GOLDEN PLAINS SHIRE

ATTACHMENTS

Under Separate Cover
Ordinary Council Meeting

6.00pm Tuesday 28 April 2020

Table of Contents

Red Gum Reserve Management Plan 2019-2029

Adopted:
April 2020
Prepared By:
Dale Smithyman

GOLDEN PLAINS SHIRE

Contents

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.

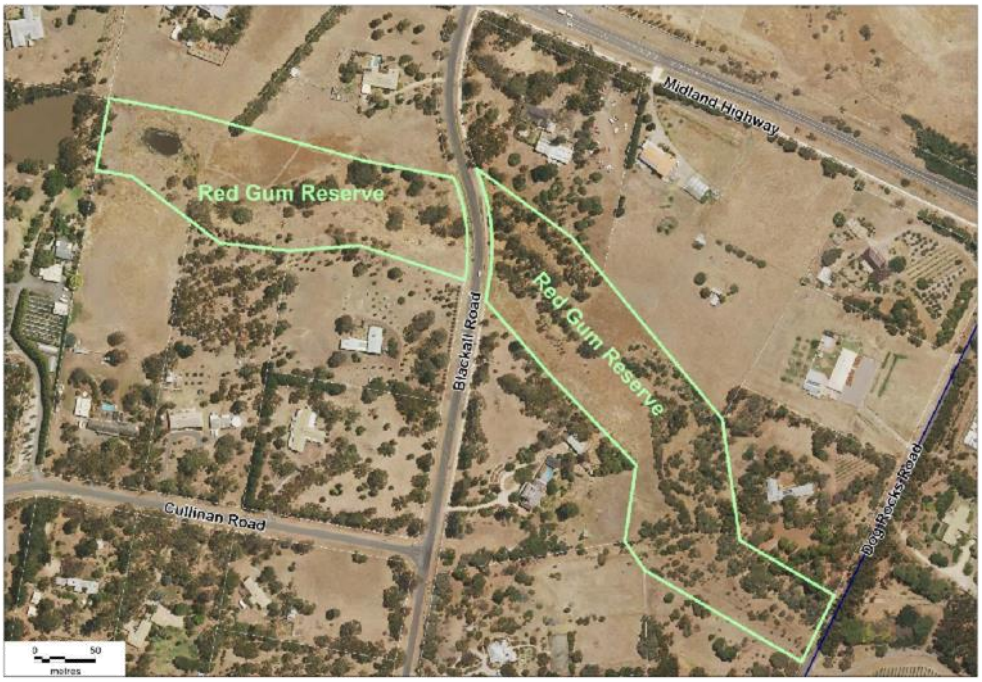

Figure 1: Red Gum Reserve

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.

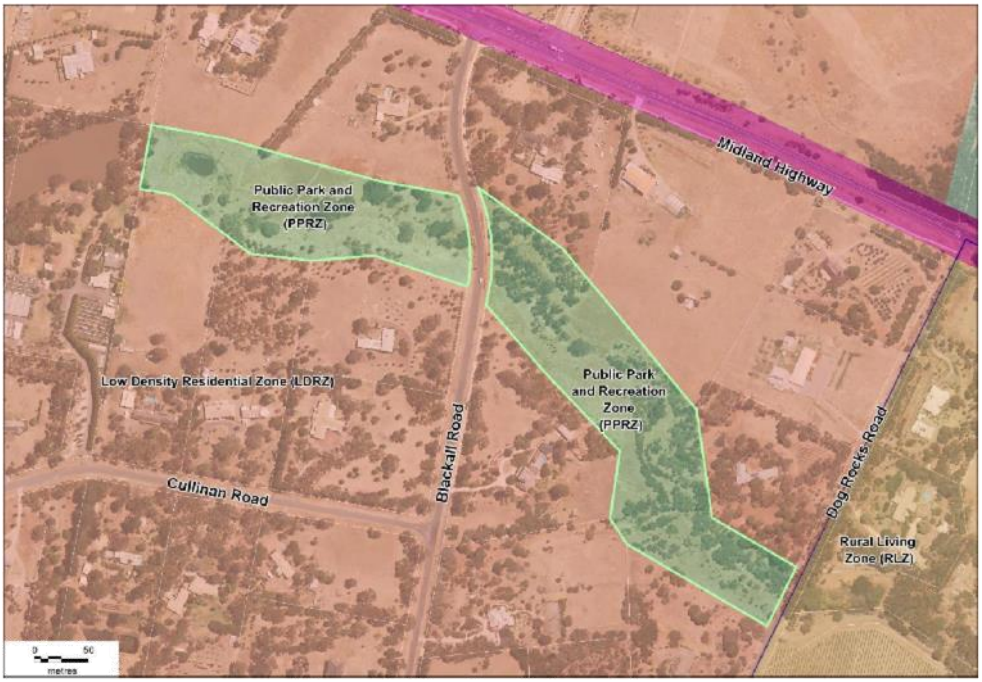

Figure 4: Planning Scheme Zones

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) and recorded 107 flora species. 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 fire 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

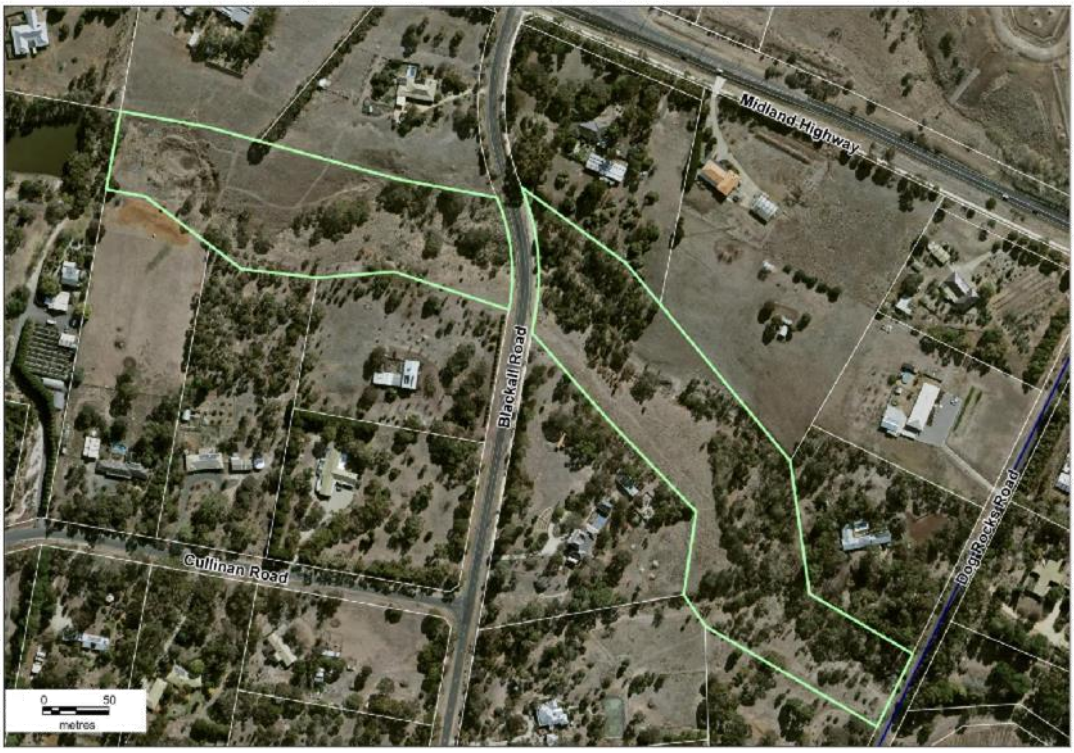

Figure 13: Red Gum Reserve Aerial Image 2019

10. Appendix 3 - Revegetation species

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

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

Microlena stipoides	Weeping Grass
Myoporum insulare	Common Myoporum
Olearia ramulosa	Twiggy Daisy-bush
Ozothamnus ferrugineus	Tree Everlasting
Poa labillardieri	Common Tussock Grass
Prostanthera nivea	Snowy Mint Bush
Senecio cunninghamii	Branching Groundsell
Solanum laciniatum	Kangaroo Apple
Viminaria juncea	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
Acacia acinacea	Gold Dust Wattle	Regional	PI
Acacia baileyana	Cootamundra Wattle		PNI
Acacia dealbata	Silver Wattle	Local	PI
Acacia longifolia ssp. longifolia	Sallow Wattle	Exotic	?PNI
Acacia mearnsii	Late Black Wattle	Local	PI
Acacia melanoxylon	Blackwood	Local	PI
Acacia paradoxa	Hedge Wattle	Local	PI
Acacia pycnantha	Golden Wattle	Local	PI
Acacia saligna	Golden Wreath Wattle	Exotic	?PNI
Acaena ovina	Sheep's Burr	Local	I
Aira caryophyllea	Silvery Hair-grass	Exotic	E
Allocasuarina littoralis	Black She Oak	Regional	PI
Allocasuarina verticillata	Drooping She Oak	Regional	PI
Anagallis arvensis var. *arvensis*	Scarlet Pimpernel	Exotic	E
Arctotheca calendula	Capeweed	Exotic	E
Asparagus asparagoides	Bridal Creeper	Exotic	E
Austrostipa gibbosa	Spear-grass	Regional	I
Austrostipa mollis	Supple Spear-grass	Local	I
Austrostipa scabra ssp. *scabra*	Rough Spear-grass	Local	I
Avena fatua	Wild Oat	Exotic	E
Banksia marginata	Silver Banksia	Regional	PI
Briza maxima	Quaking-grass	Exotic	E
Briza minor	Lesser Quaking-grass	Exotic	E
Bromus catharticus	Prairie Grass	Exotic	E
Bromus diandrus	Great Brome	Exotic	E
Bromus hordeaceus	Soft Brome	Exotic	E
Bromus rubens	Red Brome	Exotic	E
Bursaria spinosa ssp. *spinosa* (Large Leaf form)	Sweet Bursaria	Regional	PI
Callistemon sieberi	River Bottlebrush	Regional	PI
Callitris gracilis	Slender Cypress-pine	Regional	PI
Carex tereticaulis	Basket sedge	Local	PI
Cassina longifolia	Shiny Casinia	Regional	PI
Catapodium rigidum	Fern-grass	Exotic	E

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

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