEAE	<i>Stenotaphrum secundatum</i>	Buffalo Grass	N			1
EPACRIDACEAE	<i>Styphelia exarrhena</i>	Desert Heath	Y			1
CHENOPODIACEAE	<i>Suaeda australis</i>	Austral Seablite	Y			9
TAMARICACEAE	<i>Tamarix aphylla</i>	Athel Pine	N			4
TAMARICACEAE	<i>Tamarix ramosissima</i>		N			20
COMPOSITAE	<i>Taraxacum officinale (NC)</i>	Dandelion	N			1
CHENOPODIACEAE	<i>Tecticornia indica ssp. bidens</i>	Brown-head Samphire	Y			1
CHENOPODIACEAE	<i>Tecticornia indica ssp. leiostachya</i>	Brown-head Samphire	Y			1
AIZOACEAE	<i>Tetragonia implexicoma</i>	Bower Spinach	Y			10
ORCHIDACEAE	<i>Thelymitra antennifera</i>	Lemon Sun-orchid	Y			1
ORCHIDACEAE	<i>Thelymitra benthamiana</i>	Leopard Sun-orchid	Y			1
ORCHIDACEAE	<i>Thelymitra brevifolia</i>		Y			1
ORCHIDACEAE	<i>Thelymitra grandiflora</i>	Great Sun-orchid	Y		Rare	1
ORCHIDACEAE	<i>Thelymitra nuda</i>		Y			2
ORCHIDACEAE	<i>Thelymitra rubra</i>	Salmon Sun-orchid	Y			1
GRAMINEAE	<i>Themeda triandra</i>	Kangaroo Grass	Y			3
GRAMINEAE	<i>Thinopyrum junceiforme</i>	Sea Wheat-grass	N			2
STERCULIACEAE	<i>Thomasia petalocalyx</i>	Paper-flower	Y			2
CHENOPODIACEAE	<i>Threlkeldia diffusa</i>	Coast Bonefruit	Y			8
DASYACEAE	<i>Thuretia quercifolia</i>		Y			1
LILIACEAE	<i>Thysanotus baueri</i>	Mallee Fringe-lily	Y			1
LILIACEAE	<i>Thysanotus patersonii</i>	Twining Fringe-lily	Y			3
LILIACEAE	<i>Tricoryne elatior</i>	Yellow Rush-lily	Y			1
LILIACEAE	<i>Tricoryne elatior (NC)</i>	Yellow Rush-lily	Y			2
LILIACEAE	<i>Tricoryne tenella</i>	Tufted Yellow Rush-lily	Y			3
LEGUMINOSAE	<i>Trifolium angustifolium</i>	Narrow-leaf Clover	N			2



LEGUMINOSAE	<i>Trifolium campestre</i>	Hop Clover	N			3
LEGUMINOSAE	<i>Trifolium fragiferum</i> var. <i>fragiferum</i>	Strawberry Clover	N			3
LEGUMINOSAE	<i>Trifolium glomeratum</i>	Cluster Clover	N			1
LEGUMINOSAE	<i>Trifolium scabrum</i>	Rough Clover	N			2
LEGUMINOSAE	<i>Trifolium</i> sp.	Clover	N			1
GRAMINEAE	<i>Triodia compacta</i>	Spinifex	Y			1
ULVACEAE	<i>Ulvaria oxysperma</i>		Y			4
COMPOSITAE	<i>Urospermum picroides</i>	False Hawkbit	N			2
GOODENIACEAE	<i>Velleia arguta</i>	Toothed Velleia	Y			4
GOODENIACEAE	<i>Velleia paradoxa</i>	Spur Velleia	Y			5
SCROPHULARIACEAE	<i>Veronica hillebrandii</i>	Rigid Speedwell	Y			2
RHODOMELACEAE	<i>Vidalia spiralis</i>		Y			2
COMPOSITAE	<i>Vittadinia australasica</i> var. <i>australasica</i>	Sticky New Holland Daisy	Y			2
COMPOSITAE	<i>Vittadinia blackii</i>	Narrow-leaf New Holland Daisy	Y			1
COMPOSITAE	<i>Vittadinia cervicularis</i> var. <i>cervicularis</i>	Waisted New Holland Daisy	Y			1
COMPOSITAE	<i>Vittadinia condyloides</i>	Club-hair New Holland Daisy	Y			1
COMPOSITAE	<i>Vittadinia cuneata</i> var.	Fuzzy New Holland Daisy	Y			1
COMPOSITAE	<i>Vittadinia cuneata</i> var. <i>cuneata</i>	Fuzzy New Holland Daisy	Y			3
COMPOSITAE	<i>Vittadinia megacephala</i>	Giant New Holland Daisy	Y			5
COMPOSITAE	<i>Vittadinia</i> sp.	New Holland Daisy	Y			3
GRAMINEAE	<i>Vulpia fasciculata</i>	Sand Fescue	N			1
GRAMINEAE	<i>Vulpia muralis</i>	Wall Fescue	N			1
GRAMINEAE	<i>Vulpia myuros</i> f.	Fescue	N			1
GRAMINEAE	<i>Vulpia myuros</i> f. <i>myuros</i>	Rat's-tail Fescue	N			2
GRAMINEAE	<i>Vulpia</i> sp.	Fescue	N			2
CAMPANULACEAE	<i>Wahlenbergia gracilentia</i>	Annual Bluebell	Y			3
CAMPANULACEAE	<i>Wahlenbergia stricta</i> ssp. <i>stricta</i>	Tall Bluebell	Y			3
IRIDACEAE	<i>Watsonia meriana</i> cv. <i>Bulbillifera</i> (NC)	Bulbil Watsonia	N			1
CONVOLVULACEAE	<i>Wilsonia humilis</i>	Silky Wilsonia	Y			2
CONVOLVULACEAE	<i>Wilsonia rotundifolia</i>	Round-leaf Wilsonia	Y			3
CERAMIACEAE	<i>Wrangelia nobilis</i>		Y			1
LILIACEAE	<i>Wurmbea dioica</i> ssp. <i>brevifolia</i>	Early Nancy	Y			1
LILIACEAE	<i>Wurmbea dioica</i> ssp. <i>dioica</i> (NC)	Early Nancy	Y			2
LILIACEAE	<i>Xanthorrhoea semiplana</i> ssp.	Yacca	Y			1
LILIACEAE	<i>Xanthorrhoea semiplana</i> ssp. <i>semiplana</i>	Yacca	Y			7
UMBELLIFERAE	<i>Xanthosia huegelii</i>	Hairy Xanthosia	Y			1
DICTYOTACEAE	<i>Zonaria spiralis</i>		Y			5
DICTYOTACEAE	<i>Zonaria turneriana</i>		Y			2
ZYGOPHYLLACEAE	<i>Zygophyllum billardierei</i>	Coast Twinleaf	Y			2