

Boulevard Bush Reserve

Environmental Management Plan 2014 – Reviewed 2019



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Prepared by Greater Shepparton City Council in consultation and approved by Parks Victoria:

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1. Key Messages

Adaptive Management

The management regime recommended for Boulevard Bush Reserve in this Environmental Management Plan has been developed based on the current conditions within the Reserve. Over time, as conditions in the Reserve change and to mitigate the impact of climate change, the management regime recommended for the Reserve will also need to be adapted to meet these challenges.

Handle with Care

Many of the environmental assets contained within the Boulevard Bush Reserve are in good to very good condition which, in a landscape that is largely fragmented and depleted of biodiversity values, is extremely valuable. All management activities need to be undertaken with this in mind and should ensure that they do not have a negative impact on the Reserve's environmental values.

Partnership approach

Boulevard Bush Reserve is made up of two parcels of land for which Greater Shepparton City Council and Parks Victoria are the responsible land managers. There are a number of community groups and individuals who have an interest in the Reserve. The development of this Environmental Management Plan and its ongoing implementation will have input from a range of partners and stakeholders.

2. Introduction

Boulevard Bush Reserve is a section of unique River Red Gum woodland which encompasses 13.6ha of land in North Shepparton, northern Victoria, as shown in Figure 1 below.

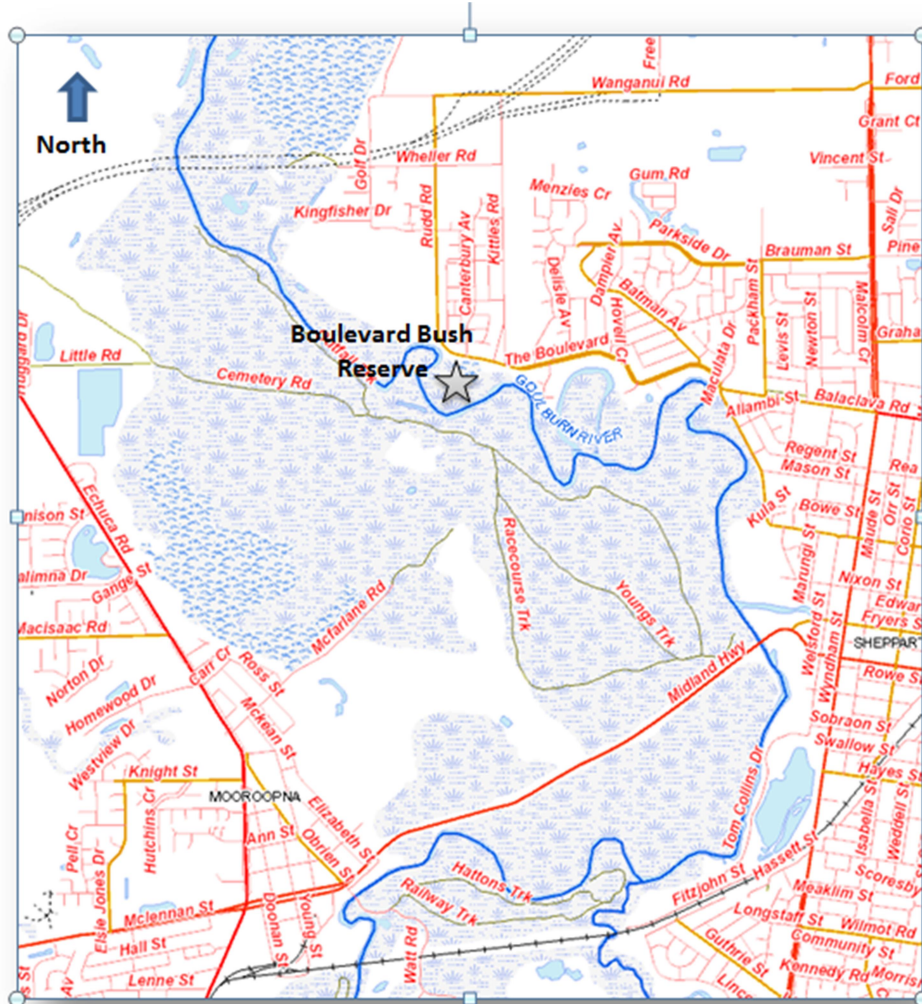


Figure 1: Boulevard Bush Reserve, North Shepparton, Victoria

Bordered by the Goulburn River and The Boulevard, the land that forms the Reserve is in two parcels situated in the Shepparton Regional Park. The Reserve is owned by Greater Shepparton City Council and Parks Victoria (Figure 2).

The former freehold parcel of Boulevard Bush Reserve was purchased by Greater Shepparton City Council in June 2010 with the intent for the community to enjoy and appreciate its natural values and to conserve its environmental features.

Prior to this, the land was owned by the Tassicker family. Mary and Norman Tassicker purchased the Tassicker farm in 1931 for their son Bert. The 650 acre farm, under

irrigation, was originally part of the Wanganui Estate. Half the property was sold after Norman passed away, however Bert retained his half which included the land on the river side of the Boulevard. Unfortunately Bert was killed in a tractor accident in 1960, after which the remaining farm was sold to a local syndicate for housing development (Brady, E., 1996).

The Reserve has a good representation of native understorey plants and large old trees that support a large number of hollows. There are some areas where Kangaroo Grass dominates whilst other low-lying depressions maintain a high cover of Tall Sedge, Pale Rush, Leafy Flat-sedge and Common Club-rush, all typical riparian species. Some of the fauna species that have been sighted in the Reserve include echidna, beautiful woodland birds such as the Azure Kingfisher and platypus in the Goulburn River. A full list of Flora and Fauna species can be found in Appendix A and B.

Prior to Council purchasing the freehold land, the Goulburn Broken Catchment Management Authority developed a draft concept plan, RiverConnect Boulevard Property Master Plan, which outlined some potential works that could be undertaken on site to protect its high conservation values and encourage a range of passive recreational activities. This concept plan influenced where Council installed the boundary fence and walking path after purchase in 2011.

In order to understand what plants and animals were in the Reserve, a Flora and Fauna Assessment of the site was conducted by Integrated Catchment Services in October 2012. This document also included some interim management actions that are currently being implemented. These include track maintenance, weed removal and the formal naming of the site, Boulevard Bush Reserve (Guinane, S., 2012).

A second Flora and Fauna Assessment was undertaken by Out of the Woodlands Environmental Consultancy from October 2017 to June 2018.

A number of community groups and individuals have expressed their interest in Boulevard Bush Reserve the Shepparton Mooroopna Urban Landcare Group (SMULG) in particular. To date SMULG have volunteered their time to undertake some of the actions highlighted in the Flora and Fauna Assessment and have run community events at this site in conjunction with Council.

This Environmental Management Plan has been produced by Greater Shepparton City Council in partnership with RiverConnect Land Management Group (LMWG). The purpose of this plan is to provide direction for the future environmental management of Boulevard Bush Reserve. This draft management plan will be subject to public consultation and Council and Parks Victoria endorsement.

3. Boulevard Bush Reserve Vision, Values and Objectives

3.1 Vision

The local community will value, protect and enhance the environmental values of the Reserve, whilst utilising it as a passive recreational and educational space.

3.2 Values

There are 4 key values identified as being a priority for Boulevard Bush Reserve. These are: protection and enhancement of native flora and fauna; passive recreation; education; and partnerships.

3.2.1 Protection and enhancement of native flora and fauna

The Reserve has a good representation of native plants that support an array of fauna species. There are good patches of a range of native flora species, including a number of large hollow bearing trees. Boulevard Bush Reserve gives a good representation of what the River Red Gum Woodland would have looked like prior to European settlement.

3.2.2 Passive Recreation

Due to its close proximity to a major urban setting, Boulevard Bush Reserve is an ideal location to promote passive recreational activities such as walking, fishing, bird watching, picnics and other low impact activities. Neighbouring residents and visitors are encouraged to utilise the Reserve as a unique space to enjoy these activities in a natural setting.

3.2.3 Education

Boulevard Bush Reserve is a valuable site for environmental education due to its close proximity to a major urban setting and natural beauty. There are a range of opportunities to educate community members, community groups and schools about a variety of ecological processes, flora and fauna and general natural resource management issues.

3.2.4 Partnerships

The joint management of Boulevard Bush Reserve extends beyond partnerships between Greater Shepparton City Council and Parks Victoria as land owners, to include other community groups, agencies and individuals as outlined in Section 5: Roles and Responsibilities.

3.3 Management Objectives

As Boulevard Bush Reserve is in relatively good condition and is in such close proximity to an urban setting, the majority of management activities over the Reserve will focus on maintaining and enhancing habitat values, maintaining low impact recreational use and providing the opportunity for community education.

Management Objectives will focus on weed control, revegetation, installation and maintenance of passive recreational infrastructure, enhancing habitat values and hosting community education activities.

4. Governance

Whilst the Boulevard Bush Reserve Management Plan outlines the management of both Greater Shepparton City Council and Parks Victoria parcels of land located within the Reserve (Figure 2 below), Greater Shepparton City Council is not responsible for the activities, infrastructure or events that occur on the Parks Victoria owned parcel of land. Likewise, Parks Victoria is not responsible for the activities, infrastructure or events that occur on the Greater Shepparton City Council owned parcel of land.

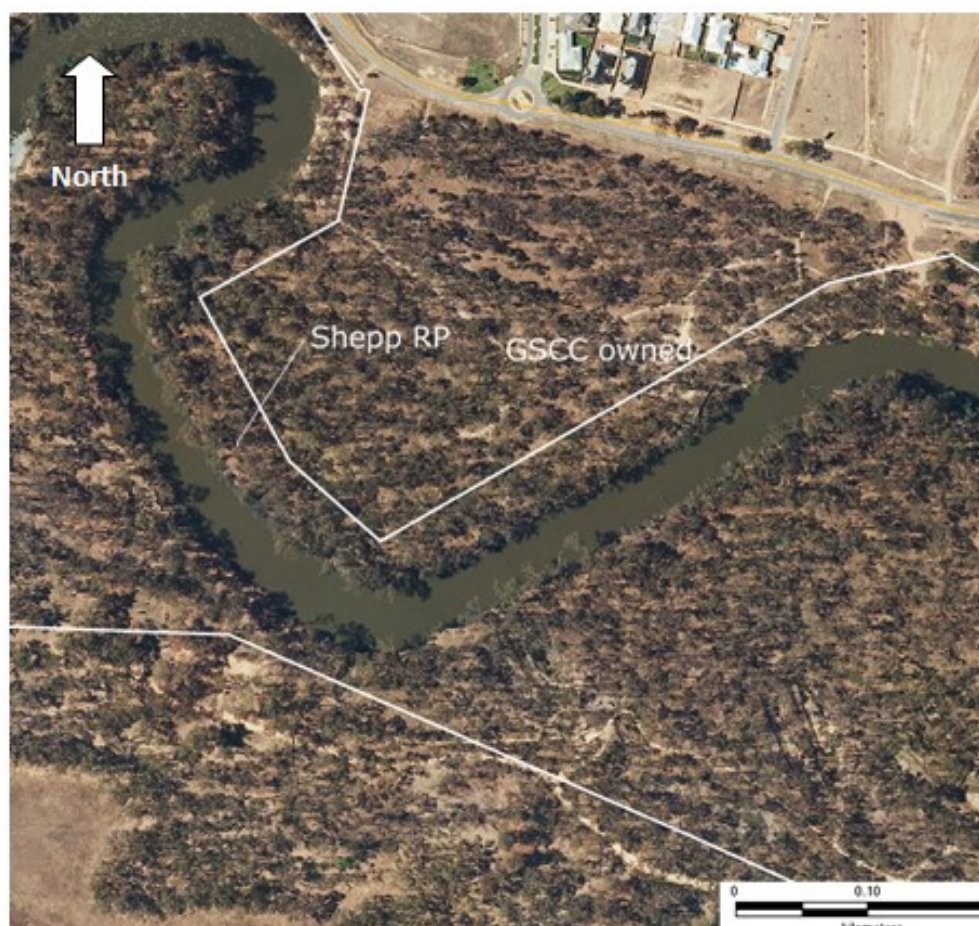


Figure 2: Boulevard Bush Reserve Land Ownership. Parks Victoria Shepparton Regional Park parcel borders the Goulburn River and the Greater Shepparton City Council (GSCC) parcel. Greater Shepparton City Council parcel borders Parks Victoria parcel and The Boulevard.

The RiverConnect Land Management Working Group (LMWG) is the nominated Advisory Committee for Boulevard Bush Reserve. As a sub-group of the RiverConnect

Implementation Advisory Committee (IAC), the RiverConnect LMWG will seek Council endorsement and provide regular reports to Council through the RiverConnect IAC, as shown below in Figure 3.

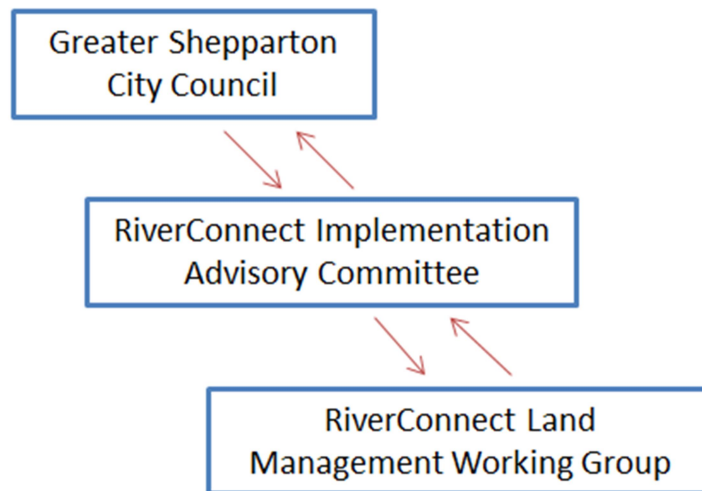


Figure 3: Governance for Boulevard Bush Reserve

The RiverConnect Land Management Working Group determines an annual Action Plan for the reserve.

5. Roles and Responsibilities

A range of organisations, community groups and individuals have an interest in Boulevard Bush Reserve. With these interests come a range of formal and informal responsibilities that need to be fulfilled in order to ensure that the management and development of the Reserve continues in an integrated manner. The key stakeholders for Boulevard Bush Reserve are:

- Greater Shepparton City Council, as the owner of the northern parcel of land that comprises the majority of Boulevard Bush Reserve. Council’s annual budgetary process will determine the ability to deliver management actions.
- Parks Victoria, as the owner of the parcel of land bordering the Goulburn River that comprises Boulevard Bush Reserve. Parks Victoria’s annual budgetary process will determine the ability to deliver management actions.
- Yorta Yorta Nation Aboriginal Corporation, as the Registered Aboriginal Party with responsibility for the management of all Aboriginal Cultural Heritage within Greater Shepparton. This activity must operate within a detailed legislative process. YYNAC has a co-operative agreement with the State of Victoria over the management of crown land and water in this area. Under this agreement the Yorta Yorta Joint Body was established to provide formal advice and

recommendations to the Minister for Environment. Boulevard Bush Reserve falls within the designated areas of this agreement.

- RiverConnect Implementation Advisory Committee, as a partnership platform providing high level oversight, strategic direction and advice to stakeholder organisations and nominated working groups.
- RiverConnect Land Management Working Group, as a cross agency-community forum addressing various issues and exploring opportunities regarding public land management within the RiverConnect area. It is the nominated advisory group for the Boulevard Bush Reserve.
- Shepparton Mooroopna Urban Landcare Group, who have identified Boulevard Bush Reserve as one of their areas for on-ground works and have a significant role to play as both a member of the RiverConnect Land Management Working Group and as a lead community group, and
- Adjacent residents, who do not have any authoritative responsibilities but play an important role in preserving the values of the Reserve. The major responsibilities of residents whose properties are in close proximity to Boulevard Bush Reserve are to ensure that any activities do not have an adverse impact on the values of the Reserve.

The following sections outline the roles and responsibilities vested with these key stakeholders.

Role / responsibility	Council	Parks Victoria	YYNAC	LMWG	SMULG	Residents
Provide budgetary and officer support for implementing management actions	GSCC Native Open Space GSCC Environment	Parks Victoria				
Seek external funding	GSCC Native Open Space GSCC Environment	Parks Victoria				
The management (control) of a range of identified pest plant and animal species in consideration of seasonal conditions and available resources	GSCC Native Open Space	Parks Victoria				
Monthly site inspection of the Reserve	GSCC Native Open Space					
The completion of regular safety audits to ensure that all infrastructure within the Reserve is safe	GSCC Native Open Space	Parks Victoria				
The management of infrastructure/assets contained within the Reserve to ensure that it meets safety and other requirements of the Council	GSCC Native Open Space					
The repair of any damaged infrastructure within the Reserve subject to the Council's annual budgetary process	GSCC Native Open Space					
Management of vehicle and equipment hygiene	GSCC Native Open Space	Parks Victoria				
Attend regular meetings with RiverConnect Land Management Working Group representatives to ensure that there is sufficient cooperation and	GSCC Native Open Space GSCC Environment	Parks Victoria			SMULG	

Role / responsibility	Council	Parks Victoria	YYNAC	LMWG	SMULG	Residents
coordination of management of the Reserve. This meeting would also be utilised to discuss strategic issues						
Fulfil regulatory requirements under Local Law 1(GSCC, 2008)	GSCC Local Laws					
Fulfil regulatory requirements under <i>Crown Land (Reserves) Act 1978</i> (Crown Land (Reserves) Act 1978)		Parks Victoria				
Where appropriate, consultation of proposed activities outside of the action plan, with the RiverConnect Land Management Working Group	GSCC Native Open Space	Parks Victoria			SMULG	
Have a designated person within the organisation for all urgent works on issues such as fallen limbs or damaged infrastructure	GSCC Native Open Space	Parks Victoria			SMULG	
Minimise the risk of injury to users of the land	GSCC Native Open Space GSCC Environment	Parks Victoria			SMULG	
Conduct community education programs in partnership with other stakeholders, and	GSCC Environment	Parks Victoria			SMULG	
Conduct community working bees in partnership with other stakeholders					SMULG	

Role / responsibility	Council	Parks Victoria	YYNAC	LMWG	SMULG	Residents
Ensure that staff undertake appropriate training for working in an environmentally sensitive area.	GSCC Native Open Space GSCC Environment	Parks Victoria			SMULG	
Wildfire suppression		Parks Victoria				
Provide recommendations on Cultural appropriateness of reserve works programs			YYNAC			
Provide recommendations on Environmental programs from Yorta Yorta Nation's perspective where possible			YYNAC			
Provide guidance and strategic direction in monitoring the health of the Reserve				LMWG		
Develop the annual action plan which incorporates community education programs				LMWG		
Undertake appropriate public relations, promotional and education activities to maintain and, where appropriate, enhance the profile of the Reserve				LMWG		
Oversee implementation of the annual action plan				LMWG		
Report bi-monthly to the RiverConnect Implementation Advisory Committee				LMWG		

Role / responsibility	Council	Parks Victoria	YYNAC	LMWG	SMULG	Residents
Minimise the risk of injury to users of the land				LMWG		
Provide two way communications between members representative organisations and the working group, and				LMWG		
Develop a list of proposed works for budgetary consideration by October each year and table at the RiverConnect Land Management Group meeting.					SMULG	
Develop a list of proposed works for budgetary consideration by December each year for review by Council.				LMWG		
Via email, notify the appropriate Council contacts before and after a spraying activity. This will include a list of those involved, what chemicals are being used, the spray rates and a completed Spray Data Form (Appendix F)					SMULG	
Domestic animals are secured as per Local Law 1; Community Living, Part 6 (GSCC, 2018)						Residents
Fallen timber collection does not occur						Residents
Any undesirable activity is reported to Council, such as motor bike activity, rubbish dumping, etc						Residents

5.6 Contacts

The majority of management activities are undertaken by Council, Parks Victoria or Shepparton Mooroopna Urban Landcare Group. In order to streamline the interaction between these organisations and ensure a timely response, up to date contact information for these representatives needs to be maintained via the RiverConnect Land Management Working Group.

Each of these organisations will identify designated officers for all contact relating to Boulevard Bush Reserve.

Name	Organisation	Position	Contact Number
Paul Parsons	Greater Shepparton City Council	Co-ordinator - Native Open Space	0409 310 499
Meg Pethybridge	Greater Shepparton City Council	RiverConnect Project Officer	0400 231 269
Neville Wells	Parks Victoria	Ranger – Team Leader	0427 327 522
After Hours Council Contact	Greater Shepparton City Council	nil	(03) 5832 9700

5 Management Zones

As Boulevard Bush Reserve is in relatively good condition, the majority of management activities over the Reserve will focus on weed control, revegetation, installation and maintenance of passive recreational infrastructure and enhancing habitat values.

Four management zones (see figure 4) have been identified in Boulevard Bush Reserve derived directly from *Flora and Fauna Assessment for Tassicker's Block, Shepparton* (Guinane, S., 2012), each of which is made up of a patch work of Ecological Vegetation Classes (EVC). Each of these zones varies in environmental condition and requires different management actions.



Figure 4: Boulevard Bush Reserve Management Zones. The Roadside Zone is delineated in red (Zone A), the Northern Zone in yellow (Zone B), the Southern Zone in green (Zone C), and the Gully Zone running into the Goulburn River in blue (Zone D) (Guinane, S., 2012).

5.1 Zone A

This zone of 1.00 ha is contiguous with the southern road reserve of The Boulevard, although fenced from it, along its entire east-west length of 460m (Fig. 4). This zone has been predominately cleared of woody vegetation and is dominated by introduced species at ground level (Guinane, S., 2012).



Figure 5: Zone A looking east from near the car park (Guinane, S., 2012).

Zone A comprises Riverine Grassy Woodland EVC (EVC No. 295) and a small area of Sedgy Riparian Forest EVC (EVC No. 816) (Appendix D).

The management objectives for this zone will focus primarily on weed control, revegetation of overstorey and understorey species, the re-introduction of logs and general indigenous landscaping. Further detailed management objectives are outlined in the Boulevard Bush Reserve Action Plan, Section 14.

5.2 Zone B

This zone of 3.71 ha is contiguous with Zone A to its north, and is defined by the foot track on its southern, western and eastern boundaries (Fig. 4).

This zone retains its woody overstorey vegetation, and at ground level is a mixture of annual/perennial introduced species and indigenous large-tufted graminoids. This zone drains to a lower-lying depression which is central to the site, and where most of the indigenous large-tufted graminoids are located (Guinane, S., 2012).



Figure 6: Zone B looking north from the foot track (Guinane, S., 2012).

Zone B comprises Riverine Grassy Woodland EVC (EVC No. 295), Floodplain Wetland Aggregate EVC (EVC No. 172) and Sedgy Riparian Forest EVC (EVC No. 816) (Appendix D).

The management objectives for this zone will focus on the control of introduced species and minimal understorey revegetation.

5.3 Zone C

This zone of 8.74 ha is contiguous with zone B to its north (which is north of the foot track), and is defined by the Goulburn River on its southern, western and eastern boundaries (Fig. 4). Most of this zone is slightly elevated relative to Zone B. This zone retains its woody overstorey vegetation, and at ground level is a mixture of annual/perennial introduced species, and indigenous large-tufted graminoids (Guinane, S., 2012).



Figure 7: Zone C looking south from the foot track (Guinane, S., 2012).



Figure 8: Zone C looking east along the foot track (Guinane, S., 2012).

Zone C comprises Sedgy Riparian Forest EVC (EVC No. 816) and Floodplain Riparian Woodland EVC (EVC No. 56) (Appendix D).

The management objectives for this zone will focus primarily on weed control and minimal understorey revegetation.

5.4 Zone D

This zone of 0.17 ha is a gully embedded within Zone C which runs south-east to the Goulburn River on its southern boundaries (Fig. 4). This zone retains little of its woody overstorey vegetation, and at ground level is a mixture of bare earth (on the banks), annual/perennial introduced species, and indigenous large-tufted graminoids (Guinane, S., 2012).



Figure 9: Zone D Looking north up the gully from the edge of the Goulburn River (Guinane, S., 2012).



Figure 10: Zone D Looking west along the bank of the Goulburn River from the base of the gully (Guinane, S., 2012).

The management objectives for this zone will focus primarily on weed control.

6 Terrestrial Management

6.1 Indigenous Plants

A large range of native trees, shrubs, grasses and groundcovers are distributed throughout Boulevard Bush Reserve (Guinane, S., 2012). Every effort should be taken to retain these species and where possible, to increase the distribution and abundance of Indigenous plants.

6.1.1 Management of Established Trees and Fallen Timber

Fallen timber from the trees in the Reserve provides valuable habitat for a range of native species. Any fallen timber on or near tracks will be relocated

by Council to maintain pedestrian access. Fallen timber should be placed one to two metres off the path edge.

Council is responsible for the management of trees within the freehold section of the Reserve from a public liability perspective and will conduct annual audits on trees within the maintenance zone of the paths. A copy of this report will be provided to the RiverConnect Land Management Working Group. Trees within the Shepparton Regional Park are the responsibility of Parks Victoria.

If there are trees present within the Reserve that Council believes to be a danger to the public, the fate of these trees will be determined by Council after consultation with the RiverConnect Land Management Working Group so that options other than complete removal of the tree can be considered. Council will then be responsible for undertaking the necessary actions.

6.1.2 Fire

It has been recommended that fire is not an appropriate management tool for Boulevard Bush Reserve; however, there may be unique circumstances in the future where it may be utilised. In some circumstances, fire is able to be used as an adaptive management tool to modify the species composition of vegetated areas. Any use of fire should be conducted under sound scientific information and guided by expert and traditional owner advice.

6.1.3 Revegetation Activities

A range of revegetation activities have been proposed for each of the zones throughout the Reserve. Specific detail regarding these activities can be found in the Boulevard Bush Reserve Action Plan and will be reported against at regular RiverConnect Land Management Working Group meetings.

6.2 Weed Control

6.2.1 Types of Weeds

A large variety of introduced grasses and groundcover species are present within the Reserve. These are both perennial and annual. Significant weeds within the catchment were also found across the site: Paterson's Curse, African Lovegrass and Bathurst Burr are *Regionally Controlled Weeds*; Spear Thistle and Variegated Thistle are *Restricted Weeds*; Jerusalem Cherry, Tall Fleabane and Phalaris are *Undeclared Weeds* (DSE 2008).

A list of introduced species can be found in the Flora species recorded from Boulevard Bush Reserve, Shepparton document (Appendix A) (Williams, L. and Stothers, K., 2018).

6.2.2 Weed Management

Any works to manage terrestrial weed species should be undertaken with due care. Non-chemical solutions are preferred and hand weeding may be undertaken as appropriate. If required, minimal appropriate herbicides and application rates should be used for the specific species being targeted, with the least toxic spray being the preferred option. Care should be taken to ensure that any herbicide application does not affect indigenous species.

A works program has been identified in the Boulevard Bush Reserve Action Plan and will be incorporated into the appropriate Council work plans. Typically, this will involve the application of an appropriate herbicide at the most appropriate time.

All spray operators require a Chemical Users Certificate and the designated Council contacts must be notified of any spraying activity, including type of chemical being used, and a list of non-Council employees undertaking spraying.

6.3 Fauna

A range of fauna species have been identified in Boulevard Bush Reserve and these species utilise the range of habitats available. A full species list can be found in the Fauna recorded within Boulevard Bush Reserve, Shepparton attachment (Appendix B) (Williams, L. and Stothers, K., 2018). Most notable are the presence of the endangered Squirrel Glider, the near threatened Brown Treecreeper and the near threatened Azure Kingfisher (DSE 2013).

6.3.1 Indigenous Fauna

Six conservation-significant fauna species have been identified as occurring within the Reserve, at both the State and Regional levels: State - Squirrel Glider (*Petaurus norfolcensis*), Azure Kingfisher (*Alcedo azurea*), Black-chinned Honeyeater (*Melithreptus gularis*), Brown Treecreeper (*Climacteris picumnus*), Jacky Winter (*Microeca fascians*); Regional – Platypus (*Ornithorhynchus anatinus*) (Williams, L. and Stothers, K., 2018). Notable species previously identified include Short Beaked Echidna (*Tachyglossus aculeatus*) (Figure 11) (Guinane, S., 2012).



Figure 11: Short Beaked Echidna (*Tachyglossus aculeatus*) (Roberston, P., n.d)

6.3.2 Fauna Management

There is a lack of appropriate hollow-bearing trees for hollow-dependent fauna habitat in the Reserve (Williams, L. and Stothers, K., 2018). Management actions for the local fauna will focus on habitat for the provision of hollows and monitoring of pest species. The RiverConnect Land Management Working Group supports the installation of nest boxes through the RiverConnect Education Program to enhance the Reserve's habitat value. Annual monitoring with wildlife cameras will be undertaken through this program to determine the success of nest box introduction and inform further management plans.

6.3.3 Pest Animal Control

Along with a significant range of indigenous fauna species there are also numerous introduced fauna species that utilise the Reserve. The Domestic Cat (*Felis catus*), European Red Fox (*Vulpes vulpes*), and European Rabbit (*Oryctolagus cuniculus*) have been identified within the Reserve (Guinane, S., 2012 and Williams, L. and Stothers, K., 2018), with each of these species having a negative effect on the environmental values of the Reserve. Foxes and feral and domestic cats are predators that predate upon native species that utilise the Reserve and are not permitted in the Reserve. Rabbits inhibit the regeneration and revegetation of native plants.

The location of the Reserve and its proximity to urban areas limits the control measure for these species. Control measures such as shooting or baiting are inappropriate. Cat trapping was undertaken by the Greater Shepparton City

Council in the Reserve 3 times per year from 2014 to 2018, with little to no evidence of cats recorded in the Reserve over this time. The RiverConnect Land Management Working Group will continuously monitor pest animal activity with the assistance of the wildlife cameras put out in the RiverConnect Education Program. Detailed management options are outlined in the Boulevard Bush Reserve Action Plan, Section 14.

6.4 Cultural Site Management

The Goulburn River was a permanent water source to Yorta Yorta Nation people and European settlers. The resources the River system supports and the Rivers themselves were, and continue to be, the lifeblood of these communities.

6.4.1 Aboriginal Heritage

The Aboriginal Heritage Act 2006 governs the protection and preservation of Cultural Heritage in the State of Victoria. Yorta Yorta Nation Aboriginal Corporation is the designated Registered Aboriginal Party for the protection of Cultural Heritage within their traditional country, which encompasses Boulevard Bush Reserve.

Given the close proximity to waterways of the Boulevard Bush Reserve, it can be assumed that the site was utilised by Yorta Yorta Nation people prior to colonial times. For legislative purposes “areas of Cultural Heritage Sensitivity” are defined by the Regulations as including:

- Areas within 200 metres of a waterway, prior waterway, lake, waterhole, natural spring wetland, or lunettes
- Land within 50 metres of a registered cultural heritage place, and
- Landscape features such as prior waterways

Accordingly, it is strongly advised that advice is sought regarding the potential requirement of a Cultural Heritage Assessment prior to the commencement of any major works on site.

6.4.2 European Heritage

Timber, particularly red gum harvesting, was an important early industry for the region. Red gum was a prized timber, harvested for local consumption as well as for the Melbourne markets. Transport of the timber was via Paddle Steamer, which once travelled up the Goulburn River to Shepparton.

Travelling labourers did much of the early colonial timber milling with hand tools. The colonial hardwoods were difficult to work. Initially trees were felled by cutting notches into the timber, which would support planks of

timber for the timber cutters to stand on. Crosscut saws or axes were used to then saw the timber to appropriate lengths. There is an example of a crosscut saw tree in Boulevard Bush Reserve.

During its varied history, Boulevard Bush Reserve was also used to stable horses that would race at the nearby racecourse. Horses were stabled in barbed wire pens across the site, of which remnants have been located.

A European Heritage Assessment is recommended for Boulevard Bush Reserve.

6.5 Litter Management

Prior to the erection of a boundary fence which restricted vehicle access, Boulevard Bush Reserve saw high levels of rubbish dumping. Since the installation of this fence, there are low levels of litter in Boulevard Bush Reserve, which is also assisted by the Shepparton Mooroopna Urban Landcare Group who regularly monitor and clean the site. The Reserve has a 'carry in, carry out' policy with no rubbish bins provided. This approach will continue into the future with appropriate signage being developed to inform Reserve users of their responsibility with regard to litter.

In the event of the dumping of large rubbish items, Council and/or Parks Victoria contacts should be notified (refer to Section 5.6).

7 Infrastructure

There is some existing built infrastructure located in Boulevard Bush Reserve including fences, gates, paths and signage.

7.1 Reactive Management

Along with a regular maintenance schedule there will be circumstances where reactive maintenance is required to infrastructure as a result of storm, vandalism, flood or other unexpected events.

In the event of reactive maintenance being required the persons identifying the maintenance requirement should contact Council.

7.2 Signage

Signage has an important role within Boulevard Bush Reserve; however its function, style, design, materials and location will need to be carefully considered.

Interpretative signage is located at both entrances to the Reserve in addition to a series of smaller signs that identify key species and sites which are located occasionally through the Reserve. Each entrance sign includes educational, directional and regulatory information. Roadside signage is proposed for either end

of the reserve to alert road users along The Boulevard of its significance. Yorta Yorta Nation Aboriginal Corporation has indicated their interest in developing cultural and historical signage in the Reserve.

All signage in Boulevard Bush Reserve will conform to Greater Shepparton City Council's Style guide. A standard design format was developed through the RiverConnect Land Management Working Group and includes artwork of a possum skin cloak design by Lee Darroch. Greater Shepparton City Council has a formal agreement with Lee for the use of this artwork on interpretative signage in the river environment (TRIM 2018/26201). Adherence to this agreement is critical for any signage in the Reserve. Maintenance of these signs is the responsibility of Greater Shepparton City Council.

7.3 Walking Paths

Visitors are encouraged to use the existing paths within Boulevard Bush Reserve. A single gravelled walking path runs between the main two entrances to the Reserve. The maintenance of this is the responsibility of Greater Shepparton City Council Parks, Sport and Recreation department. Path maintenance includes:

- Crushed brick re-laying as required;
- Maintenance to a width of 1.5 metres;
- Slashing along either side of the path, one mower width wide, a minimum of 6 times per year;
- Spraying of all vegetation as it appears on the crushed brick path;
- Maintenance to a width of 1.5 metres surrounding the picnic table; and
- Maintenance of the risk from overhanging and fallen tree limbs as per section 7.1.1.

There are two smaller unformed paths intersecting the more remote patches of the Reserve. Visitors are encouraged to use these paths during the cooler months, when the risk of snake bite and fire is minimal. There are no path maintenance activities undertaken on these paths.

7.4 Gates and Access

Gates have been constructed at the eastern and western end of the Reserve. Since their installation, these gates have remained closed to restrict vehicle access to the Reserve. Emergency and management vehicles can access the site via these gates. A key can be obtained from Council or Parks Victoria.

Bollarded pedestrian entrances have been constructed at the eastern and western end of the Reserve. This enables pedestrian access to the site, whilst restricting vehicle and motor bike access.

All walkways from car parks to entrances will be formalised with crushed brick of 1.5 metres wide and slashed per section 8.3.

7.5 Fencing

There is currently a ring-lock fence located along the northern and eastern boundaries of the Reserve. The majority of this fence runs parallel to The Boulevard. Fencing has been installed to eliminate unauthorised vehicle access through the Reserve. Greater Shepparton City Council is responsible for the maintenance of this fencing.

7.6 Car Parks

There are two un-sealed, semi-formal car parks at the eastern and western ends of the Reserve. Greater Shepparton City Council is responsible for the maintenance of these car parks.

7.7 Seating

At present, there is one bench seat along the path and one picnic table at the eastern end of the Reserve. The RiverConnect Land Management Working Group has recognised the potential for a second picnic table at the western end of the Reserve. The design and location of any additional seating will take into account cultural heritage, the likelihood of future flooding and potential fire, and should be sympathetic to the surrounding environment. Greater Shepparton City Council is responsible for the maintenance of seating.

8 Education

The use of Boulevard Bush Reserve as a venue for educational activities is encouraged and forms a key part of the vision for the Reserve. The RiverConnect Land Management Working Group, Greater Shepparton City Council, Parks Victoria and Shepparton Mooroopna Urban Landcare Group will promote the venue in this context and identify funding opportunities for appropriate activities to be undertaken within the Reserve.

There will be an increase in the number of various Educational activities and events throughout the duration of the Environmental Management Plan, outlined in detail in the Action Plan. These activities include:

- An annual open day
- Installation, maintenance and monitoring of nesting boxes
- Bird and plant surveys
- RiverConnect spotlight walks
- European and Aboriginal Heritage walks
- Bat monitoring sessions, and

- General informational walks, including bush safety ie. Snakes.

9 Human Interaction

9.1 Vehicle Access

No vehicles, including motorbikes, are permitted in the Reserve, other than those involved in maintenance activities, as per Greater Shepparton City Council *Local Law Number 1 – Section 2.15 Recreational Vehicles* (GSCC 2008).

9.2 Dogs

All visitors to Boulevard Bush Reserve are required to have their pets on a leash (GSCC 2008). Pets, particularly dogs, are not permitted to disturb any native wildlife. The inappropriate management of dogs and other domestic pets has the potential to compromise the natural values of the Reserve and to discourage other visitors, such as bird observers.

The management of dog excrement in Boulevard Bush Reserve will comply with Greater Shepparton City Council *Local Law No 1 – Community Living Section 6.9; ‘No person in charge of an animal shall allow any part of the animals excrement to remain in a highway or council land’* and *‘a person in charge of a domestic animal must carry a suitable receptacle for the removal of that animal’s excrement from a highway or council land’* (GSCC 2008).

9.3 Cats

Domestic cats are not permitted in Boulevard Bush Reserve as per Greater Shepparton City Council’s *Local Law Number 1 – Community Living Section 6.3*. (GSCC, 2008). They are a potential predator to endangered and threatened wildlife species and compete with similar species for food.

9.4 Bardi Grubbing

The digging or removal of any ground cover for the purpose of bardi grubbing, or any other type of bait, is an activity that can cause substantial damage to the vegetation of the Reserve, potentially leading to the death of native plants and the introduction of weeds. Bardi grubbing is not prohibited in Boulevard Bush Reserve and is generally an activity that is not permitted in other areas of public land and is only allowed to be undertaken in state forests with a permit under the *Forests Act 1958* (Forests Act 1958).

9.5 Camping

Overnight camping is not permitted in Boulevard Bush Reserve or its car parks. The Reserve does not have the appropriate facilities to allow it to be used as a site for camping. This position is consistent with the *Greater Shepparton City Council’s Local*

Law Number 1 – Community Living, Section 2.17 (a); which states ‘A person must not, except with a permit, camp on any Council land or on any privately owned land within the municipality unless within a designated camping area’ (GSCC 2008).

Camping is however permitted in the Shepparton Regional Park which runs along the river frontage.

9.6 Camp Fires

Due to the fragile environment and conservation values of the site, camp fires are prohibited in Boulevard Bush Reserve. This position is consistent with *Greater Shepparton City Council’s Local Laws Number 1, Section 2.5 (GSCC 2008)*. Campfires are however permitted in the Shepparton Regional Park which runs along the river frontage. Campfires must comply with fire regulations and are not permitted on days of Total Fire Ban.

9.7 Firewood Collection

Ground timber, particularly larger diameter materials, provide valuable habitat for a range of fauna species. The Flora and Fauna assessment found there was little timber on the ground in the Reserve, which is presumably due to continuous removal of this timber by members of the public (Guinane, S., 2012).

The collection of firewood within Boulevard Bush Reserve is therefore not permitted. It has been recommended through the Flora and Fauna Assessment that managers increase the number of ground cover logs within the Reserve (Guinane, S., 2012).

9.8 Recreational Fishing

As the majority of the boundary of Boulevard Bush Reserve is bordered by the Goulburn River, fishing is accepted as an appropriate recreational activity, provided that Victorian Fishing Regulations are followed.

9.9 Horse Riding

The riding of horses in the Reserve is prohibited. The riding of horses is not compatible with the other users of the park. This policy is consistent with the *Greater Shepparton City Council’s Local Law Number 1 – Community Living, Section 2.16; which states ‘A person must not without a permit ride or lead a horse or cause or authorise another person to ride or lead a horse on any land set aside by the Council for the purpose of recreation, whether active or passive, or a pleasure ground, or place of public resort, or playground being Council land unless such place has been signposted by the Council as being available for horses or horse riding’ (GSCC 2008).*

9.10 Graffiti

Graffiti of any form is not permitted in Boulevard Bush Reserve. Any graffiti needs to be reported to the Greater Shepparton City Council and removed as soon as possible.

9.11 Functions

The use of the Reserve as a venue for functions such as weddings is not considered to be a priority by the working group. However, if there are individuals or groups who wish to stage functions they should contact the working group or the Council (contact details are found in Appendix D), to determine whether the proposal is appropriate. Any functions held within the Reserve should be managed in such a way to ensure that they do not impact on the existing visitor base and values of the Reserve.

10.12 Other

The following shall apply in the Reserve:

- Under no circumstances is shooting permitted;
- All paths are considered to be shared between all visitors;
- All native wildlife is protected and Reserve users should not harass or harm wildlife at any time;
- Walking off the paths is not encouraged, and
- The construction of “rope swings” or “swings” of any kind is not permitted and will be removed by Parks Victoria.

10 Urban Development

Boulevard Bush Reserve is bordered by the Goulburn River on its western, southern and eastern boundaries. Its northern boundary is bordered by The Boulevard which runs parallel to the Reserve.

There is a new development area opposite Boulevard Bush Reserve to the north. Whilst this development does not share a boundary with the Reserve, additional pressures for the site increase as population rises. These pressures include: increased recreational use by neighbours including pet animals, increased access to river, spread of introduced species, and increase in ground cover removal, noise pollution and litter for native species.

11 Emergency Management

11.1 Flooding

Bordering the Goulburn River, Boulevard Bush Reserve will flood at a moderate flood level of 10.2m. With this in mind, it is essential that all management objectives take flooding into consideration.

11.1.1 Preferred Flood Mitigation Options

No other fencing beyond the current extent is to be erected to ensure flood waters pass unimpeded.

11.1.2 Reactive Management

There may be an increase in weed species after a flood event and management will need to take this into consideration.

It is also likely that existing fallen timber will be re-located within and outside the Reserve and management will need to take this into consideration.

12.2 Wildfire Risk Management

Due to the close proximity of Boulevard Bush Reserve to housing, it will be necessary to monitor and act accordingly to fire risk. Fire risk will be managed through ongoing monitoring and slashing of the road side area 3 times per year or as required. This will provide a buffer zone between Boulevard Bush Reserve and residential properties.

12 Occupational Health and Safety and Risk Management

All members of the RiverConnect Land Management Group, Greater Shepparton City Council, Parks Victoria and their representative agencies, must demonstrate a strong commitment to workplace health and safety and public risk management, and take all reasonable care in the performance of their duties to prevent injury to themselves or others.

Members of the RiverConnect Land Management Working Group and their representative agencies are responsible for complying with the relevant Occupational Health and Safety legislation, the Council's Occupational Health and Safety Management System (My Safety), and the Council's Risk Management Policy. They must ensure that appropriate work practices and procedures are in place, including the correct use of equipment and the identification and reporting of workplace incidents and hazards.

13 Insurance

At all times during the term of the Boulevard Bush Reserve Environmental Management Plan, all land managers of the Reserve must be the holder of a public liability policy of insurance (effected with an insurer which is authorised to carry on non-life insurance

business in Australia under the Insurance Act 1973) in the name of the relevant authority for an amount no less than \$20 million and a WorkCover policy complying with the provisions of the Accident Compensation (WorkCover Insurance) Act 1993 in respect of all of its employees.

Any user of the land must promptly notify the relevant land owner of any accident, injury, property damage or environmental damage which occurs during performance of the services and provide details of the investigation and any recommendation or strategies for future prevention.

14 Review

The Boulevard Bush Reserve Environmental Management Plan should be reviewed every three years by Council, in consultation with the RiverConnect Land Management Working Group, or more often if necessary.

The Boulevard Bush Reserve Action Plan will be reviewed and reported against annually by the RiverConnect Land Management Working Group, as outlined in Sections 4 and 5.

15 Boulevard Bushland Reserve Action Plan

The Boulevard Bush Reserve Action Plan was developed in response to the findings and recommendations of the *Flora and Fauna for Tassicker's Block, Shepparton* (Guinane, S., 2012). The implementation of the Action Plan will be dependent on Greater Shepparton City Council's annual budgetary process, Parks Victoria's budgetary process and external funding opportunities.

The following actions are recommended to Greater Shepparton City Council and Parks Victoria to enhance habitat values, improve the opportunities for passive recreational use and provide educational opportunities for the community.

The table has been colour coded to reflect existing (Black) and additional (Blue) budget required for various items.

No.	Item	Strategic Link	Budget Estimate (\$)			Information required to complete the task	Priority	Status
			2014 - 15	2015 - 16	2016 -17			
1.	Seating	Seating - 8.7	\$1500			Bench seating mid-way along the main walking path	High	Complete
2.	Cultural Heritage Assessment	Terrestrial Management - 7.4	\$10000	\$5000		<ul style="list-style-type: none"> • European • Aboriginal 	Medium Medium	Not yet addressed
3.	Flora and Fauna Assessment	Terrestrial Management – 7.1, 7.2 and 7.3			\$3000		High	Complete
4.	Nesting Box	Terrestrial Management – 7.3.1	\$1000	\$2500		<ul style="list-style-type: none"> • Installation – with school group • Monitoring - \$ for camera 	Medium Medium	Ongoing
6.	Cat Trapping	Human Interaction – 10.3	\$800	\$800	\$800	Conduct trappings 3 times per year	High	Complete
7.	Signage	Infrastructure – 2.8	\$3000	\$2000	\$1500	<ul style="list-style-type: none"> • Entrance signs (2) • Species specific signage (different tree species, or culturally significant trees) • Information Board 	High Medium	Complete

8.	Educational Walks	Education - 9	\$300 In-kind \$1000	\$300 In-kind \$1000	\$300 In-kind \$1000	<ul style="list-style-type: none"> Spotlight Walk and talk Annual Event (report back to community on Management Plan/Action Plan) 	High Medium Medium	Ongoing
9.	Brochure for local new home owner kits	Education - 9		\$1000			Low	Not yet addressed
10.	Community Working Bees	8.3 and 8.4 Gates, Access and Walking paths.	\$500	\$2000	\$500	Shepparton Mooroopna Urban Landcare Group to coordinate with Council, PV and community.	High	Ongoing
11.	Bollarding	Gates and Access 8.3	\$2000	\$1000	\$500	Council to bollard between old pump and gully to restrict unauthorised vehicle access.	High	Complete
12.	Site Inspection <ul style="list-style-type: none"> Weed Management Grass Management Rubbish Undesirable 	Terrestrial management 7.2, 7.1 and 7.5	\$450 In-kind	\$450 In-kind	\$450 In-kind	<ul style="list-style-type: none"> Seasonal site inspections to be conducted by Aquatic Bushland Care team Annual site inspection to be conducted by RiverConnect Land Management Working Group in August each year, with an action list developed. 	High High	Ongoing

	human activity – Fencing							
13.	Fuel Load Monitoring	Emergency Management – 12.2	In-kind	In-kind	In-kind	CFA – Municipal Fire Prevention Officer undertake annual assessments prior to the Fire Danger Period. Parks Victoria – The site will be assessed for consideration as part of the annual Fire Operations Plan.	High	Ongoing
14	Investigate Old Pump Site	Car Parks 8.6	In-kind	\$1000	\$1000	Council to investigate history of area and consider for inclusion in BBR EMP.	Medium	Not yet addressed
15	Trail counters	8.3 and 8.4 Gates, Access and Walking paths.				Install trail counters temporarily on lectern sign at Y of path to monitor walking traffic	High	Not yet addressed
16	Revegetation	Terrestrial Management – 7.1, 7.2 and 7.3				Planting around the new picnic table in One Tree Per Child– blue devils, lemon beauty heads, lilies etc		Not yet addressed

16 References

Aboriginal Heritage Act 2006, No.16/2006 (Victoria)

Brady, E., (1996) *They Left Their Footprints*, Published by the Greater Shepparton City Council, Shepparton.

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DEPI (2014) *Advisory List of Rare or Threatened Plants in Victoria* – 2014. Victorian Department of Environment and Primary Industries, East Melbourne.

Department of Primary Industries (2008). *Declared Noxious Weeds – Listed by Common Name*. Landcare Note March 2008. Department of Primary Industries, East Melbourne.

DSE (2008) *Advisory List of Threatened Vertebrate Fauna in Victoria* – 2008. Victorian Department of Sustainability and Environment, East Melbourne.

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GSCC (2008). *Local Law 1 – Community Living* - 2008. Greater Shepparton City Council.

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Roberston, P., (n.d), Museum Victoria Australia, accessed 5 December 2013, <http://museumvictoria.com.au/bioinformatics/mammals/images/acullive.htm>

Williams, L. and Stothers, K., (2018) *Flora and Fauna Assessment of Boulevard Bush Reserve, Shepparton* – 2018. Out of the Woodlands Environmental Consultancy. Report prepared for the Greater Shepparton City Council.

Appendix A Vegetation List for Boulevard Bush Reserve

Vascular flora has been recorded for presence in Boulevard Bush Reserve. This information has been collected from Flora and Fauna Assessment – Tassicker’s Block, Shepparton (Guinane, S., 2012) and Flora and Fauna Assessment of Boulevard Bush Reserve, Shepparton (Williams, L. and Stothers, K., 2018) and recorded in the table below.

An asterisk denotes an introduced species.

“1” denotes a planted species.

“r” signifies rare in Victoria (however, note this status does not apply to planted specimens or populations)

Common Name	Scientific Name	Guinane 2012	This survey	Conserv. significance
Trees				
River Red Gum	<i>Eucalyptus camaldulensis</i>	✓	✓	
Grey Box	<i>Eucalyptus microcarpa</i>		✓	
Low trees				
Silver Wattle	<i>Acacia dealbata</i>	✓	✓	
Kurrajong			✓	
¹ White Cypress-pine	<i>Callitris glaucophylla</i>	✓		
¹ Lightwood	<i>Acacia implexa</i>		✓	
*Desert Ash	<i>Fraxinus angustifolia</i>	✓	✓	
Shrubs				
River Bottlebrush	<i>Callistemon sieberi</i>	✓	✓	
Grey Parrot-pea	<i>Dillwynia cinerescens</i>	✓	✓	
River Tea-tree	<i>Leptospermum obovatum</i>	✓		
Drooping Cassinia	<i>Cassinia arcuata</i>	✓	✓	
¹ Gold-dust Wattle	<i>Acacia acinacea</i>		✓	
¹ Bent-leaf Wattle	<i>Acacia flexifolia</i>		✓	r
¹ Spreading Wattle	<i>Acacia genistifolia</i>		✓	
¹ Mallee Wattle	<i>Acacia montana</i>		✓	
¹ Hedge Wattle	<i>Acacia paradoxa</i>	✓	✓	
¹ Ovens Wattle	<i>Acacia pravissima</i>		✓	
¹ Golden Wattle	<i>Acacia pycnantha</i>	✓	✓	
¹ Varnish Wattle	<i>Acacia verniciflua</i>	✓	✓	
¹ Sweet Bursaria	<i>Bursaria spinosa</i>		✓	
¹ Common Eutaxia	<i>Eutaxia microphylla</i>		✓	
*Sweet Briar	<i>Rosa rubiginosa</i>		✓	
*Blackberry	<i>Rubus fruticosus</i>		✓	

Common Name	Scientific Name	Guinane 2012	This survey	Conserv. significance
Herbs				
Lesser Joyweed	<i>Alternanthera denticulata</i>	✓	✓	
Rounded Water Starwort	<i>Callitriche muelleri</i>	✓		
Flat Spurge	<i>Chamaesyce drummondii</i>		✓	
Austral Stonecrop	<i>Crassula sieberiana</i>	✓		
Late-flower Flax-lily	<i>Dianella tarda</i>		✓	
Climbing Saltbush	<i>Einadia nutans</i>	✓	✓	
Smooth Willow-herb	<i>Epilobium billardierianum</i>	✓		
Austral Cranesbill	<i>Geranium solanderi</i> var. <i>solanderi</i>	✓ ¹		
Rough Raspwort	<i>Haloragis heterophylla</i>	✓		
False Loosestrife	<i>Lythrum hyssopifolia</i>	✓		
Wood Sorrel	<i>Oxalis perennans</i>	✓	✓	
Creeping Knotweed	<i>Persicaria prostrata</i>	✓	✓	
Poison Pratia	<i>Pratia concolor</i>	✓	✓	
Jersey Cudweed	<i>Pseudognaphalium luteoalbum</i>	✓		
River Buttercup	<i>Ranunculus inundatus</i>	✓	✓	
Swamp Dock	<i>Rumex brownii</i>	✓	✓	
Groundsel	<i>Senecio linearifolius</i>	✓		
Cotton Fireweed	<i>Senecio quadridentatus</i>	✓	✓	
River Bluebell	<i>Wahlenbergia fluminalis</i>	✓	✓	
*Sheep Sorrel	<i>Acetosella vulgaris</i>	✓	✓	
*Capeweed	<i>Arctotheca calendula</i>	✓		
*Shepherd's Purse	<i>Capsella bursa-pastoris</i>	✓		
*Spear Thistle	<i>Cirsium vulgare</i>	✓	✓	
*Flaxleaf Fleabane	<i>Coryza bonariensis</i>	✓		
*Canadian Fleabane	<i>Coryza canadiensis</i>	✓		
*Sand Rocket	<i>Diplotaxis tenuifolius</i>	✓		
*Paterson's Curse	<i>Echium plantagineum</i>	✓	✓	
*Common Storksbill	<i>Erodium cicutarium</i>	✓		
*Cleavers	<i>Galium aparine</i>	✓	✓	
*Cat's Ear	<i>Hypochoeris radicata</i>	✓	✓	
*Prickly Lettuce	<i>Lactuca serriola</i>	✓	✓	
*Small-flowered Mallow	<i>Malva parviflora</i>	✓		
*Barrel Medic	<i>Medicago truncatula</i>	✓		
*Red-flowered Mallow	<i>Modiola caroliniana</i>	✓		

Common Name	Scientific Name	Guinane 2012	This survey	Conserv. significance
*Soursob	<i>Oxalis pes-caprae</i>	✓	✓	
*Red Bartsia	<i>Parentucellia latifolia</i>	✓		
*Ox's Tongue	<i>Picris echioides</i>	✓		
*Plantain	<i>Plantago lanceolata</i>	✓	✓	
*Creeping Buttercup	<i>Ranunculus repens</i>	✓	✓	
*Onion-grass	<i>Romulea rosea</i>	✓	✓	
*Curled Dock	<i>Rumex crispus</i>	✓	✓	
*Variegated Thistle	<i>Silybum marianum</i>	✓		
*Jerusalem Cherry	<i>Solanum pseudocapsicum</i>	✓	✓	
*Rough Sowthistle	<i>Sonchus asper</i>	✓		
*Milk Thistle	<i>Sonchus oleraceus</i>	✓	✓	
*Strawberry Clover	<i>Trifolium fragiferum</i>	✓		
*White Clover	<i>Trifolium repens</i>	✓		
*Subterranean Clover	<i>Trifolium subterraneum</i>	✓		
*Vetch	<i>Vicia sativa ssp. sativa</i>	✓	✓	
*Bathurst Burr	<i>Xanthium spinosa</i>	✓		
Rushes & Sedges				
Tall Sedge	<i>Carex tereticaulis</i>	✓	✓	
Knob Sedge	<i>Carex inversa</i>		✓	
Leafy Flat-sedge	<i>Cyperus lucidus</i>	✓		
Common Club-rush	<i>Eleocharis acuta</i>	✓		
Pale Rush	<i>Juncus pallidus</i>	✓	✓	
*Drain Sedge	<i>Cyperus eragrostis</i>	✓	✓	
Mistletoes				
Box Mistletoe	<i>Amyema miquelli</i>	✓	✓	
Grasses				
Hill Wallaby-grass	<i>Austrodanthonia eriantha</i>	✓		
Leafy Wallaby-grass	<i>Austrodanthonia linkii</i>		✓	
Blown Grass	<i>Lachnagrostis filiformis</i>	✓		
Warrego Summer Grass	<i>Paspalidium jubiflorum</i>	✓		
Water Couch	<i>Paspalum distichum</i>	✓		
Tussock Grass	<i>Poa labillardiera</i>	✓	✓	
*Wild Oats	<i>Avena fatua</i>	✓	✓	

Common Name	Scientific Name	Guinane 2012	This survey	Conserv. significance
*Quaking Grass	<i>Briza maxima</i>	✓	✓	
*Prairie Grass	<i>Bromus catharticus</i>	✓	✓	
*Great Brome	<i>Bromus diandrus</i>	✓	✓	
*Couch	<i>Cynodon dactylon</i> var. <i>dactylon</i>		✓	
*Cocksfoot	<i>Dactylis glomeratus</i>	✓		
*Annual Veldtgrass	<i>Ehrharta longiflora</i>	✓	✓	
*Yorkshire Fog-grass	<i>Holcus lanatus</i>	✓		
*Barley Grass	<i>Hordeum leporinum</i>	✓	✓	
*Perennial Ryegrass	<i>Lolium perenne</i>	✓	✓	
*Wimmera Ryegrass	<i>Lolium rigidum</i>	✓		
*Paspalum	<i>Paspalum dilatatum</i>	✓	✓	
*Toowoomba Canary Grass	<i>Phalaris aquatica</i>	✓	✓	
*Winter-grass	<i>Poa annua</i>	✓		
*Squirrel-tail Fescue	<i>Vulpia bromoides</i>	✓	✓	

Appendix B Fauna Observed for Boulevard Bush Reserve

Fauna have been recorded for presence in Boulevard Bush Reserve. This information has been collected from Flora and Fauna Assessment – Tassicker’s Block, Shepparton (Guinane, S., 2012) and recorded in the Table immediately below.

An asterisk denotes an introduced species.

NT signifies Near threatened in Victoria (DSE 2013)

EN signifies Endangered in Victoria (DSE 2013)

L signifies Listed under the Victorian Flora and Fauna Guarantee Act 1988

Common Name	Scientific Name	Guinane 2012	This survey	Conserv. significance
Birds				
Australian Wood Duck	<i>Chenonetta jubatta</i>	✓	✓	
Pacific Black Duck	<i>Anas superciliosa</i>	✓	✓	
Great Cormorant	<i>Phalacrocorax carbo</i>	✓		
Little Pied Cormorant	<i>Phalacrocorax melanoleucos</i>	✓		
Nankeen Night Heron	<i>Nycticorax caledonicus</i>		✓	
Little Eagle	<i>Hieraetus morphoides</i>		✓	
Galah	<i>Cacatua roseicapilla</i>	✓	✓	
Long-billed Corella	<i>Cacatua tenuirostris</i>		✓	
Little Corella	<i>Cacatua sanguinea</i>	✓	✓	
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	✓	✓	
Rainbow Lorikeet	<i>Trichoglossus haematodus</i>	✓	✓	
Little Lorikeet	<i>Glossopsitta pusilla</i>	✓		
Musk Lorikeet	<i>Glossopsitta concinna</i>	✓		
Eastern Rosella	<i>Platycercus eximius</i>	✓	✓	
Mallee Ringneck	<i>Barnardius barnardi</i>	✓		
Red-rumped Parrot	<i>Psephotus haematonotus</i>	✓		
Horsfield's Bronze-Cuckoo	<i>Chrysococcyx basalis</i>		✓	
Southern Boobook	<i>Ninox novaeseelandiae</i>		✓	
Tawny Frogmouth	<i>Podargus strigoides</i>		✓	
Azure Kingfisher	<i>Alcedo azurea</i>	✓		NT
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	✓	✓	
Sacred Kingfisher	<i>Todiramphus sanctus</i>		✓	
Rainbow Bee-eater	<i>Merops ornatus</i>		✓	
Dollarbird	<i>Eurystomus orientalis</i>		✓	
White-throated Treecreeper	<i>Cornobates leucophaeus</i>		✓	
Brown Treecreeper	<i>Climacteris picumnus</i>	✓	✓	NT
Superb Fairy-wren	<i>Malurus cyaneus</i>	✓	✓	

Common Name	Scientific Name	Guinane 2012	This survey	Conserv. significance
Spotted Pardalote	<i>Pardalotus punctatus</i>	✓	✓	
Striated Pardalote	<i>Pardalotus striatus</i>	✓	✓	
Brown Thornbill	<i>Acanthiza pusilla</i>	✓		
Red Wattlebird	<i>Anthochaera carunculata</i>		✓	
Little Friarbird	<i>Philemon citreogularis</i>	✓	✓	
Noisy Friarbird	<i>Philemon corniculatus</i>		✓	
Noisy Miner	<i>Manorina melanocephala</i>	✓	✓	
White-plumed Honeyeater	<i>Lichenostomus penicillatus</i>	✓	✓	
Black-chinned Honeyeater	<i>Melithreptus gularis</i>		✓	NT
Jacky Winter	<i>Microeca fascinans</i>	✓		W'land bird community
Eastern Yellow Robin	<i>Eopsaltria australis</i>	✓		
Grey Shrike-thrush	<i>Colluricincla harmonica</i>	✓	✓	
Willie Wagtail	<i>Rhipidura leucophrys</i>	✓	✓	
Black-faced Cuckoo-Shrike	<i>Coracina novaehollandiae</i>	✓	✓	
Dusky Woodswallow	<i>Artamus cyanopterus</i>	✓		
Magpie-lark	<i>Grallina cyanoleuca</i>	✓	✓	
Australian Magpie	<i>Gymnorhina tibicen</i>	✓	✓	
Pied Currawong	<i>Strepera graculina</i>	✓		
Australian Raven	<i>Corvus coronoides</i>	✓	✓	
White-winged Chough	<i>Corcorax melanorhamphos</i>	✓		
Mistletoebird	<i>Dicaeum hirundinaceum</i>		✓	
Welcome Swallow	<i>Hirundo neoxena</i>	✓		
Silvereye	<i>Zosterops lateralis</i>	✓		
*Eurasian Blackbird	<i>Turdus merula</i>		✓	
*Common Myna	<i>Acridotheres tristis</i>		✓	
Mammals				
Common Brushtail Possum	<i>Trichosurus vulpecula</i>	✓		
Swamp Wallaby	<i>Wallabia bicolor</i>		✓ (scats)	
Eastern Grey Kangaroo	<i>Macropus giganteus</i>		✓ (scats)	
*Brown Hare	<i>Lepus capensis</i>		✓	
White-striped Mastiff Bat	<i>Tadarida australis</i>		✓ (heard)	
*Fox	<i>Canis vulpes</i>	✓	✓ (scats)	
*Dog (domestic)	<i>Canis familiaris</i>	✓		

Further Fauna species have been identified in Boulevard Bush Reserve. These are shown in the Table immediately below.

Common Name	Scientific Name	Guinane 2012	This survey	Conserv. significance
Mammals				
Short-beaked Echidna	<i>Tachyglossus aculeatus</i>			
Platypus	<i>Ornithorhynchus anatinus</i>			Regional significance
Squirrel Glider	<i>Petaurus norfolcensis</i>			EN; L
*European Rabbit	<i>Oryctolagus cuniculus</i>			
*Cat	<i>Felis catus</i>			

Appendix C Consultation and Community Feedback

No.	What do you like about Plan?	Is there anything missing from the draft EMP?	Comments	How feedback incorporated/used
1			Pg 15 - Will contacts date? Mention Eastern neighbour in 12.2	The plan will be reviewed every three years, giving opportunity for updates. Eastern neighbours are covered in section 12.2.
2			Key Performance Indicators needed. How do you measure achievements? Risk assessment to guide priorities.	The action plan will be reviewed annually to ensure targets are being met. This action plan will be guided by high risk priorities.
3	Keeps undesirable activities out	Boat launch ramp at Easter boundary	Ensure risk assessment is followed - Fire Hazard. No more planting at eastern entrance	Flora and Fauna assessment identified little to no revegetation planting to occur in the site, including the eastern entrance. Boat access elsewhere, as is inappropriate at the pump site.
4	Council taking responsibility, alleviating the pressure on neighbouring residents	Full restriction of vehicles - extra bollards on eastern end.	Regular fencing work will be required. Enforce ban on motorbike use. Remove bike jumps asap. Regular feral animal trapping (possible job for SMULG). Spring time mowing of two sub paths to open up site along the river. Full area mowing between Reserve and The Boulevard. Mowing of eastern section of car park. Overall a good plan.	Annual fencing inspection and inspection for undesirable human activity included in Action Plan. Trapping undertaken as per Acton Plan section 6. Section 8.3 speaks about mowing of two smaller unformed paths. Maintenance and aesthetic works on the eastern car park have been listed to occur at least annually as part of a working bee with partner groups.
5			Eastern Gray Kangaroo with Joey, swamp wallaby and Echidna all spotted in or near Reserve. Fear for the future sanctuary of Snake Island and predicted	Fauna captured in Fauna Observed in BBR document. (Appendix B) Noted for Path Project considerations re: Snake Island.

			bridge crossing. This will attract feral animals.	
6			Hadn't realised importance of area. Continue bike path to link to the entrance of the Reserve (easier for cycling to work etc.). Concern regarding parking and spill over to other areas where local traffic currently utilises.	Next section of Shared Path Network planned to come into eastern car park. Vehicle use in car parks will be continuously monitored and incorporated for action if necessary.
7	Protection for future generations. Educational opportunities	Educational and interactive signs along the paths aimed at families. (well done in NT state parks)	Concerned about fire threat. Snake safety signage. Possible snake first aid kits on walking trail. Possible option for Council playgrounds too.	Mowing regimes should be sufficient for urban area. Land Management Working Group has all the relevant authorities represented if further action needed to be taken. Incorporated snake education into Section 9.
8	That it has been developed for this area	Fox and rabbit control.	Consider including old pump area, this is not clear on the plan. Fence line along car park needs to be cleared (whipper snapped). The concrete crossing from the north side of the Boulevard Park band is in the wrong place and is extremely dangerous as the vision line for seeing traffic coming Shepparton is no clear. Regular use of the riverbank behind the houses along Boulevard by kids on motorbikes has been happening most afternoons for last few weeks.	It has been actioned for Council to begin investigations regarding the old pump area and how that may be included in the EMP over coming years. An annual working bee has been included to improve aesthetics of eastern car park. Information passed onto Council Local Laws department. It is common to see a decrease in undesirable behaviours when correct usage of an area increases.



EVC 56: Floodplain Riparian Woodland

Description:

An open eucalypt woodland or open forest to 20 m tall over a medium to tall shrub layer with a ground layer consisting of amphibious and aquatic herbs and sedges. Occurs along the banks and floodplains of the larger meandering rivers and major creeks, often in conjunction with one or more floodplain wetland communities. Elevation and rainfall are relatively low and soils are fertile alluviums subject to periodic flooding and inundation.

Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	80 cm	15 / ha

Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus camakulensis</i>	River Red-gum
	<i>Eucalyptus melliodora</i>	Yellow Box

Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	2	5%	MS
Small Shrub	1	1%	SS
Medium Herb	4	10%	MH
Small or Prostrate Herb	2	1%	SH
Large Tufted Graminoid	2	10%	LTG
Large Non-tufted Graminoid	1	5%	LNG
Medium to Small Tufted Graminoid	6	35%	MTG
Medium to Tiny Non-tufted Graminoid	2	10%	MNG
Bryophytes/Lichens	na	10%	BL
Total understorey projective foliage cover		90%	

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia dealbata</i>	Silver Wattle
MS	<i>Hymenanthera dentata</i> s.l.	Tree Violet
MH	<i>Sida corrugata</i>	Variable Sida
MH	<i>Oxalis perennans</i>	Grassland Wood-sorrel
MH	<i>Persicaria decipiens</i>	Slender Knotweed
SH	<i>Chamaesyce drummondii</i>	Flat Spurge
SH	<i>Azolla filiculoides</i>	Pacific Azolla
LTG	<i>Carex appressa</i>	Tall Sedge
LNG	<i>Phragmites australis</i>	Common Reed
LNG	<i>Eleocharis sphacelata</i>	Tall Spike-sedge
MTG	<i>Poa labillardierei</i>	Common Tussock-grass
MTG	<i>Chloris truncata</i>	Windmill Grass
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Aristida behriana</i>	Brush Wire-grass
MNG	<i>Pseudoraphis spinescens</i>	Spiny Mud-grass
MNG	<i>Eleocharis acuta</i>	Common Spike-sedge

Ecological Vegetation Class bioregion benchmark



EVC 56: Floodplain Riparian Woodland - Victorian Riverina bioregion

Recruitment:

Episodic/Flood - Desirable period between disturbances is 10 years.

Organic Litter:

40 % cover

Logs:

30 m³/0.1 ha.

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
SH	<i>Tribium glomeratum</i>	Cluster Clover	high	low

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EVC/Bioregion Benchmark for Vegetation Quality Assessment
Victorian Riverina bioregion

EVC 295: Riverine Grassy Woodland

Description:

Occurs on the floodplain of major rivers, in a slightly elevated position where floods are infrequent, on deposited silts and sands, forming fertile alluvial soils. River Red Gum woodland to 20 m tall with a groundlayer dominated by graminoids. Occasional tall shrubs present.

Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	80 cm	15 / ha

Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus camaldulensis</i>	River Red-gum

Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Small Shrub	1	1%	SS
Medium Herb	2	1%	MH
Small or Prostrate Herb	2	1%	SH
Large Tufted Graminoid	2	5%	LTG
Medium to Small Tufted Graminoid	5	20%	MTG
Medium to Tiny Non-tufted Graminoid	2	20%	MNG
Bryophytes/Lichens	na	10%	BL
Total understorey projective foliage cover		65%	

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia dealbata</i>	Silver Wattle
MH	<i>Sida corrugata</i>	Variable Sida
MH	<i>Oxalis perennans</i>	Grassland Wood-sorrel
SH	<i>Chamaesyce drummondii</i>	Flat Spurge
SH	<i>Azolla filiculoides</i>	Pacific Azolla
LTG	<i>Austrostipa gibbosa</i>	Spurred Spear-grass
LTG	<i>Carex tereticaulis</i>	Hollow Sedge
MTG	<i>Chloris truncata</i>	Windmill Grass
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Aristida behriana</i>	Brush Wire-grass
MTG	<i>Elymus scaber</i> var. <i>scaber</i>	Common Wheat-grass
MNG	<i>Pseudoraphis spinescens</i>	Spiny Mud-grass
MNG	<i>Eleocharis acuta</i>	Common Spike-sedge

Recruitment:

Continuous

Organic Litter:

10 % cover

Logs:

20 m²/0.1 ha.

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
MTG	<i>Lolium rigidum</i>	Wimmera Rye-grass	high	low

Ecological Vegetation Class bioregion benchmark

EVC/Bioregion Benchmark for Vegetation Quality Assessment
Victorian Riverina bioregion

EVC 816: Sedgy Riverine Forest

Description:

Riverine Sedgy Forest occurs on the floodplain of major rivers in areas of frequent flooding. The overstorey is a tall forest of River Red Gum to 25 m tall. The groundlayer is dominated by flood-related grass and sedge species. Depending on time of year and flooding level, associated water plants may be present.

Large trees:

Species	DBH(cm)	# / ha
<i>Eucalyptus</i> spp.	90 cm	20 / ha

Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus camaklensis</i>	River Red-gum

Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Large Herb	2	5%	LH
Medium Herb	7	15%	MH
Small or Prostrate Herb	3	10%	SH
Large Tufted Graminoid	2	10%	LTG
Medium to Small Tufted Graminoid	4	5%	MTG
Medium to Tiny Non-tufted Graminoid	3	20%	MNG
Bryophytes/Lichens	na	10%	BL
Total understorey projective foliage cover		80%	

LF Code	Species typical of at least part of EVC range	Common Name
LH	<i>Epilobiumillardianum</i> ssp. <i>cinereum</i>	Grey Willow-herb
MH	<i>Myriophyllum crispatum</i>	Upright Water-milfoil
MH	<i>Goodenia gracilis</i>	Slender Goodenia
MH	<i>Lythrum hyscopifolia</i>	Small Loosestrife
MH	<i>Marsilea drummondii</i>	Common Nardoo
SH	<i>Azolla fillicoides</i>	Pacific Azolla
SH	<i>Ludwigia pepioides</i> ssp. <i>montevideensis</i>	Clove-strip
SH	<i>Lobelia concolor</i>	Poison Pratia
SH	<i>Elatine gratioloides</i>	Waterwort
LTG	<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass
LTG	<i>Juncus aridicola</i>	Tussock Rush
MTG	<i>Triglochin procerum</i> s.l.	Water Ribbons
MTG	<i>Carex inversa</i>	Knob Sedge
MTG	<i>Setaria jubiflora</i>	Warrego Summer-grass
MTG	<i>Austrodanthonia duttoniana</i>	Brown-back Wallaby-grass
MNG	<i>Eleocharis pusilla</i>	Small Spike-sedge
MNG	<i>Eleocharis acuta</i>	Common Spike-sedge
EP	<i>Muehlenia eucalyptoides</i>	Creeping Mistletoe

EVC 816: Sedgy Riverine Forest - Victorian Riverina bioregion

Recruitment:

Continuous

Organic Litter:

10 % cover

Logs:

20 m³/0.1 ha.

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
MTG	<i>Lolium rigidum</i>	Wimmera Rye-grass	high	low

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EVC Benchmark for the Index of Wetland Condition

EVC 172: Floodplain Wetland Aggregate

Description:

Collective label for the various zones of vegetation associated with wetlands of riparian floodplains, best developed in association with Floodplain Riparian Woodland. Potentially includes mosaics of scrub/shrubland, reedbed, sedgeland, rushland, grassland and/or herbland zones. The following components are variously recognisable within Floodplain Wetland: Aquatic Herbland, Aquatic Sedgeland, Tall Marsh, Swamp Scrub, Wet Venge Sedgeland, Floodway Pond Herbland and Dwarf Floating Aquatic Herbland. Billabong Wetland is also an aggregate EVC including many of these components. Floodplains of major streams, principally in less arid areas.

Indicator species (some or all of these species should be present)

See descriptions of component EVCs above.

Conditions when the EVC should not be assessed

None recognised but may be impossible to access and sample during floods.

1. CRITICAL LIFEFORM GROUPINGS

Conditions when specific critical lifeform groupings should not be assessed

Small aquatic/mud-colonizing herbs may not be visible or expressed during extreme wet or prolonged dry conditions.

General comments on assessing critical lifeform groupings

Score zones with trees and/or shrubs under respective EVCs.

Critical lifeform groupings and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Herbs	2	+	broad-leaved, not aquatic but moisture-requiring, tolerant of shallow inundation periods or mud-colonizing
Small aquatic herbs	2	+	
Tall graminoids	3	+	
Medium graminoids	3	+	

+ denotes presence

EVC 172: Floodplain Wetland Aggregate

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alphacurus</i> spp.	Fox Tail
<i>Atriplex prostrata</i>	Hastate Orache
<i>Callitriche stagnalis</i>	Common Starwort
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Lotus corniculatus</i>	Bird's-foot Trefoil
<i>Nymphaea</i> spp.	Waterlily
<i>Paspalum distichum</i>	Water Couch
<i>Phalaris arundinacea</i>	Reed Canary-grass
<i>Salix</i> spp.	Willow
<i>Typha latifolia</i>	Lesser reed-mace

Conditions where weeds are considered to have a negligible impact

While plants are inundated or otherwise inactive.

3. INDICATORS OF ALTERED PROCESSES

Indicator	% cover	Scale of severity
Scattered individuals	<1%	Minor
Invasion by woody species	Dense regeneration of invasion fronts apparent	Moderate
	Denser regeneration	Severe

Circumstances where some critical lifeform groupings may not be evident

None recognised, provided relevant vegetation zones are visible rather than obscured by turbid water.

4. VEGETATION STRUCTURE AND HEALTH

Where present, score each lifeform separately and average. See component EVCs and note also EVC 334 Billabong Wetland Aggregate.

Structural dominant	Benchmark cover
Sedges	
Reeds	
Rushes	
Herbs	

Assess for scoring category of >50% benchmark cover

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■ Record keeping template – Agricultural chemical use

Agricultural chemical application details						Weather details (If product is being sprayed outdoors)		Contact details	
Date of application	Product trade name	Application rate	Crop/commodity treated OR situation product was applied	Extent of use (area/volume /weight)	Location where product was used	Wind speed	Wind direction	Name and address of applicator and (if applicable) supervisor	Name and address of person for whom the application was carried out

Agricultural chemical details must be recorded within 48 hours of use.

For pest animal baiting, use the 'Poison Baits used for Pest Animal Control' record keeping template.

For details of your legal requirements when using agricultural chemicals visit: www.depi.vic.gov.au/chemicaluse