



Red Gum Reserve Management Plan 2019-2029

Adopted:
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GOLDEN PLAINS SHIRE

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Version control

1.00	Original Management Plan	Dale Smithyman	December 2009
2.00	Updated Management Plan	Dale Smithyman	December 2019

1. Introduction

Red Gum Reserve comprises two parcels on Blackall Road in Batesford encompassing 5.86 hectares (14.5 acres). The parcels; which are freehold land held by Council, contain remnant old River Red Gums (*Eucalyptus camadulensis*) of significant size and age, extensive areas of revegetation and patches of remnant native grassland.

The Reserve has native vegetation values that require preservation and enhancement as well as providing valuable public open space.



Figure 1: Red Gum Reserve

2. Background and Context

2.1. History

The Reserve was set aside as part of a subdivision for rural residential development as a 'Reserve for Municipal and Drainage Purposes' in 1980. The reserve status was subsequently revoked and separate titles created for the two sections of the Reserve (Lot 1 on Plan of Subdivision 410300C, Volume 09418, Folio 385 and Lot 2 on Plan of Subdivision 410300C, Volume 09418, Folio 385) in 1999.

Adjacent landowners occupied parts of the Reserve in 2001 with the agreement of Council to reduce Council's management burden. The balance of the Reserve was to be managed with the assistance of the Batesford, Fyansford, Stonehaven Landcare group. The last of these private use occupied areas was removed in 2019 and all occupied areas have been returned to the Reserve.

Significant revegetation with local species (Appendix 3) has been undertaken by the Batesford, Fyansford, Stonehaven Landcare group from the early 2000's. These efforts have resulted in the establishment of large areas of local trees and shrubs (Appendix 1 and 2).

2.2. Values and Significance

The Reserve contains remnant River Red Gums (*E. camaldulensis*) of significant age and size and patches of native grassland. Primrose Creek runs through the Reserve although due to many large upstream impoundments, it rarely flows. The Reserve is one of the few areas of public open space in Batesford offering passive recreation and nature conservation opportunities.

Being located amidst extensively cleared peri-urban and rural farming landscapes, the Reserve is now of high local conservation significance.

2.3. Location and Planning Area

Red Gum Reserve is located in the township of Batesford. Blackall Road, Dog Rocks Road and private land bound the Reserve (Figure 2: Locality).

The Reserve falls within the Corangamite Catchment Management Area and the Golden Plains Shire Council local government area.



Figure 2: Locality

2.4. Land Tenure

The Reserve is comprised of two freehold titles (Lot 1 PS410300 and Lot 2 PS410300 Parish of Gherineghap, 2.41 ha and 3.45 ha respectively) held by Golden Plains Shire Council and encompasses 5.86 hectares (14.5 acres) (Figure 3: Land Titles).



Figure 3: Land Titles

2.5. Planning Zones and Overlays

The land is zoned Public Park and Recreation Zone (PPRZ) under the Golden Plains Shire Planning Scheme.

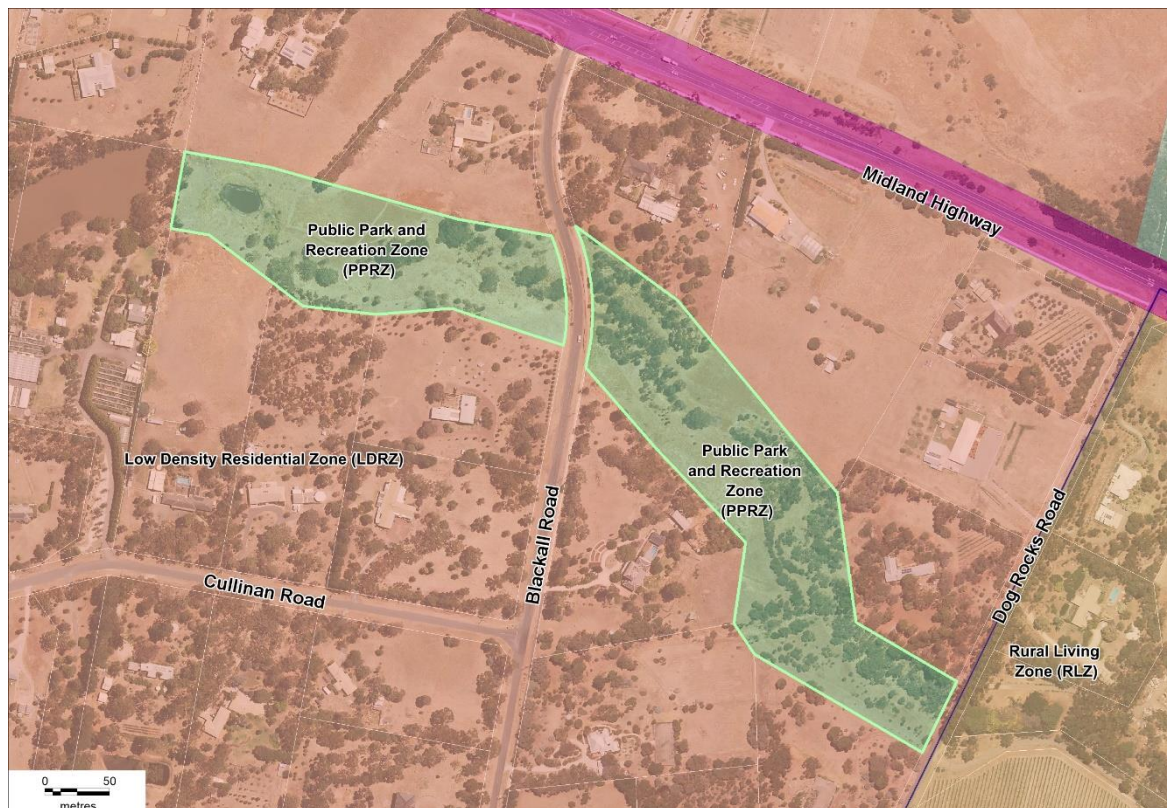


Figure 4: Planning Scheme Zones

The land is also subject to the planning overlays:

- Design and Development Overlay – Schedule 5 (DDO5)
- Land Subject to Inundation Overlay (LSIO)

2.6. Legislation and Guidelines

Management of the Reserve is carried out under the direction of the following legislation:
Federal Legislation

Environment and Biodiversity Protection Act 1999

Native Title Act 1993

State Legislation

Aboriginal Heritage Act 2006

Catchment & Land Protection Act 1994

Flora and Fauna Guarantee Act 1988

Heritage Act 1995

Local Government Act 1989

Planning and Environment Act 1987

2.7. Strategic Direction

The Reserve was set aside as part of a subdivision for rural residential development as a 'Reserve for Municipal and Drainage Purposes' in 1980. Its use has shifted to public open space for passive recreation and conservation and this is reflected in its zoning as Public Park and Recreation Zone under the Planning Scheme.

Management objectives

- Maintain and where possible, improve the extent and quality of the remnant Plains Grassy Woodland EVC on the Reserve
- Provide for low impact public passive recreation which is not detrimental to the conservation values of the Reserve in line with the objective above
- Control and/or eradicate pest flora and fauna within and adjacent to the Reserve.
- Minimise fire hazard in line with the conservation values of the Reserve

2.8. Management

The Reserve is freehold land managed by Council. The Batesford, Fyansford, Stonehaven Landcare Group assist Council with the management of the Reserve. They have completed many hundreds of volunteer hours revegetating the Reserve.

Management Actions

- Facilitate community involvement in the management of the Reserve.

3. Natural Resource Management

3.1. Geology and Landforms

The Reserve lies within the Victorian Volcanic Plain bioregion.

It contains the drainage line for Primrose Creek which exits towards the south-east end of the Reserve.

The land falls to the south east from 53 metres above sea level to 27 metres above sea level; a fall of 26 metres.

The geology of the site is complex and comprises basalt outcrops associated with the Newer Volcanics, mostly on the southern gully escarpments. The northern gully sides comprise loams and sandy loams of the Moorabool Viaduct Sands intermixed with basalt outcrops.

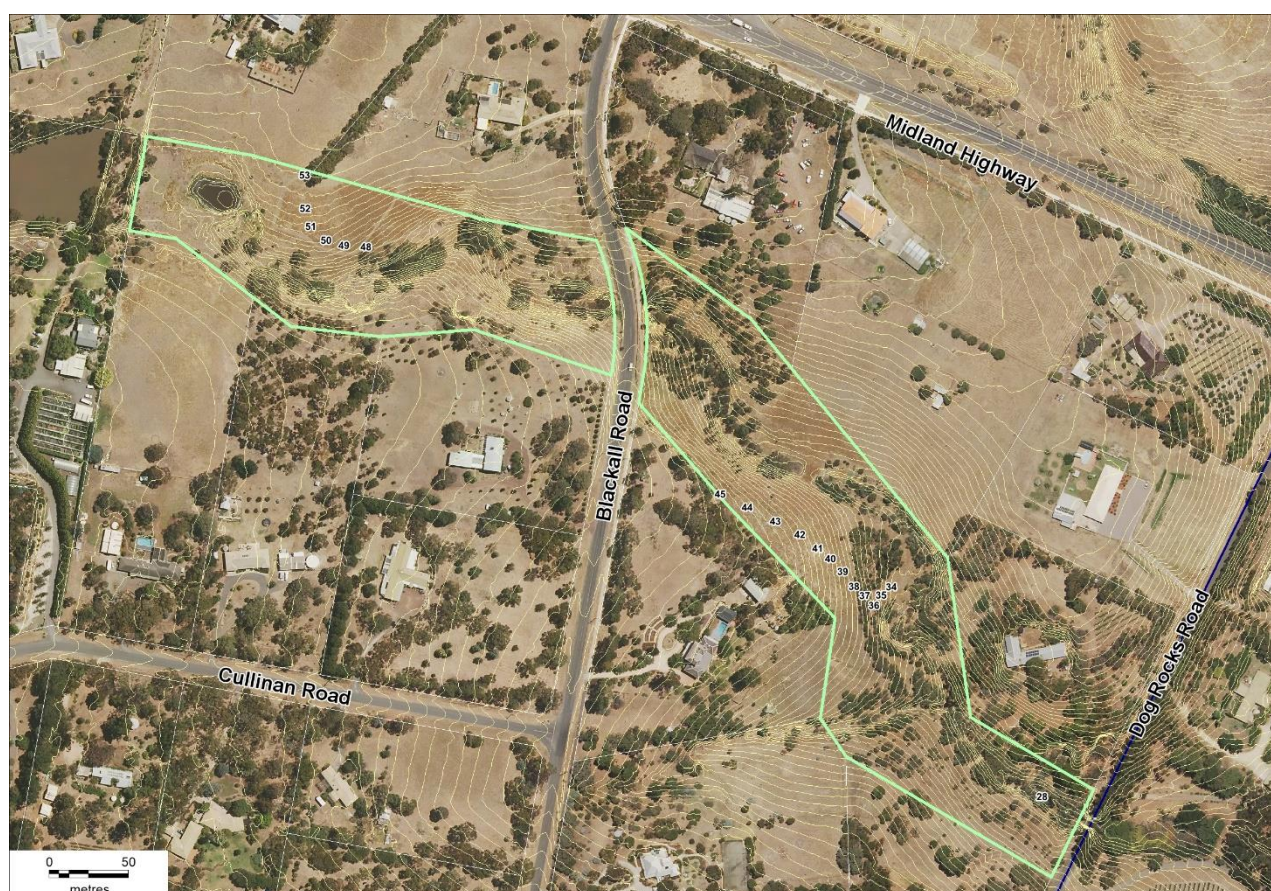


Figure 5: Landform and 50cm contours

3.2. Hydrology

The Reserve contains the watercourse known as Primrose Creek. This creek was probably connected to the large wetland to the east of the Gheringhap railway known as Learmonth Swamp prior to the construction of the Midland Highway. The creek now only flows in very wet years as any rainfall in its catchment is collected by 9 dams on private land upstream of the Reserve. The old dam in the western part of the Reserve rarely holds water.

3.3. Soils

Soils are reddish brown sandy loams of Moorabool Viaduct Sand origin grading to dark brown/grey/black clayey loams associated with basalt decomposition of the Newer Volcanics.

Management actions

- Maintain vegetation, tracks and drainage to prevent erosion of soils.

3.4. Flora

The reserve is located in the Victorian Volcanic Plains bioregion and contains remnants of the endangered Plains Grassy Woodland Ecological Vegetation Class (EVC) with large old River Red Gums (*E. camaldulensis*) and patches of native grassland.

The site has been extensively revegetated with local indigenous species (Appendix 3) that after many long years of establishment are now flourishing. First revegetation efforts commenced in October 2001 and are ongoing. The success of revegetation efforts is clearly demonstrated by aerial imagery from 2004 through to 2017 (Appendix 2) and photopoints (Appendix 1).

With ongoing revegetation with trees and shrubs, consideration must be given to maintaining and improving native grassland remnants so that this vegetation type is not lost.

Photo points (Figure 6 and Appendix 1) have been established based on photographs taken during revegetation efforts in the early 2000's and these show the significant change at the site.



Figure 6: Photo points

A formal flora survey by a botanist was conducted on the Reserve in late spring 2019 (Appendix 4). Flora records from this survey are recorded on the Victorian Biodiversity Atlas.

There are no Vulnerable, Rare or Threatened (VROT) species recorded in the Reserve but the site may be suitable for the establishment of VROT species.

Management actions

- Maintain remnant native grassland areas by removing encroaching native trees and shrubs
- Enhance grassland biodiversity through revegetation with grassland herbaceous species and planned burning.
- Continue to monitor established photo points in the Reserve

3.5. Fauna

No fauna species list exists for the Reserve.

It is likely that fauna such as bats, possums and Eastern Rosellas (*Platycercus eximius*) are using the hollows in the River Red Gums (*E. camaldulensis*).

No comprehensive fauna survey has been undertaken in the Reserve for invertebrates, amphibians, reptiles or birds.

Management Actions

- Undertake fauna surveys in the Reserve using the assistance of a Tertiary institution or other body.

4. Cultural Resource Management

4.1. Indigenous cultural heritage

There are no recorded indigenous archaeological sites and no identified sites or features within the Reserve. Indigenous places have been recorded in the vicinity of the Reserve and these include stone arrangements, scarred trees and artefact scatters. No survey for Indigenous cultural places within the Reserve has yet been undertaken.

It is an offence to do an act that will harm Indigenous cultural heritage or is likely to harm indigenous cultural heritage.

Management of the Reserve in accordance with relevant legislation will respect the aspirations and rights of the Traditional Owners and the local Aboriginal community.

Management Actions

- Undertake a survey for indigenous cultural heritage places and areas of indigenous cultural heritage sensitivity using the services of a qualified cultural heritage advisor or Registered Aboriginal Party. Review the Management Plan in light of any findings of the survey.

4.2. Post-settlement cultural heritage

While Batesford is a locally significant post-settlement historical locality, the Reserve has little existing evidence of post-settlement cultural heritage. The Reserve has evidence of the quarrying of basalt (bluestone) which may have been used in local buildings and structures. It also contains an old dam that utilises a natural basalt stone barrier as part of its wall and spillway.

There are no sites in the Reserve that are listed on the Victorian Heritage Database.

There are no sites in the Reserve listed in the Golden Plains Shire Heritage Study.

Management Actions

- Maintain and preserve the old dam and its bluestone spillway

5. Reserve Management

5.1. Threatening Processes

A range of threatening processes have been identified for the Reserve including:

- Climate change
- Inappropriate fire regimes
- Unrestricted vehicle access
- Spread of declared and environmental weeds
- Grazing by rabbits.

5.2. Climate Change

Climate change poses a long term risk to the Reserve.

The Victorian Government's 'State of the Environment' Report, released in 2013, states that:

- Average temperatures in Victoria have risen by approximately 0.8°C since the 1950s and the severity, duration and frequency of heatwaves have increased
- Between 1997 and 2009, Victoria experienced a record-breaking 13-year drought, the longest recorded period of rainfall deficits on record
- Over the past two decades, there has been a large decline in autumn rainfall, a small decline in winter and spring rainfall, a small increase in summer rainfall, and reduced frequency of very wet years
- Victoria experienced its highest summer rainfall on record in 2010–11. The record rainfall led to major flooding that affected a third of Victoria

Under current climate projections, the Batesford area can expect:

- Higher average temperature with more extreme temperature days
- Longer and hotter summers with an increase in heat wave conditions
- Decrease in average rainfall; more particularly, cool season rains
- Increased intensity in severe rainfall events

These changes have the potential to adversely affect native flora and fauna as well as increasing fire risk.

Increase in fire risk will result in increased pressure to undertake works to mitigate the threat with potentially adverse impacts on native vegetation.

Actual impacts are hard to predict. Monitoring and analysis over an extended period of time may provide insights into changes occurring in the Reserve as a result of climate change. Management of the Reserve may then be adjusted to address these changes.

5.3. Planning Scheme Protection

The Reserve is zoned Public Park and Recreation Zone (PPRZ) under the Golden Plains Shire Planning Scheme.

Native vegetation is protected under the provisions of the *Planning and Environment Act 1987* and it is not considered that a higher level of protection is required at this site.

5.4. Fire

There are no records of fire in the Reserve and limited evidence of fire in the long distant past in the reserve (e.g. charred trees).

The Reserve poses little fire risk to adjacent properties if well managed. Given the lack of ignition sources within the Reserve, the most likely fire scenario is one in which the Reserve is impacted by fire from an adjacent property.

The property is not slashed to reduce grass fuels in the lead up to summer due to the difficulty in accessing much of the Reserve and the amount of in-situ rock in the ground. Progressive revegetation efforts have reduced heavy grass fuels through shading.

The primary fire fuel type is heavy fuel load, cured, introduced grass with lighter fuel loads associated with native grass patches in summer and autumn.

Vehicle access for fire suppression in the western part of the Reserve (Lot 1) is problematic and requires vehicles to access through adjacent properties. Vehicle access in the eastern part of the Reserve is possible via the mown access tracks.

Vehicle access gates from adjacent properties are mostly signed with “Fire Access Only” signs.

The re-introduction of fire into the Reserve for fuel reduction and ecological purposes commenced in the spring of 2018 with three grassland burns completed. These burns were carefully spot sprayed after burning to reduce introduced grasses. Planned burning will continue as Council resources allow with aim of enhancing native grassland cover and reducing high fuel load introduced grasses.

Management Actions

- Undertake a burning program using Councils planned burn crew to encourage biodiversity and reduce fuel loads.
- Undertake pest plant control works targeting high fuel load introduced grass species to reduce fuel loads.
- Undertake a regular program of vegetation clearance to ensure access for emergency vehicles.

5.5. Pest Plants

Pest plants are a threat to the conservation values of the Reserve by out competing and replacing native species. Declared weeds in the Reserve are largely under control through Councils annual weed control program. As a result, a range of environmental weeds presents the greater threat to biodiversity and should be progressively addressed as resources allow.

The following declared weeds have been controlled in the Reserve:

- Serrated Tussock (*Nassella trichotoma*)
- Patersons Curse (*Echium plantagineum*)
- Sweet Briar (*Rosa rubiginosa*)
- Wild Garlic (*Allium vineale*)
- Chilean Needle Grass (*Nassella neesiana*)

A variety of non-native grassy and herbaceous environmental weed species are present in the Reserve and occupy large areas. These environmental weeds contribute significantly to fire hazard and require ongoing control to minimise this fire risk. Environmental weeds also provide harbour for Rabbits and reduce the effectiveness of Rabbit control efforts.

The following environmental weeds are present in the Reserve:

- Annual Veldt Grass (*Ehrharta longiflora*)
- Toowoomba Canary Grass (*Phalaris aquatica*)
- Brown-top Bent Grass (*Agrostis capillaris*)
- Wild Oat (*Avena fatua*)
- Sour Sob (*Oxalis pes-capre*)
- Onion Grass (*Romulea rosea*)
- Blue Periwinkle (*Vinca major*)
- *Brassica* sp.

Control works have commenced through targeted brush cutting and spot spraying of key invasive species like Toowoomba Canary Grass (*Phalaris aquatica*).

Ongoing annual control is required to reduce the impact of these environmental weed species with the aim of eradicating them from the Reserve.

Management Actions

- Monitor and prevent the establishment and spread of new declared or environmental weeds in the Reserve.
- Undertake control of declared weeds annually with the aim of eradicating these species from the Reserve.
- Undertake control of grassy/herbaceous environmental weeds annually as resources permit with the aim of protecting biodiversity assets (e.g. native grasslands) and reducing their impact and spread in the Reserve.
- Liaise with adjacent landholders to encourage the control of pest plants

5.6. Pest Animals

Foxes (*Vulpes vulpes*) are present throughout the district, but their impact of on native fauna in the Reserve is unknown. Predation by foxes of native fauna is listed as a potentially threatening process under the *Flora and Fauna Guarantee Act 1988*. Control of foxes through poisoning in the Reserve is problematic due to the close proximity of local residences and dogs. Additionally, residents regularly use the Reserve to exercise their dogs, which are usually unrestrained and at risk from picking up fox baits. The use of 1080 near a township area is considered an unacceptable risk to domestic dogs and therefore is not an option for the control of foxes.

Rabbits are the greatest pest animal threat in the Reserve. The Reserve provides excellent harbour in dense introduced grass and under some areas of revegetation. Rabbit warrens are extensive and efforts to control these by implosion or excavation have had some effect but ongoing annual efforts are required. Incursion by rabbits from adjacent properties is problematic but the installation of a rabbit resistant fence would be complex and expensive. Grazing of native vegetation by rabbits is listed as a potentially threatening process under the *Flora and Fauna Guarantee Act 1988*. The control of rabbits is a high priority.

The use of Ferrets (*Mustela putorius furo*) for control of rabbits is not permitted due to the risk of these animals not being recovered.

Wandering pet and feral cats (*Felis catus*) present a threat to small fauna, particularly native birds. It is a legislated requirement to register a domestic cat and the Golden Plains Shire Council is actively encouraging residents to register and control their domestic cats.

Management actions

- Control rabbits to minimise their grazing impact on the Reserve through an annual Pindone baiting, fumigation and where required, a warren destruction program.
- Control rabbit harbour through a program of removal of heavy introduced grass fuels.
- Control foxes to minimise their impact on the Reserve and surrounding properties through fumigation and destruction of fox dens as required.
- Control cats through opportunistic cat trapping as required.
- Liaise with adjacent landholders to encourage the control of pest animals.

5.7. Tracks

Three grassed tracks running between Blackall Road and Dog Rocks Road serve access in the eastern part of the Reserve. These tracks provide essential access for the public and for management of the Reserve. There are no vehicle access tracks in the western part of the Reserve.



Figure 7: Access Tracks

The grassed tracks are maintained by the Golden Plains Shire parks and gardens maintenance staff. Council mow the tracks 2-3 times per year with the timing determined by other roadside mowing tasks in the Batesford area. Any additional mowing will continue to be carried out by volunteers.

Some sections of the tracks are becoming overgrown and require trimming back to maintain management vehicle access.

Some adjacent residents have established mown tracks in the western part of the Reserve that allow localised walking access. Residents are permitted to maintain these tracks provided that they do not expand or extend their reach.

No formal graded or formed track needs to be formed within the Reserve and maintenance of the existing grassed track should allow sufficient access for most uses.

Management of fire in the Reserve requires that the access tracks are clear and safe for fire fighters and their vehicles. Access and egress from the narrow creek crossing halfway down the eastern part of the Reserve is problematic for fire management vehicles. This situation has been improved by the development of a second track through the Reserve on the other side of the creek. Fire access through the western part of the Reserve is through adjacent properties. Development of a fire access track through this area is not feasible.

Management actions

- Regularly mow and maintain tracks in the eastern part of the Reserve as a grassed surface to minimise soil erosion.
- Undertake an annual program of track maintenance and clearance to ensure access for fire vehicles.
- Investigate and; if feasible, develop a walking track in the western part of the Reserve.
- Install bollards at either end of the tracks to prevent unauthorised vehicle access if this becomes problematic.

5.8. Fencing

The Reserve is fenced on all boundaries; excepting road boundaries, to varying levels of repair. The fences serve to prevent stock access and to define boundaries. Where the Reserve abuts adjacent private land, fences must be kept in a good state of repair.

Management Actions

- Maintain the existing fences between private landholders and the Reserve in a good state of repair.

5.9. Signs

Signs have been installed at the access points to identify the Reserve and provide basic information.

Management Actions

- Maintain signs at the entrances to the Reserve.
- Install additional signs at the access points to the western part of the Reserve

5.10. Interpretation

There are no interpretive signs in the Reserve. Interpretive signs informing visitors of the values of the Reserve should be installed when funds become available.

Management Actions

- Install interpretive signs when funds become available

5.11. Revegetation

The members of the Batesford, Fyansford, Stonehaven Landcare Group have undertaken extensive revegetation across the Reserve since the early 2000's (Appendix 1, 2 and 3). These efforts are ongoing and are targeting previously occupied private use areas that have been reinstated as part of the Reserve and progressively infilling prior revegetation efforts in difficult sites. Revegetation has been primarily undertaken with tree and shrub species (Appendix 3). Opportunities exist for targeted revegetation with herbs and forbs; particularly in grassland areas that have been recently burned by Council.

Management Actions

- Undertake biodiversity enhancement plantings with grassland herbaceous species in planned burn areas.
- Continue revegetation of areas of the Reserve with local trees, shrubs and understorey species.

6. Authorised uses

The strategic direction of the Reserve is to maintain and where possible, improve the extent and quality of the remnant Plains Grassy Woodland EVC on the Reserve and provide for low impact public passive recreation, which is not detrimental to its conservation values.

Therefore, there are a range of uses that are suitable for the Reserve in line with the strategic direction. Unsuitable uses that are detrimental to the Reserve should be prevented.

6.1. Vehicle access

Vehicle access to the Reserve is possible through gates and across the open paddock areas. No formal constructed tracks are in place.

Vehicle access except for management purposes (e.g. maintenance, wildfire control) is not permitted. If vehicles access becomes problematic, install bollards to control access

6.2. Firewood Collection

The collection of firewood for personal or commercial use is not permitted in the Reserve. If the collection of firewood becomes problematic, appropriate signs should be installed.

6.3. Rubbish Dumping

The dumping of rubbish in the Reserve is not permitted. If the dumping of rubbish becomes problematic, appropriate signs should be installed.

6.4. Recreational Uses

Passive recreation in the form of walking and enjoyment of the natural and cultural heritage of the Reserve are to be encouraged. It is important to encourage appropriate recreational use to engender a sense of public ownership and pride that will lead to support of the management aims for the Reserve.

6.4.1. Horse Riding

Horse riding has the potential to introduce weeds and damage the soft soil leading to erosion and further weed invasion. Horse riding is not permitted in the Reserve. If horse riding becomes problematic, appropriate signs should be installed.

6.4.2. Motorbike riding

Motorbikes have the potential to create tracks, disturb soil and disturb other users. Motorbikes are not an acceptable use of reserves of this type and this activity is not permitted in the Reserve. If motorbike riding becomes problematic, appropriate signs should be installed.

6.4.3. Walking

Walking for fitness or recreation should be encouraged to develop a community appreciation of the natural and cultural values of the Reserve. Walkers should be encouraged to use the mown tracks and these should be maintained to ensure walker safety.

The development of signed nature walks highlighting particular vegetation types, plants or features can educate and stimulate interest in natural history and should be considered.

6.4.4. Cycling

Cycling as a recreational activity should be restricted to the mown tracks. The development of challenging mountain or BMX type tracks should be discouraged as these have the potential to create erosion and damage vegetation.

6.4.5. Dogs and Cats

Reserve visitors may use the Reserve to walk their dogs and preventing this use would result in a reduction in community support for the Reserve. Uncontrolled dogs have the potential to disturb or even kill native wildlife and may annoy other Reserve users.

Ideally, dogs should be leashed but it is not easy to police such an action. If dogs off lead and not in effective control become an issue, signs should be installed stating “Dogs on leash or under effective control at all times”.

Cats are not permitted in the Reserve.

6.4.6. Camping

No sites exist for the provision of camping and the development of camp sites would severely impact on the ecological values of the Reserve therefore, camping is not permitted in the Reserve.

6.4.7. Fires

Recreational fires (e.g. camp fires) present a risk of fire escape and impact on the ecological value of the Reserve through firewood collection therefore fires are not permitted in the Reserve.

6.5. Education

The Reserve as a significant local area of remnant vegetation could provide educational opportunities for local school children.

Encourage use of the Reserve by schools for educational purposes.

6.6. Research

The Reserve is an important remnant of Plains Grassy Woodland and as such would be of interest for research into the appropriate management of the flora and fauna of this ecosystem type. All research projects on flora and fauna operate under a permit system managed by the Department of Environment, Land, Water and Planning (DELWP). Opportunities exist for the education of local school children and the community through participation in research in the Reserve. Appropriate research, minimising impacts on the flora and fauna of the Reserve should be permitted.

6.7. Grazing

Grazing of stock is not permitted in the Reserve.

7. Implementation

Management Action	Priority (High, Medium or Low)	Timeframe (ongoing, annually, as required or date e.g. December 2009)	Responsibility (Committee of Management, Golden Plains Shire, DELWP)
Management			
Facilitate community involvement in the management of the Reserve.	High	Ongoing	Golden Plains Shire
Soils			
Maintain vegetation, tracks and drainage to prevent erosion of soils	High	As required	Golden Plains Shire
Flora			
Maintain remnant native grassland areas by removing encroaching native trees and shrubs	High	Annually	Golden Plains Shire
Enhance grassland biodiversity through revegetation with grassland herbaceous species and planned burning.	High	Ongoing	Golden Plains Shire & BFS Landcare
Continue to monitor established photo points in the Reserve.	Medium	Annually	Golden Plains Shire
Fauna			
Undertake fauna surveys in the Reserve using the assistance of a Tertiary institution or other body.	Medium	Every 10 years	Golden Plains Shire
Indigenous cultural heritage			
Undertake a survey for indigenous cultural heritage places and areas of indigenous cultural heritage sensitivity using the services of a qualified cultural heritage advisor or Registered Aboriginal Party. Review the Management Plan in light of any findings of the survey.	Medium	2025	Golden Plains Shire
Post Settlement cultural heritage			
Maintain and preserve the old dam and its bluestone spillway	Medium	Ongoing	Golden Plains Shire
Fire			
Undertake a burning program using Councils planned burn crew to encourage biodiversity and reduce fuel loads.	High	Annually	Golden Plains Shire
Undertake pest plant control works targeting high fuel load introduced grass species to reduce fuel loads.	High	Annually	Golden Plains Shire
Undertake a regular program of vegetation clearance to ensure access for emergency vehicles.	High	Annually	Golden Plains Shire

Management Action	Priority (High, Medium or Low)	Timeframe (ongoing, annually, as required or date e.g. December 2009)	Responsibility (Committee of Management, Golden Plains Shire, DELWP)
Pest Plants			
Monitor and prevent the establishment and spread of new declared or environmental weeds in the Reserve.	High	Ongoing	Golden Plains Shire
Undertake control of declared weeds annually with the aim of eradicating these species from the Reserve.	High	Annually	Golden Plains Shire
Undertake control of grassy/herbaceous environmental weeds annually as resources permit with the aim of protecting biodiversity assets (e.g. native grasslands) and reducing their impact and spread in the Reserve.	High	Annually	Golden Plains Shire
Liaise with adjacent landholders to encourage the control of pest plants and animals.	High	Ongoing	Golden Plains Shire
Pest Animals			
Control rabbits to minimise their grazing impact on the Reserve through an annual Pindone baiting, fumigation and where required, a warren destruction program.	High	Ongoing	Golden Plains Shire
Control rabbit harbour through a program of removal of heavy introduced grass fuels.	High	Ongoing	Golden Plains Shire
Control foxes to minimise their impact on the Reserve and surrounding properties through fumigation and destruction of fox dens as required.	High	As required	Golden Plains Shire
Control cats through opportunistic cat trapping as required.	High	As required	Golden Plains Shire
Liaise with adjacent landholders to encourage the control of pest animals.	High	Ongoing	Golden Plains Shire
Tracks			
Regularly mow and maintain tracks in the eastern part of the Reserve as a grassed surface to minimise soil erosion.	High	Ongoing	Golden Plains Shire & BFS Landcare
Undertake an annual program of track maintenance and clearance to ensure access for fire vehicles.	High	Annually	Golden Plains Shire
Investigate and; if feasible, develop a walking track in the western part of the Reserve.	Medium	2025	Golden Plains Shire & BFS Landcare
Install bollards at either end of the tracks to prevent unauthorised vehicle access if this becomes problematic.	Low	As required	Golden Plains Shire

Management Action	Priority (High, Medium or Low)	Timeframe (ongoing, annually, as required or date e.g. December 2009)	Responsibility (Committee of Management, Golden Plains Shire, DELWP)
Fencing			
Maintain the existing fences between private landholders and the Reserve in a good state of repair.	Medium	Ongoing	Golden Plains Shire
Signs			
Maintain signs at entrances to the Reserve.	Medium	As required	Golden Plains Shire
Install additional signs at the access points to the western part of the Reserve	Medium	2020	Golden Plains Shire
Interpretation			
Install interpretive signs when funds become available.	Medium	As required	Golden Plains Shire & BFS Landcare
Revegetation			
Undertake biodiversity enhancement plantings with grassland herbaceous species in planned burn areas.	Medium	Ongoing	Golden Plains Shire
Continue revegetation of areas of the Reserve with local trees, shrubs and understorey species.	High	Ongoing	BFS Landcare & Golden Plains Shire

8. Appendix 1 – Photo Points



Photo point 1: 2002



Photo point 1: 2018



Photo point 2: 2002



Photo point 2: 2018



Photo point 3: 2002



Photo point 3: 2018



Photo point 4: 2005



Photo point 4: 2018



Photo point 5: 2005



Photo point 5: 2018



Photo point 6: 2005



Photo point 6: 2018



Photo point 7: 2005



Photo point 7: 2018



Photo point 8: 2002



Photo point 8: 2018



Photo point 9: 2005



Photo point 9: 2018



Photo point 10: 2017



Photo point 10: 2018

9. Appendix 2 - Aerial imagery



Figure 8: Red Gum Reserve Aerial Image 2005

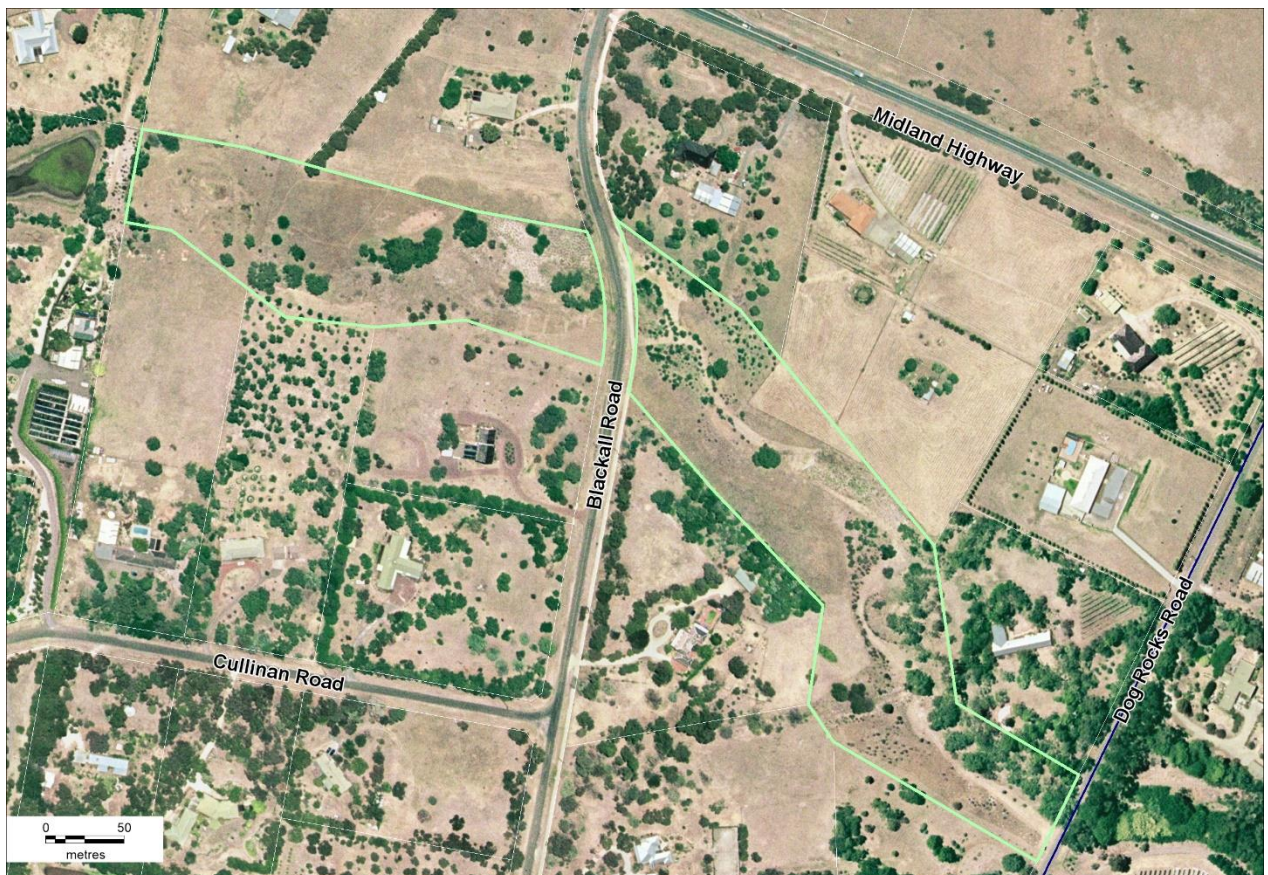


Figure 9: Red Gum Reserve Aerial Image 2007



Figure 10: Red Gum Reserve Aerial Image 2010



Figure 11: Red Gum Reserve Aerial Image 2013



Figure 12: Red Gum Reserve Aerial Image 2017



Figure 13: Red Gum Reserve Aerial Image 2019

10. Appendix 3 - Revegetation species

This list of species has been drawn from records of revegetation efforts in the Reserve.

<i>Acacia dealbata</i>	Silver Wattle
<i>Acacia acinacea</i>	Gold Dust Wattle
<i>Acacia implexa</i>	Lightwood
<i>Acacia meamsii</i>	Black Wattle
<i>Acacia melanoxylon</i>	Blackwood
<i>Acacia pycnantha</i>	Golden Wattle
<i>Acacia paradoxa</i>	Hedge Wattle
<i>Allocasuarina verticillata</i>	Drooping Sheoak
<i>Allocasuarina littoralis</i>	Black She Oak
<i>Austrodanthonia caespitosa</i>	White Top Wallaby Grass
<i>Austrostipa bigeniculata</i>	Spear Grass
<i>Bursaria spinosa</i>	Sweet Bursaria
<i>Callistemon sieberi</i>	River Bottlebrush
<i>Callitris glaucophylla</i>	White Cypress-Pine
<i>Carex appressa</i>	Tall Sedge
<i>Carex tereticaulis.</i>	Common Sedge
<i>Cassinea arcuata</i>	Chinese Scrub
<i>Clematis microphylla</i>	Small Leaved Clematis
<i>Chenopodium candolleanum</i>	Seaberry Saltbush
<i>Chenopodium parabolicum</i>	Fragrant Saltbush
<i>Convolvulus erubescens</i>	Pink Bindweed
<i>Correa glabra ssp.</i>	Rock Correa
<i>Dianella admixta</i>	Spreading Flax-lily
<i>Dianella revoluta</i>	Black Anther Flax-lily
<i>Dodonea viscosa</i>	Hop Bush
<i>Einadia nutans</i>	Nodding Saltbush
<i>Enchylaena tomentosa</i>	Ruby Saltbush
<i>Eucalyptus camaldulensis</i>	River-Red Gum
<i>Eucalyptus leucoxylon</i>	Yellow Gum
<i>Eucalyptus viminalis</i>	Manna Gum
<i>Goodenia ovata</i>	Hop Goodenia
<i>Gynatrix pulchella</i>	Native Hemp
<i>Indigofera australis</i>	Austral Indigo
<i>Kunzea ericoides</i>	Burgan
<i>Leptospermum lanigerum</i>	Woolly Tea-tree
<i>Leptospermum obovatum</i>	River Tea-tree
<i>Lomandra longifolia</i>	Spiny Mat-Rush
<i>Melicytus dentatus</i>	Tree Violet

Microlena stipoides
Myoporum insulare
Olearia ramulosa
Ozothamnus ferrugineus
Poa labillardieri
Prostanthera nivea
Senecio cunninghamii
Solanum laciniatum
Viminaria juncea

Weeping Grass
Common Myoporum
Twiggy Daisy-bush
Tree Everlasting
Common Tussock Grass
Snowy Mint Bush
Branching Groundsell
Kangaroo Apple
Native Broom

11. Appendix 4 – Flora species

This list of species is derived from a Flora Survey by Mark Trengove in November 2019.

Status Key

I - Indigenous naturally occurring.

PI - Planted indigenous.

PNI - Planted non-indigenous.

E- Exotic

Botanical Name	Common Name	Significance	Status
<i>Acacia acinacea</i>	Gold Dust Wattle	Regional	PI
<i>Acacia baileyana</i>	Cootamundra Wattle		PNI
<i>Acacia dealbata</i>	Silver Wattle	Local	PI
<i>Acacia longifolia</i> ssp. <i>longifolia</i>	Sallow Wattle	Exotic	?PNI
<i>Acacia mearnsii</i>	Late Black Wattle	Local	PI
<i>Acacia melanoxylon</i>	Blackwood	Local	PI
<i>Acacia paradoxa</i>	Hedge Wattle	Local	PI
<i>Acacia pycnantha</i>	Golden Wattle	Local	PI
<i>Acacia saligna</i>	Golden Wreath Wattle	Exotic	?PNI
<i>Acaena ovina</i>	Sheep's Burr	Local	I
<i>Acrotheca calendula</i>	Capeweed	Exotic	E
<i>Aira caryophyllea</i>	Silvery Hair-grass	Exotic	E
<i>Allocasuarina littoralis</i>	Black She Oak	Regional	PI
<i>Allocasuarina verticillata</i>	Drooping She Oak	Regional	PI
<i>Anagallis arvensis</i> var. <i>arvensis</i>	Scarlet Pimpernel	Exotic	E
<i>Asparagus asparagoides</i>	Bridal Creeper	Exotic	E
<i>Austrostipa gibbosa</i>	Spear-grass	Regional	I
<i>Austrostipa mollis</i>	Supple Spear-grass	Local	I
<i>Austrostipa scabra</i> ssp. <i>scabra</i>	Rough Spear-grass	Local	I
<i>Avena fatua</i>	Wild Oat	Exotic	E
<i>Banksia marginata</i>	Silver Banksia	Regional	PI
<i>Briza maxima</i>	Quaking-grass	Exotic	E
<i>Briza minor</i>	Lesser Quaking-grass	Exotic	E
<i>Bromus catharticus</i>	Prairie Grass	Exotic	E
<i>Bromus diandrus</i>	Great Brome	Exotic	E
<i>Bromus hordeaceus</i>	Soft Brome	Exotic	E
<i>Bromus rubens</i>	Red Brome	Exotic	E
<i>Bursaria spinosa</i> ssp. <i>spinosa</i> (Large Leaf form)	Sweet Bursaria	Regional	PI
<i>Callistemon sieberi</i>	River Bottlebrush	Regional	PI
<i>Callitris gracilis</i>	Slender Cypress-pine	Regional	PI
<i>Carex tereticaulis</i>	Basket sedge	Local	PI
<i>Cassina longifolia</i>	Shiny Casinia	Regional	PI
<i>Catapodium rigidum</i>	Fern-grass	Exotic	E

Botanical Name	Common Name	Significance	Status
<i>Centaurium erythraea</i>	Common Centaury	Exotic	E
<i>Chloris truncata</i>	Windmill-grass	Local	I
<i>Cirsium vulgare</i>	Spear Thistle	Exotic	E
<i>Clematis microphylla</i>	Small-leaf Clematis	Local	PI
<i>Convolvulus angustissimus</i>	Blushing Bindweed	Local	I
<i>Correa</i> spp. "Barwon River"	Correa	State	PI
<i>Corymbia maculata</i>	Spotted Gum		PNI
<i>Crassula tetramera</i>	Sieber's Stonecrop	Local	I
<i>Cynodon dactylon</i>	Couch Grass	Exotic	E
<i>Dactylis glomerata</i>	Cock's-foot	Exotic	E
<i>Dodonaea viscosa</i> ssp. <i>cuneata</i>	Wedge-leaf Hop-bush	Regional	PI
<i>Duma florulenta</i>	Tangled Lignum	Regional	PI
<i>Ehrharta erecta</i>	Panic Veldt-grass	Exotic	E
<i>Ehrharta longiflora</i>	Annual Veldt-grass	Exotic	E
<i>Epilobium hirtigerum</i>	Hairy Willow-herb	Local	I
<i>Erodium botrys</i>	Big Heron's-bill	Exotic	E
<i>Eucalyptus camaldulensis</i> var. <i>camaldulensis</i>	River Red Gum	Local	I
<i>Eucalyptus cladocalyx</i>	Sugar Gum		PNI
<i>Eucalyptus globulus</i>	Blue Gum		PNI
<i>Eucalyptus leucoxylon</i> ssp. <i>connata</i>	Melbourne Yellow Gum	State	PI
<i>Eucalyptus</i> spp.	Gum		PNI
<i>Eucalyptus viminalis</i> ssp. <i>viminalis</i>	Manna Gum	Local	PI
<i>Fumaria muralis</i>	Wall Fumitory	Exotic	E
<i>Galena pubescens</i>	Blanket Weed	Exotic	E
<i>Galium aparine</i>	Cleavers	Exotic	E
<i>Geranium retrorsum</i>	Grassland Crane's-bill	Local	I
<i>Goodenia ovata</i>	Hop goodenia	Local	PI
<i>Holcus lanatus</i>	Yorkshire Fog-grass	Exotic	E
<i>Hordeum leporinum</i>	Barley-grass	Exotic	E
<i>Hypochaeris radicata</i>	Flatweed	Exotic	E
<i>Indigofera australis</i>	Austral Indigo	Regional	PI
<i>Juncus subsecundus</i>	Finger Rush	Local	I
<i>Kunzea ericoides</i> s.l.	Burgan	Regional	PI
<i>Lachnagrostis filiformis</i>	Common Blown-grass	Local	I
<i>Lactuca serriola</i>	Prickly Lettuce	Exotic	E
<i>Lolium</i> spp.	Rye Grass	Exotic	E
<i>Lomandra filiformis</i> ssp. <i>coriacea</i>	Wattle Mat-rush	Local	I
<i>Lomandra filiformis</i> ssp. <i>filiformis</i>	Wattle Mat-rush	Local	I
<i>Lomandra longifolia</i>	Spiny Mat-rush	Local	PI

Botanical Name	Common Name	Significance	Status
<i>Lythrum hyssopifolia</i>	Lesser Loosestrife	Local	I
<i>Malva parviflora</i>	Small-flowered Mallow	Exotic	E
<i>Medicago polymorpha</i>	Burr Medic	Exotic	E
<i>Melaleuca lanceolata</i>	Moonah	Regional	PI
<i>Melicytis dentatus</i>	Shrub Violet	Local	I
<i>Microleana stipoides</i> var. <i>stipoides</i>	Weeping Grass	Local	I
<i>Nassella neesiana</i>	Chilean Needle-grass	Exotic	E
<i>Nassella</i> spp? <i>Narrow leaves</i>		Exotic	E
<i>Nassella trichotoma</i>	Serrated Tussock	Exotic	E
<i>Oxalis perennans</i>	Woodland Sorrel	Local	I
<i>Phalaris aquatica</i>	Canary-grass	Exotic	E
<i>Plantago coronopus</i>	Buck's-horn Plantain	Exotic	E
<i>Plantago lanceolata</i>	Ribwort	Exotic	E
<i>Poa labillardierei</i> var. <i>labillardierei</i>	Common Tussock-grass	Local	I
<i>Polycarpon tetraphyllum</i>	Four-leaved Allseed	Exotic	E
<i>Populus alba</i>	White Poplar	Exotic	E
<i>Prostanthera nivea</i> var. <i>nivea</i>	Snowy Mint-bush	State	PI
<i>Rapistrum rugosum</i>	Giant Mustard	Exotic	E
<i>Reseda luteola</i>	Weld	Exotic	E
<i>Rhagodia candolleana</i>	Seaberry Saltbush	Local	PI
<i>Rhagodia parabolica</i>	Fragrant Saltbush	State	PI
<i>Rhamnus alaternus</i>	Italian Buckthorn	Exotic	E
<i>Romulea rosea</i>	Onion-grass	Exotic	E
<i>Rosa rubiginosa</i>	Briar Rose	Exotic	E
<i>Rumex crispus</i>	Curled Dock	Exotic	E
<i>Rytidosperma caespitosum</i>	Common Wallaby-grass	Local	I
<i>Rytidosperma geniculatum</i>	Kneed Wallaby-grass	Local	I
<i>Rytidosperma racemosum</i>	Slender Wallaby-grass	Local	I
<i>Silybum maritimum</i>	Variegated Thistle	Exotic	E
<i>Sonchus asper</i>	Prickly Sow-thistle	Exotic	E
<i>Sonchus oleraceus</i>	Common Sow-thistle	Exotic	E
<i>Themeda triandra</i>	Kangaroo Grass	Local	I
<i>Trifolium arvense</i>	Hare's-foot Clover	Exotic	E
<i>Trifolium dubium</i>	Suckling clover	Exotic	E
<i>Trifolium</i> sp.	Clover	Exotic	E
<i>Vinca major</i>	Periwinkle	Exotic	E
<i>Vulpia myuros</i> f. <i>myuros</i>	Rat's-tail Fescue	Exotic	E

