Seymour Bushland Park Management Plan

2025-2035

Directorate

Economy, Growth, and Infrastructure

Owner

Environment and Sustainability Department

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Acknowledgement of Country

Mitchell Shire Council acknowledges the Taungurung and Wurundjeri Woi Wurrung people as the Traditional Owners of the lands and waterways in the area now known as Mitchell Shire.

We pay our respect to their rich cultures and to Elders, past, present, and emerging, as well as other Aboriginal and Torres Strait Islander people who live, work, and play in the area.

1. Introduction

Mitchell Shire Council (Council) commissioned TREC Land Services to develop a management plan for the Seymour Bushland Park (the Park). The plan has been developed in partnership with Council's Environment and Sustainability department, and the Seymour Bushland Park Committee of Management (CoM).

The plan is informed by community and stakeholder engagement, a literature review of policy documents, legislation, ecological assessments and related resources.

The Seymour Bushland Park Management Plan (the Plan) is designed to be a strategic guide for the management of both the natural and cultural resources of the Park.

The Plan outlines the ecological, cultural, recreational, and educational values of the Park and details how Council, together with the CoM will protect and enhance these values into the future.

2. Vision

To facilitate ecosystem function, and enhance the connection between people and nature, to ensure the preservation of the Park's natural heritage into the future.

3. Objectives

The key objectives for the Park are to:

- Preserve and enhance natural ecosystem functions for flora and their floristic communities.
- Provide increasing habitat for a range of indigenous fauna.
- Enhance the connection between people and nature, providing opportunities for passive recreation, nature based tourism, and environmental education.
- Recognise, preserve and celebrate Indigenous and European history.
- Consider management actions that support the Parks role in a regional context.

4. Site description

The Park covers approximately 65 hectares of natural bushland and is located on the outskirts of Seymour (4.5km south-east from the centre of the town). It is managed as a bushland reserve and contains walking tracks, interpretative signage, and some basic amenities. The Park is a popular destination for bushwalking and bird watching and is an important habitat link between the Goulburn River and the Strathbogie Ranges (Granite to Goulburn Landscape Project).

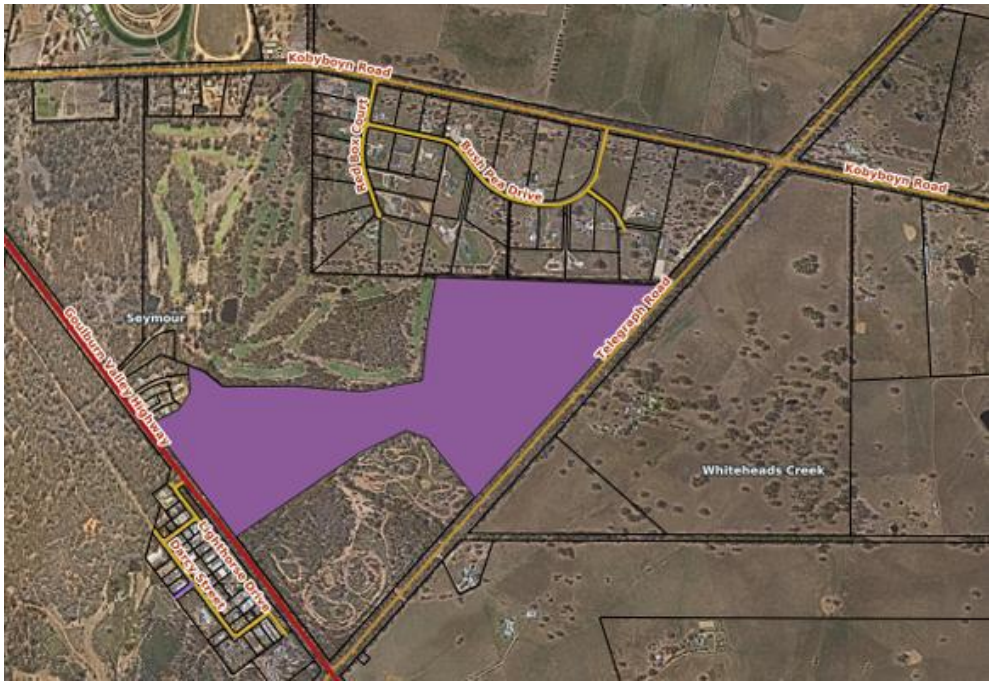

Figure 1 Seymour Bushland Park location

4.1 Geology

The Park is in an area of undulating plains and low hills cut into Lower Palaeozoic sedimentary rock (DJPR, 2024). Soils are typically brown chromosols that display a strong texture contrast between surface (A) horizons and subsoil (B) horizons (DJPR, 2024). The upper part of the subsoil ranges from slightly acid to alkaline (pH >5.5), but is generally not sodic (DJPR, 2024). Surface soil texture and depth vary considerably from past use with many slopes having little to no topsoil resulting in poor permeability and increased erodibility.

The highest point within the Park is approximately 200m above sea level located in the centre of the Park (known as Command Hill). Towards the northern boundary of the Park the topography slopes down to 175m above sea level as the landscape flattens out and heads into the broad valley of Whiteheads Creek. Drainage lines within and surrounding the Park are wide alluvial floodplains that are tributaries of the Whiteheads Creek catchment.

4.2 Hydrology

The Park has three main sub-catchment areas all contributing to Whiteheads Creek which runs through the township of Seymour and into the Goulburn River. These sub-catchment areas are;

- The northern part of the Park which drains into a creek line beginning in the Motorcross area, which includes a small dam providing a sediment basin, before running north into the Park's dam and then downstream to the Park's northern boundary,
- The ridgelines running north-east and west-north-west from Area Command Hill (the hill located centre in the Park) encloses a series of slopes and valleys running down and across the golf course, and
- In the southern part of the Park, South Creek follows another wide swale beginning at a dam in Granite Park and runs west under the Goulburn Valley Highway into the Australian Light Horse Memorial Park.

4.3 Climate

The climate in Seymour is temperate, with warm summers, cool winters, and four distinct seasons. January has the highest average hours of "bright" sunshine and June the lowest (BOM, 2024). Average rainfall is 590mm/year with rainfall typically the highest in June and lowest in January (BOM, 2024). January and February are typically the hottest months of the year, while June is the coolest.

5. History

5.1 Indigenous

The Taungurung People are the traditional custodians of the land on which the Park is located and have cared for Country for many thousands of years. The Taungurung people have a strong connection to the local flora and fauna and are the Registered Aboriginal party for the area.

The Park along with the general area have significant cultural importance to the Taungurung people, who utilised a vast range of its resources. Yam Daisy (Mirnong), Red Stringybark (Dhulangi), Common Tussock Grass (Dulim), Possum (Walert) and Bracken Fern, as well as many other important resources would have all been historically available within the Park (TLWC 2021).

There are many mapped areas of Aboriginal Cultural Heritage Sensitivity located close to the Park. These include the Goulburn River to the south and Whiteheads Creek to the north and numerous sites along Telegraph Rd between the two waterways. There has been no formal Indigenous cultural heritage survey conducted within the Park.

5.2 European

Following European colonisation, the Park was used for military training and was part of the Kitchener Military Camp from 1910. In 1978 it became a conservation reserve. The Park was placed under a Trust for Nature Conservation Covenant by Mitchell Shire Council in 2006, to ensure its permanent protection into the future.

In 1885 the Victorian Mounted Rifles (VMR) was established and based east of Seymour. The Seymour area was selected for military activities due to the newly opened (1872) railway station, the proximity to Melbourne, and the surrounding hilly terrain.

Upon Federation in 1901, it was determined that Australia would need a national military force and the VMR became a part of the newly formed Australian Light Horse. In 1910, Field-Marshal Lord Herbert Kitchener, the then Commander-in-Chief of the British Army, visited Seymour to establish Kitchener Military Camp, which included the area now known as the Seymour Bushland Park.

The Seymour Camp became home to thousands of troops, with hundreds of tents covering a once quiet paddock. The Seymour Camp was used for training, as well as a holding and overflow camp for the camp at Broadmeadows in Melbourne. As many as 15,000 troops were stationed and training at the camp in preparation for World War 1. During World War 2, the camp was a crucial training and transit facility for Australian and American soldiers. Prior to Puckapunyal, Seymour camp was Victoria's largest military training facility.

In 1939, Puckapunyal Military Area was established as a military base to the north-west of Seymour. The use of the Seymour Camp ceased in the 1960's as the Puckapunyal Military Area was established. In 1978, the old Seymour Camp was sold by the Commonwealth Government to the former Shire of Seymour.

Following community action and advocacy the Seymour Bushland Park was established in 1981, and a community CoM was formed. The CoM have worked tirelessly to rehabilitate the Park.

The Park contains numerous military camp relics and artifacts. If found it is important that these and other artifacts are retained in situ for their historic preservation. (S. Guy, 2021, RSL Victoria)

6. Governance and Legislative and Policy Context

The Park is owned by Mitchell Shire Council. The management of the Park is guided by various legislation, policies, and plans at federal, regional, and local government levels. Full details of these can be found in Appendix 8.

7. Stakeholders and Partners

Mitchell Shire Council and the CoM, manage the park in a partnership approach.

Seymour Bushland Park Committee of Management

The CoM is an incorporated association that has been established for the purpose of managing and maintaining the Park. The CoM consists of a group of dedicated community volunteers with a Council officer representative attending meetings.

A Funding and Service Agreement (FASA) between the CoM and Council is in place which details the powers and functions of the Committee, membership, governance, and the payment of an annual allocation from Council to the CoM to assist with Park maintenance.

The purpose of the Committee as per the FASA is *"to manage, operate and maintain the Seymour Bushland Park for the benefit of the user groups and local community."*

Mitchell Shire Council

Under the FASA with the CoM, Council is responsible for undertaking capital improvements, structural repairs, and replacement of infrastructure.

There are a number of other stakeholders involved in the management and use of the Park, these are listed below.

Table 3 Stakeholders

Stakeholders	Involvement
Mitchell Shire Council	Landowner and land manager. The Park is managed by Mitchell Shire Council's
Seymour Bushland Park Committee of Management	Appointed community group (volunteers) with a funding and service agreement (FASA) with Council to maintain the Park
Taungurung Land and Waters Council	The representatives of the Traditional Owners of the land.
Trust for Nature	Administration of the Conservation Covenant and provision of conservation advice.
Neighbours, including private landholders and Seymour Golf Club	Adjacent land use, passive surveillance and park users.
CFA (Country Fire Authority)	Involvement in the planning and implementation of fuel management activities within the park.
Goulburn Broken Catchment Management Authority	Statutory body responsible for the integrated management of land, water, and biodiversity assets across the Goulburn Broken Catchment in which the Park is situated.
Central Victorian Biolinks Alliance	Exploration of potential research and/or collaborative opportunities. Recognition of the Park as part of a broader landscape Biolink.
Mitchell Shire Municipal Fire Prevention Committee	Provides advice and recommendations to Council on fuel management matters.
Landcare – Hughes Creek Catchment Collaborative	Engagement and educational workshop opportunities.
Department of Transport and Planning	Management of the adjoining Goulburn Valley Highway.
Wider community and park users	Recreation, connecting to nature, education and cultural reasons.

Community Engagement

In addition to stakeholder consultation, community engagement was undertaken to inform the development of the Plan. This included a community survey, public consultation on the draft Plan and several meetings with the CoM and representatives from Trust for Nature, Country Fire Authority, Mitchell Environment Advisory Committee and Mitchell Shire Heritage Advisory Committee.

This engagement illustrated that people valued the Park as a place to connect to nature, exercise and appreciate biodiversity values. There were several suggestions for future management including continued protection and enhancement of biodiversity values, improvements to the walking tracks, signage, and fuel management.

8. Existing Infrastructure and Visitor Experience

The Park has a number of built assets many of which are located around the main carpark off the highway including an entrance sign, information board, composting toilet, picnic table and park bench. There is also a short and long loop walking track with track markers, foot bridges and benches for seating, and a timber jetty off the dam. There are also a number of military camp relics scattered throughout the Park. The Park boundary is fenced (farm fencing) and is in varying condition.

8.1 Track Network

There is an existing network of walking tracks and vehicle tracks in the Park. These are comprised of 'bush' walking tracks and include four timber boardwalks and two small foot bridges. (Figure 3)

There is a long and short loop walking track - Long loop track is 3.9km and marked with orange directional arrows, whilst the short loop track is 1.4km and is marked with blue directional arrows (BEAM 2024).

The paths are of varying condition and the boardwalks require upgrading.

Under the Australian Walking Track Grading System, the walking tracks in the Park are classified as either Grade 2 or Grade 3.

The two small bridges were replaced in 2022 and are in good condition. The vehicle tracks are generally in good condition and require minimal ongoing maintenance. Although there are no dedicated cycling tracks, there is evidence that the Park is used for bike riding (mountain bikes and BMX).

The Park is frequented by people walking dogs. There has been an issue of people leaving dog waste behind, especially near the car park.

Figure 2 Bridges in the Bushland Park replaced in 2022

8.2 Wayfinding

The existing wayfinding signage throughout the Park assists with visitor navigation (Figure 4) . The existing signs provide a good foundation to build on with some additions to 'fill the gaps' and offer visitors a more complete wayfinding experience. Some additional simple, non-intrusive directional markers could assist with navigation in the Park.

Figure 3 Existing wayfinding signage.

Directional markers could be accompanied by a QR code which when scanned, gives visitors a map of the Park tracks and additional interpretive information.

Figure 5 Examples of QR codes being used in bushlands and parklands

8.3 Interpretative Signage

There is one main interpretive sign in the Park located under an iconic triangular shelter at the main carpark. The sign was developed by the CoM and includes a detailed map. There is a small sign at the Bush Pea Drive entrance and one near the historic relics relating to the control of dogs.

There are opportunities for additional signage relating to flora, fauna, and cultural information.

Figure 6 Signage in the park

8.4 Destination Points

The seating platforms currently located at the visitor carpark create nice places to stop and enjoy this area of the Park.

Introducing additional destination points for people to visit will create more opportunities for people to observe and enjoy the Park.

One destination point existing on site, is the wooden seat overlooking the dam. Locations overlooking water are always popular destinations for visitors. Leveraging a site such as this or other areas of the Park with additional seating or a low picnic table would create an opportunity for visitors to elevate their experience during their visit.

Figure 7 Example of existing seating platform in Seymour Bushland Park

8.5 Rest Stops

Currently there are a few places to sit in the Park (Figure 9) , the addition of more seating would provide rest stops for walkers. Currently all the rest stop options are benches, introducing a few more seats with back and arm rests could help to increase the accessibility of walking tracks.

Figure 8 Existing seat overlooking dam

Figure9 Examples of benches existing on site

8.6 Public Toilet

The Park has *a Clivus Multrum* waterless composting toilet (CM20). The toilet uses aerobic decomposition to slowly break down toilet waste into stable compounds within the polyethylene composting unit. (Figure 10)

The toilet is a raised structure with a ramp; however, it is not compliant as an all accessible toilet facility.

The CoM manage a toilet cleaning and maintenance program.

Figure 10 Existing Toilet facility

8.7 Entrances and Car Parks

The main entrance to the Park is off the Goulburn Valley Highway. The entrance was upgraded in 2019 to a sealed asphalt driveway that leads to a large gravel car park that can accommodate 20 cars.

A second entrance is a gate on Telegraph Road, providing parking space for up to 5 cars. This entrance was also upgraded in 2021/2022. The speed along the Goulburn Valley Highway at the main entrance is 100km/h, this was highlighted as a concern though the community survey and by the CoM.

There is no formal cycling or pedestrian link to the Park from the Seymour township.

8.8 Nest Boxes

Wooden nest boxes have been installed by the CoM and Council, to provide artificial habitat for fauna. The condition of all nest boxes within the Reserve is poorly documented. As there are few natural hollows, establishing a program to monitor and repair nest boxes is recommended.

8.9 Tourism and Education

The Park has been used for many events over the years including spotlighting walks for nocturnal animals, bird watching, insect education, nest box monitoring and wildflower walks. This Plan recommends that these events continue to engage the community in the natural treasures of the Park and raise awareness of its ecological values and processes.

There are many opportunities to link with local educational institutions including local schools, Tafe, scout groups and bush kindergartens. The use of the Park for research is an area that both the CoM and Council are keen to expand on.

9. Ecological Values

9.1 Bioregion and Ecological Vegetation Classes

The Park lies north of the Great Dividing Range, in the Central Victorian Uplands Bioregion, and near the boundaries of the Victorian Riverina, Goldfields and Highlands Northern Fall Bioregions (DEECA, 2024a.

Maps of Ecological Vegetation Classes (EVCs, DEECA 2024c) show that most of the Park is EVC 61 Box Ironbark Forest with a small area of EVC 55 Plains Grassy Woodland in the lower sections of South Creek

The bioregional conservation status of these EVCs are:

- Box Ironbark Forest: vulnerable
- Plains Grassy Woodland: endangered

EVC mapping is indicative of the EVCs in the area and as such the vegetation within the Park does not neatly align with these vegetation classes. Past disturbances resulting in the dominance of regrowth trees in many areas, loss of understorey and vegetation structure, loss of soils and changes to the hydrology have all impacted the vegetation within the Park.

9.2 Seymour Bushland Park Vegetation Types

. The following vegetation types have been identified within the Park:

Grey Box Regrowth

Large areas of the Park have regenerated from historic disturbance. Grey Box *(Eucalyptus microcarpa*) of a similar age occurs above an understorey devoid of native species diversity. This forest has only a few scattered large old trees, some hollow bearing. The ground is dominated by leaf litter. Bare ground beneath the litter is mostly clay indicating that the topsoil has been lost.

Most of this regrowth area has been mapped as the EVC Box Ironbark Forest, however due to the dominance of Grey Box and the lack of any Ironbark species in the general area, it may be more typical of EVC 175-61 Grassy Woodland. Regardless, the current state of the vegetation, structure and species does not align with either EVC.

Box Stringybark Forest

Found on the ridgelines these pockets are dominated by Red Box (*Eucalyptus polyanthemos*) and Red Stringybark (*E. macrorhyncha*) with a low dense understorey layer. These areas are relatively intact, with larger trees, some with hollows, and good groundcover structure from a diversity of medium to small shrubs. These forests floristically align to EVC 20 Heathy Dry Forest EVC's (TREC 2023, Earl et al 2001) but are structurally denser and more diverse than indicated in the EVC benchmarks. Heathy Dry Forest is mapped on steeper and typically more rocky hills nearby which align with this EVC.

Historic Relics Area

Located within the centre of the Park, Command Hill contains remnant vegetation that has been highly modified. There has also been past planting of introduced species to the area including several mature Sugar Gums.

Intact Box Forest

Areas in the north-east of the Park contain a canopy of Grey Box with occasional Red Box and Red Stringybark over an understorey containing high shrub, herb, and grass diversity,(TREC 2023). This area differs from the Grey Box Regrowth as trees are more spaced, tree size is larger and groundcover denser and more diverse. These forests are representative of the EVC Box Ironbark Forest.

Bibrons Toadlet Habitat

This area is found above the Park dam and is identified as an open grassy area. The site follows a drainage line running from the adjoining Granite Park and is seasonally wet. The area lacks canopy cover, has scattered shrubs, and is dominated with both native and introduced grasses and sedges.

Dense Shrubby Understorey

Dense shrubby thickets exist in the centre and north-west corner of the Park. These areas lack canopy cover. Areas dominated with Burgan (*Kunzea leptospermoides*) have little groundcover compared to areas dominated with Sifton Bush (*Cassinia sifton*) having a stable groundcover of grasses and forbs. The north-west corner has some introduced woody plants and areas of open grassland.

River Red Gum Forest:

An unusual patch of regrowth River Red Gums (*Eucalypus camaldulensis)* is located on dry slopes within the north-central part of the Park. These River Red Gums dominate a wide outwash slope from a side gully coming off the golf course down to the northern creek flats. The understorey of this forest contains many shrubs (mostly Sifton Bush) with a sparse but stable groundcover of grasses and forbs.

In addition there are two creek lines, have 20-50m wide alluvial flats with some large trees as well as regrowth and open grassy areas. These creek line flats most resemble EVC 55 Plains Grassy Woodland.

The creeks are seasonally wet with some pools that can last well into the dry months. They have some tussock grasses, rushes and sedges. The sides of the dam are sparsely vegetated apart with a small patch of Cumbungi in one corner.

9.3 Flora

The Park is home to at least 226 plants (154 indigenous, 9 non-local native species and 63 introduced species) including the Critically Endangered Late Flowered Flax-lily (*Dianella tarda)* which is listed under the *Flora and Fauna Guarantee Act 1988.*

A number of Eucalyptus species make up the overstory throughout the Park; Grey box *(Eucalyptus macrocarpa),* Red box (*E. polyanthemos*), Red stringybark (*E. macrorhyncha*) and a small number of River red gums (*E. camaldulensis*). The understorey consists of a variety of wattles such as Gold-dust Wattle (*Acacia acinacea*), and groundcovers such as Grey Guinea-flower (*Hibbertia obtusifolia*).

Native lilies and grasses are re-establishing within the Park and are a highlight when in flower during spring. The Park provides an important seed source of genetically healthy seed. The full flora list can be found in Appendix 5.

9.4 Fungi

The Park is home to a number of Fungi species which are best observed in Autumn, including shelf fungi, *Hexonia vesparia (Wasp nest polypore),* slime moulds and mycena nargan *(Nagans Bonnet).*

9.5 Fauna

The Park provides habitat for a range of native fauna including a broad diversity of birds, mammals, and reptiles, as well as having known threatened frog and insect species.

Birds

As of November 2024 ,131 native species of birds have been recorded in the Park (eBird 2024). A full list of bird species can be found in Appendix 2. Notable species include:

- Speckled Warbler (*Chthonicola sagittata)*
    - The FFG listed *Endangered* Speckled Warbler is particularly noteworthy. This species is frequently recorded in the Park, indicating it is a semi-permanent resident.
- Gang-gang Cockatoo *(Callocephalon fimbriatum)*
    - The Park hosts the Federal EPBC Act listed *Endangered* Gang-gang Cockatoo. The Gang-gang Cockatoo is a declining species in Victoria, likely the result of canopy tree removal (DAWE 2022).
- Square Tailed Kite (*Lophoictinia isura)*
    - The FFG-listed Vulnerable Square-tailed Kite has occasionally been recorded at Seymour Bushland Park. Records of this species are likely to be individuals associated with a population near Bendigo, known to consist of about 10 pairs (SWIFFT 2022).
- Barking Owl *(Ninox connivens)*
    - The FFG listed *Critically Endangered* Barking Owl has recently been recorded at Seymour Bushland Park (Ebird 2020). This species requires large hollows to nest. however, the site is unlikely to support more than a single pair of large owls at a time due to large territory requirement of the species (Kavanagh & Bamkin 1995).

Mammals

Within the Park, 19 native mammal species have been recorded including possums, koalas, wombats, echidnas, kangaroos, wallabies, and bats. A fill list of mammals found in the Park is detailed in Appendix 3. Some of the more notable species are detailed below.

- Koala *(Phascolarctos cinereus)*
    - Mature Grey Box and Red Box within the Park provide a food resource for the IUCN *Vulnerable* and EPBC Act *endangered* listed Koala *Phascolarctos cinereus*. While the Koala remains in high numbers in some parts of Victoria, the species has rapidly declined from much of its former range due to deforestation. Koalas now appear to be largely removed from the landscapes between Seymour and Melbourne. Koalas have often been observed in the Park (VBA 2021) and are likely to occur in surrounding woodlands, as well as, moving along the habitat link between the Goulburn River and the Great Divide.
    - River Red Gum is a preferred forage species for koalas within Victoria (DSE 2004) and ensuring a healthy population of River Red Gum within the Park will assist in ensuring that the species continues to visit the Park. Grey Box, Red Box and Red Stringybark while not being preferred forage species are known to be also eaten by koala. Ensuring that canopy diversity throughout the Park is improved particularly in Management Zone 1 may also assist koala populations in the broader area.

- Brush-tailed Phascogale *tapoatafa tapoatafa* and Squirrel Glider *Petaurus norfolcensis*
    - These two species have historically been recorded within the Park (DEECA 2024d), and are likely to continue using the site, at least sporadically. Both of these species of marsupial are hollow dependent suggesting that the installation of additional hollow habitat may be required in the short term until much of the trees have had time to develop natural hollows.

Amphibians

The Park retains a breeding population of Bibron's Toadlet (*Pseudophryne bibronii)*. Bibron's Toadlet is endangered in Victoria and is currently known to utilise three locations within the Park as breeding habitat: two patches of native rush and grass along the west and south bank of the dam, and a section of ephemeral drainage line adjacent to the firebreak along the north-west site boundary (De Angelis 2021).

The species is expected to occupy areas of higher understorey biomass, including patches of invasive grasses, and coarse woody debris across the north-eastern third of the site (De Angelis 2021). An additional ephemeral creek line to the southwest of the site has not been surveyed for Bibron's Toadlet and may also support the species.

A full list of amphibians can be found in Appendix 4 and actions relating to Brions Toadlet in Appendix 5.

Invertebrates

To date, 133 invertebrate species, including butterflies, moths, ants and spiders have been identified in the Park. This includes several species rarely recorded in Vicrtoria such as;

- Small Jumping Ant *Myrmecia picta*
    - This ant is 13.5-14.5 millimetres long with a black body, yellow mandibles and reddish-yellow; antennae and anterior legs.
- Silent leaf-Runner Cricket *Metioche vittaticollis*
    - This 10 mm long cricket feeds on little insects like planthoppers and leafhoppers

A full list can be found in Appendix 6. Invertebrates are vital for nutrient cycling and soil health, and their diversity supports a wide range of food webs.

9.6 Rare and Threatened Species and Communities

The Park supports a number of state and nationally listed rare and threatened species, as listed in Appendix 7.

9.7 Habitat Connectivity within the Landscape

The Park is located within the Central Victorian Uplands (CVU) bioregion and is within the Victorian Midlands under the Interim Biogeographic Regionalisation for Australia (IBRA).

Figure 4 Seymour Bushland Park Indicative Biolinks

Telegraph Road to the Eat has very high conservation values and provides a critical (3 chain wide) wildlife corridor for a range of species, from the Strathbogie Ranges to the Goulburn River. The Goulburn Valley Highway is also a tree corridor but presents a major threat to wildlife crossing from one patch of vegetation to another. See Figure 1.

On the opposite side of the Goulburn Valley Highway is the Australian Light Horse Memorial Park which also supports a large area of native bushland and a diversity of significant species. The Tallarook State Forest occurs approximately 16.5km to the south of the Park with some level of connectivity for species still occurring in the wider landscape between these areas.

The surrounding country is mostly open farmland with a mix of perennial pastures, native grasses, isolated paddock trees, treed corridors and patches.


Seymour Bushland Park Management Zones
N
Seymour Golf Club Inc
B340
Goulburn Valley Hwy
Australian Lighthorse Memorial Park
Zone 6
Zone 1c
Zone 2
Zone 4
Zone 1c
Zone 1c
Zone 7
Zone 1c
Zone 2
Zone 6
Zone 1c
Zone 1a
Zone 5
Zone 1b
Zone 1a
B340
South Creek
Zone 3
Zone 1a
Zone 1a
Telegraph Road
Lighthorse Drive
Darcy Street
Telegraph Road
Legend
Boardwalks
Bridges
Toilet
Pedestrian Access
Gates
Carpark
Maintenance Track
Walking Tracks
Creek
Vehicle Track
Dams
Zones
Zone 1 - Grey Box Regrowth Forest
Zone 2 - Box Stringybark Forest
Zone 3 - Historic Relics Area on Command Hill
Zone 4 - Inact Box Forest
Zone 5 - Bibron's Toadlet Habitat
Zone 6 - Dense Shrubby Understorey
Zone 7 - River Red Gum Forest
Map created:10/04/2025
Map By: MSC GIS Unit
0 100 200 Metres
MITCHELL SHIRE COUNCIL

10. Ecological Management Zones

To guide the management of the Park it has been divided into six ecological management zones, based on vegetation type and current condition, see map 2.

10.1 Ecological Management Zone 1: - Grey Box Regrowth Forest

Grey Box Regrowth Forest occurs across the majority of the Park with large areas of this regrowth designated as Management Zone 1 and divided in three subzones a, b and c due to the differing structure in vegetation. Zone 1 is located on the slopes and the flatter ground and includes the creeklines.

Canopy: This zone is characterised by a canopy of predominately semi-mature Grey Box,. There are few large eucalypts that support hollows with the majority of the canopy being of a similar age and consisting of trees with a Diameter at Breast Height (DBH) of <40cm. These younger trees have not provided the layers of coarse woody debris you would expect from a more mature forest.

Understorey: The understorey contains a lower diversity and abundance than what would be typically expected in remnant unmodified Box Ironbark Forest or Grassy Woodland EVC. The vegetation condition varies across the Management Zone, from areas devoid of native species diversity and dominated almost exclusively by leaf litter and fine woody debris, to areas with some diversity and structure in the understorey. Golden Wattle is scattered throughout the zone and often the only woody understorey.

Condition: Young Grey Box have colonised areas that have mostly lost their top soils, leaving hard clay subsoils on the surface. The dominance of the Grey Box also leads to the drying of these already hard dry surfaces covered with leaf litter. Consequently, any rainfall runs off, carrying away the leaf litter with no woody debris to moderate flows. With the dry surfaces and competition from Grey Box, these areas have very little understorey or groundcover plants that you might expect for a healthy forest.

Ecological Management Zone 1a: These zones in the south-west of the Park have been designated as Management Zone 1a. The southern areas contain the highest density of semi-mature regrowth Grey Box and the lowest overall abundance and diversity of understorey flora.

Ecological Management Zone 1b: This zone is located in the south-west corner of the Park and contains a mix of Grey Box, Red Box and Red Stringybark, at a slightly lower density than Zone 1a, and hence supports a greater abundance and diversity in the understorey.

South Creek is located within Ecological Management Zone 1a and 1b. The broad swale of South Creek which is in good condition and has many large old Grey Box and a ground layer of grasses and rushes. Management of this creekline includes removal of weed species sweet pittosporum and bridal creeper. As the creek drops down into the incised creek line under the road, there are small erosion heads that are currently stable but require ongoing monitoring.

Ecological Management Zone 1c: Large areas north of the Park similar to zone southern areas Zone 1a, support semi-mature Grey Box regrowth, although the trees are less dense with a few more mature trees. The slopes of Zone 1c have dry hard soil with sparse understorey and evidence of runoff sweeping away the leaf litter, resulting in ongoing erosion issues along the northern creekline.

Management Zone Objective:

- Increase the abundance and diversity of understorey plants
- Increase the number of large trees of a suitable size to support hollows.
- Reduce water runoff and increase water absorption.

The canopy across the management zone would benefit from a reduction in overall foliage cover achieved via ecological restoration via selective thinning of smaller and weaker canopy specimens.

10.2 Ecological Management Zone 2: - Box Stringybark Forest

Occurring centrally within the Park on the higher elevations, Management Zone 2 contains some of the highest quality vegetation within the Park.

Canopy: The canopy within Zone 2 is dominated by a mix of Red Box, Red Stringybark with Grey Box present in low numbers. While still being younger, and as a result smaller, than would be expected within a similar remnant forest type , the canopy within Zone 2 supports canopy specimens that are typically well spaced and larger than much of the Park.

Understorey: The understorey within Zone 2 contains a healthy and diverse mix of shrubs, grasses and herbs with species including Sticky Everlasting *Xerochrysum viscosum,* Gorse Bitter-pea *Daviesia ulicifolia,* Showy Parrot-pea *Dillwynia sericea,* Golden Wattle *Acacia pycnantha* and Bent Goodenia *Goodenia geniculata* abundant within the management zone.

Condition: These forests have a mix of older tree species and a reasonably diverse understorey. This mix of vegetation has taken more than 60 years to regenerate and grow after the disturbances of the past. The Sifton Bush that once dominated the understorey has largely been replaced by a diversity of wattles and other woody shrubs and groundcovers.

More recently, droughts appear to have affected some species, particularly the Red Stringybarks. Many of the large old trees have died and some of the young regeneration has been affected by these prolonged hot springs and summers. Burgan on exposed areas have also shown signs of dieback around the same period.

Management Zone Objective:

- Retain high quality conservation value of this zone.
- Provide environmental education and interpretation

10.3 Ecological Management Zone 3: - Historic Relics Area on Command Hill

Management Zone 3 has been designated based upon the presence of historic military relics, past heavy disturbance and a non-indigenous canopy dominated by Sugar Gum (*Corymbia cladiocalyx).*

Canopy: Much of Zone 3 is dominated by a non-indigenous native canopy of Sugar Gum with some Grey Box present as a minor canopy component.

Understorey: The understorey across much of Zone 3 is lacking in diversity. Dense areas of Sifton Bush and Forest Burgan Much of the zone is open particularly beneath sugar gums with some grass cover.

Condition: This zone has been highly modified and shows little natural regeneration from the adjoining forests. It has several introduced species that could spread into surrounding areas.

Management Zone Objective: Being located centrally on a small rise, this Management Zone provides opportunities to increase park amenity and walkers with a convenient area for a rest or picnic. While providing some amenity value, the non-indigenous Sugar Gum canopy has a reduced ecological value when compared to Grey Box or other indigenous species. The Sugar Gum further provide the opportunity for the creation of artificial hollows to provide some habitat while the semi mature Grey Box canopy across the rest of the reserve has time to mature.

A series of relics associated with the Parks military history occur in western areas of the Management Zone, providing an opportunity for historic education and interpretation.

- Increase park amenity and walkers with a convenient area for a rest or picnic
- Creation of artificial hollows in Sugar gums
- Provide historic interpretation and education

10.4 Ecological Management Zone 4: - Intact Box Forest

The north-east corner of the Park contains Box Ironbark Forest that has a greater number of large trees with a more abundant and diverse understorey compared to other zones within the Park.

Canopy: This zone is characterised by a canopy of Grey Box with some Red Box and Red Stringybark, towards the top of the slope. This forest is in a slightly more open and mature state than Management Zone 1. While still lacking the significantly large canopy trees that would have historically been present within Box Ironbark Forest, Zone 4 supports a canopy that is typically not as dense, and as a result supports larger trees than much of the Park.

Understorey: Understorey structure varies with areas of open tall to medium shrubs and areas of moderately dense small shrubs and groundcover. As well as structure, species diversity is also richer than the adjoining Grey Box Regrowth Zone which distinguishes the two zones.

Condition: The understorey contains a lower diversity and abundance of flora than what would be typically expected in remnant unmodified Box Ironbark Forest, but higher than that which occurs across much of the Park. The vegetation condition varies across the Zone; however, most areas contain some diversity and structure in the understorey.

Management Zone Objective: While the dominance of Grey Box is similar to Management Zone 1 this section of the Park requires a different management approach. Reducing canopy density is not a priority in this zone. The primary focus must be weed control, with a secondary focus on increasing the abundance and diversity of understorey species.

- Weed control
- Revegetation of understory species to increase diversity

10.5 Ecological Management Zone 5: - Bibron's Toadlet Habitat

This Management Zone has been designated based upon the known presence of Bibron's Toadlet *Psuedophryne bibronii*. Two areas of the Park have been identified as breeding habitat, with both areas included, as well as a 250m habitat buffer as potential refuge for Bibron's Toadlet. The Zone also includes the dam.

Canopy: Most of the Zone is treeless and is bordered by Grey Box saplings at a high density.

Understorey: The top sections of the northern creekline have open grassy areas with scattered wattles and other shrubs, and a good cover of native and introduced grasses, including sedges and

rushes in the seasonally wetter areas. The dam is bare apart from a patch of Cumbungi. Within the core breeding habitat of the Bibron's Toadlet, the absence of a canopy (along with seasonal moisture) has allowed a range of grasses, herbs and to a lesser extent shrubs to establish.

Condition: Increased sunlight due to the absence of a canopy has created conditions that benefit Bibron's Toadlet..

Management Zone Objective:

Management of this Zone aims to create improved conditions for Bibron's Toadlet by

- Reduce canopy density

Restore understorey diversity and abundance

10.6 Ecological Management Zone 6: - Dense Shrubby Understorey

Areas of dense to open shrubland lacking canopy cover occur centrally and within the north-west corner of the Park.

Canopy: As a result of historic modification, Zone 6 does not currently contain a Eucalypt canopy.

Understorey: This Zone is currently recovering from substantial historic modification and contains a range of indigenous, non-indigenous native and exotic trees and shrubs. Currently these patches provide a different but valuable habitat niche to the Park, with shrubby vegetation present in greater abundance than in other areas of the Park.

Condition This is a zone of ecological transition. Young regenerating trees provide the competition that will ultimately reduce the density of the Sifton Bush to become Grey Box or Box Stringybark Forest. This is unlikely to happen in some of the patches of Burgan however on exposed sites Burgan is dying back die over consecutive prolonged hot seasons.

Management Zone Objective:

- Allow the natural transition of the shrublands to forest with patches of understory for native animals.
- prioritise the removal of woody weeds and
- Ensure the replacement of these weeds with suitable indigenous understorey shrubs.

10.7 Ecological Management Zone 7: - River Red Gum Forest

This zone contains areas of River Red Gum canopy occurring on the western outwash slope of the northern creekline. In the Park,

Canopy: This zone is characterised by the River Red Gum with Grey Box on the adjoining slopes.

Understorey: As a result of past disturbance these areas have very little understorey. There is however sparse stands of Sifton bush and Golden Wattles and some areas of good grassy groundcover.

Condition: Many River Red gums within this area look unhealthy with epicormic growth and limited foliage. This may be due to recent hot conditions, reduced annual rainfall coupled with the sites inability to retain runoff due to the lack of coarse woody litter and groundcover. There are scattered River Red gums along the northern creek line which are healthier. This is most likely due to the ground layer being sufficient to slow the water reducing scouring and allowing some moisture retention.

Management Zone Objective:

- Investigate options of slowing water movement down.
- Increasing understorey cover and diversity.
- Maintaining ground cover

11. Management Challenges

There are several management challenges for the Park that threaten its ecological, cultural, and recreational values. These are outlined below.

11.1 Climate change

Mitchell Shire is experiencing the impacts of climate change.

The impacts of climate change on the Park include an increasing frequency of extreme weather events and changing climatic conditions which impact on fauna, especially rare and threatened species that rely on water security such as the Bibron's Toadlet.

Council adopted its inaugural Climate Emergency Action Plan in 2023. The Climate Emergency Action Plan identifies the following key actions relevant to the Park;

- *Partner with community groups to actively monitor key habitat and native vegetation along Council managed roadsides and reserves for introduced and invasive species.*
- *Protect and enhance forests, woodlands, grasslands, including state forests, and encourage and enable revegetation on public and private land by promoting sustainable land management incentives and investigating targeted sustainable land management incentives.*
- *Support the preservation and propagation of Indigenous, native, and climate resilient seed stock.*

11.2 Weed Control

Over 70 exotic plants (non-indigenous) have been found within the Park, with the majority of ground cover being exotic grasses such as Quaking Grass (*Briza maxima* and *Briza minor*) and Sweet vernal grass *(Anthoxanthum odoratum)*.

Exotic trees such as Sweet Pittosporum *(Pittosporum undulatum)* and Cootamundra Wattle *(Acacia baileyana)* are also present.

Grassy weed control is challenging and needs specialised and integrated approaches.

There are five weed species in the Park which are listed under the *Catchment and Land Protection (CaLP) Act 1994,* these include:

- St John's Wort *(Hypericum perforatum)* regionally controlled weed
- Sweet Briar *(Rosa rubiginosa)* regionally controlled weed
- Bridal Creeper (Asparagus asparagoides) restricted weed
- Chilean Needle Grass *(Nassella neesiana*) restricted weed
- Sour Sob *(Oxalis pes-caprae)* restricted weed

Emerging weed species such as African weed orchid (*Disa bracteata*) also need to be monitored and controlled.

11.3 Pest Animal Control

Invasive species predation, in particular by foxes and cats, is a problem in disturbed or fragmented areas lacking suitable refuge.

A fauna survey conducted in the Park in 2023 identified that the Red Fox (*Vulpes vulpes)* was widespread (TREC 2023). Observations from the CoM and evidence of bird death in the Park suggests cats are also an issue. The housing development to the north of the Park includes restrictive covenants on title that prohibit the keeping of cats on these properties.

Rabbits

As with many bushland reserves, rabbits are an ongoing management issue. While active warrens have not been located within the Park, ongoing surveillance to monitor for warrens is a recommendation of the Plan.

Figure 10 Red Fox (Vulpes vulpes) caught on trail camera - fauna survey TREC 2023

11.4 Kangaroo management.

Eastern Grey Kangaroos are abundant on the western side of the Park adjacent to the golf course and may be having a negative impact on the vegetation including reducing the potential for many species to naturally regenerate due to excessive grazing. Establishment of exclusion areas could help to measure this impact, preventing browsing of vegetation and potentially allowing increase seed set and germination of native plants.

11.5 Lack of understorey diversity

The current vegetation structure lacks understory abundance and diversity. Past management has encouraged rapid regeneration of eucalypts, resulting in a monoculture of eucalyptus outcompeting many understorey species. The lack of understory leads to excess water run-off increasing the potential for soil erosion due to water movement across the surface.

In the short term it is recommended that, in selected areas dominated by dense eucalypt regrowth, ecological thinning occur to open up the current tree canopy to reduce competition for light, nutrients and moisture for the understorey. Strategically placing logs along contours would also benefit vegetation by trapping and slowing water movement across the soil surface. Overtime, this will build organic matter and topsoil, and fasten the development of larger hollow bearing trees

In conjunction with ecological thinning, planting and seeding depleted or missing understorey species will assist to establish a floristically rich understorey with varied habitat structure. This will result in a range of microhabitats that help to support a range of fauna.

11.6 Lack of tree hollows

There are a number of Victorian Rare or Threatened Species (VROT) species found within and adjoining the Park that rely upon hollows. Retention of hollow bearing trees is a priority.

In the past there have been a number of nest boxes installed within the Park. Many of these are currently in poor condition requiring some form of maintenance. Management of nest boxes requires monitoring and review to determine; what species are using existing nest boxes and the types of hollow is lacking throughout the Park. This should determine future installation and management of nest boxes across the Park.

Over-crowding of eucalypt saplings places stress upon existing remnant trees including old hollow bearing trees and slows the growth of future hollow-bearing trees. Eucalypt thinning of smaller trees will actively encourage growth of remaining trees , and eventually produce the desired large size and thick limbs needed for hollow formation.

11.7 Illegal rubbish dumping and littering.

There have been incidents of illegal rubbish dumping in the Park, especially around the car park and along Telegraph Road. Dumping of green waste is of particular concern which can result in environmental weeds spreading.

Littering occurs mainly around the car park, and most commonly consists of bagged and unbagged dog waste. There are no public bins in the Park and there is no recommendation to introduce a public place bin. Users are encouraged to take their rubbish home with them.

11.8 Fire risk

As a heavily vegetated area the Park is at risk from bushfires.

A separate fuel management plan is currently under development in partnership with the CFA and the CoM which will be completed over the next six months.

Any planned events or working bees in the Park should be rescheduled if Extreme, Catastrophic or Total Fire Ban days are declared.

12. Action Plan

To achieve measurable outcomes in line with the vision and objectives for the Park, a detailed action plan has been developed. The action plan provides a structured approach to achieving the desired results through focused initiatives. It defines roles and responsibilities, priorities, and includes cost estimates.

12.1 Prioritisation

Management actions have been categorised based on a set of priority levels:

Current/Ongoing Actions

These are current and ongoing management actions. These actions are recommended to continue without requiring any additional resources.

High Priority Actions

These actions are deemed to be:

- Critical to the safety of the community and visitors surrounding and visiting the Park.

- Necessary to maintain the ecological balance and health of the Park.
- Required for the preservation of the park's cultural values.
- Required as part of legislative compliance

Medium Priority Actions

Contribute to enhancing the ecological value of the Park and address specific management challenges. While not crucial for ensuring public safety, they play a significant role in overcoming obstacles and improving Park management.

Low Priority Actions

Offer the potential to enhance the Park in numerous ways such as improving visitor experience.

Not essential for preserving the ecological and cultural values of the Park and can be undertaken as resources become available.

12.2 Resource Allocation

The implementation of the action plan is contingent upon securing funding. Efforts will continue to be made to pursue external funding opportunities and partnerships to support initiatives, projects and programs

For the purpose of budgeting, the resources required for implementing each proposed management action have been categorised as follows:

- IR - Internal staff resource
- $ - $0 -$5,000
- $$ - $5,001 -$10,000
- $$$ - $10,001 - $20,000
- $$$$ - $20,001+

Note: all budget estimates provided are estimates only.

12.3 Timeframe

The proposed actions have also been categorised by timeframe to direct the management actions for the next ten years:

- Short: Less than 3 years
- Medium: Less than 5 years
- Long: More than 5 years
- Ongoing: Actions to be sustained throughout the next 10 years.

12.4 Actions

Table 6 Action Table

Management objective	Action Number	Action	Priority	Responsible Stakeholder/s	Resource Allocation	Applicable Management Zone	Timeframe
Preserve and enhance the natural ecosystems for flora and their floristic communities	1.	Identify the abundance and impact of pest animals within the Park and implement control programs focusing on rabbits, hares, foxes and cats.	Medium	Council and CoM	$	All	Ongoing
	2.	Assess the impact of kangaroos on the Park using grazing exclusion plots and investigate ways to reduce the impact.	Short	Council and CoM	$	All	Ongoing
	3.	Develop and implement a weed control program including declared noxious weeds, environmental weeds, and new and emerging weed species. Include succession planting with indigenous species.	High	Council and CoM	$$	All	Ongoing
	4.	Monitor and manage erosion control sites.	Medium	Council	$$	All	Ongoing
	5.	Maintain open grassland area near the dam.	Medium	CoM	$	5	Ongoing
	6.	Plant or direct seed species notably absent or sparse or of importance to enhance the habitat, including Acacias and Peas for ecosystem health and species such as Bursaria, Grevillea, Xanthorrhoea for year-round nectar.	High	CoM and Council	$$	All	Ongoing
	7.	Investigate decline in River Red Gum health in north west corner.	Low	CoM and Council	IR	1b along drainage line and slope	Medium
	8.	Establish a monitoring program to assess the baseline density of trees and understory	High	CoM and Council Support from DEECA	$$$	1c (priority) and then 1b	Short
	9.	Reduce canopy cover based on benchmarking and research aimed at achieving the EVC benchmark canopy cover, using a mix of photo points and quadrat assessment. Ecological thinning should initially aim to restore a density approx. 1 tree per 10m, with the aim of 30 to 40 trees per hectare in the longer term.					
	10.	Support natural recruitment of understory plants and revegetate where required.				All	
	11.	Ongoing monitoring and managing eucalypt regeneration post ecological restoration using a mix of photo points and quadrat assessment.				1	
	12.	Establish and monitor exclusion plots to reduce browsing pressure to assist with establishment of significant species.	Medium	CoM and Council	$	All	Medium
	13.	Utilise fallen timber from ecological restoration to increase log cover	High	Council and C	$	all	Short
Provide increasing habitat for a range of indigenous fauna	14.	Maintain no firewood collection within Park	High	Council	IR	All	Ongoing
	15.	Map and monitor condition and usage of current natural hollows and nest boxes located within the Park.	Low	CoM	IR	All	Short
	16.	Develop and implement a program to retain natural hollow bearing trees and increase the number and diversity of hollows in the Park. .	Low	Council	$	All	Medium
	17.	Maintain the parks dogs on lead status and enforce via education, signage and compliance where required.	High	Council	IR	All	Ongoing

	18.	Undertake the recommended actions to protect and enhance the habitat for the Bibron's Toadlet (appendix 5) and the Surveys and management considerations for the Brown Toadlet *Pseudophryne bibronii* at Seymour Bushland Park and the former Seymour Motocross Track De Angelis, D. (2021).	High	Council and CoM	$$	5	Medium=-Long
	19.	Partner with tertiary institutions, research organisations, community groups and schools to learn more about the insects (entomology) of the Park and to monitor nest boxes.	Medium	Council, CoM. Threatened species conservancy	$	All	Medium
	20.	Actively promote the use of collection apps including e-bird and INaturalist	Medium	Council and CoM	IR	N/A	Ongoing
	21.	Work with neighbouring landowners, community groups and local residents to build a greater understanding of fauna species that use the Park	Medium	Council and CoM	IR	N/A	Ongoing
	22.	Create a flyer of birds of the Seymour Bushland Park	Low	Council and CoM	$	N/A	Medium
Recognise and celebrate Indigenous and European history	23.	Include a recognition of indigenous culture on the revised park flyer	High	CoM	$	N/A	Short
	24.	Engage with TLaWC to use indigenous names for flora and fauna in education materials and events.	Medium	Council, CoM and TLaWC	$	N/A	Medium
	25.	Research and include information about the traditional uses of native flora in the Park	Medium	Council, CoM and TLaWC	$	N/A	Medium
	26.	Install signage relating to military history.	Low	Council and CoM	$$	3	Long
Provide opportunities for passive recreation, ecotourism, and environmental education	27.	Complete an asset inventory and condition report for the Park, including renewal timelines.	High	Council	IR	All	Short
	28.	Keep existing paths clear of vegetation	High	Council and CoM	IR	All	Ongoing
	29.	Upgrade walking paths and boardwalks to increase safety and useability	High	Council	$$$$	All	Short-Medium
	30.	Repair, upgrade, and install additional benches as rest stops along the tracks.	High	Council	$$	All	Short
	31.	Install/Repair directional markers at key points along the paths	High	CoM and Council	$	All	Short
	32.	Investigate QR code linking to a map	Medium	CoM and Council	IR	All	Short
	33.	Advocate to decrease the speed limit along the Goulburn Valley Highway between Kobyboyn and Telegraph road (currently 100km/h) to facilitate safe entry to the park	Medium	CoM and Council	IR	N/A	Short
	34.	Maintain the composting toilet and review cleaning and maintenance scheduling.	High	CoM	$	1	Ongoing
	35.	Install a story telling circle as a destination point, including benches and a low picnic table	Medium	Council and CoM	$$	1	Medium
	36.	Review and update interpretive signage and online information relating to the ecological values of the Park.	Medium	CoM and Council	$$	All	Medium

	37.	Run a least one community event in the Park a year.	Low	CoM and Council	$	All	Ongoing
	38.	Update the Park brochure, display at local tourism places, links on key websites, QR codes for more information	Medium	CoM and Council	IR	All	Short
	39.	Work with the CFA to manage fuel loads in the Park, in accordance with the fuel management plan.	High	Council, CoM, and CFA	$$	All	Ongoing
	40.	Maintain the linear reserve to the north of the Park as a fire break.	High	Council	$	N/A	Ongoing
	41.	Clean up illegally dumped rubbish as soon as possible	High	Council and CoM	$	All	Ongoing
	42.	Encourage visitors to take their rubbish home (including dog droppings) with them via education and signage	High	Council and CoM	$	All	Ongoing
	43.	Regularly monitor the Park for illegal activity. And promote Council's online reporting platform to report illegal activities.	High	Council and CoM	IR	All	Ongoing
	44.	Discourage use of the Park during days of high elevated fire danger rating and during storm events.	High	Council and CoM	$	All	Ongoing
Consider management actions that support the Parks role in a regional context.	45.	Improve accessibility to the Park from the Kobyboyn Rise development (Bush Pea Drive)	Medium	Council	$$	1c	Medium
	46.	Investigate options to improve cycling and walking accessibility from the township to the Park, including the Australian Lighthorse Memorial Park	Medium	Council	$$$	All	Long
	47.	Protect and enhance the roadside values of Telegraph Road, which has a very high conservation significance	High	Council	$	N/A	Ongoing
	48.	Ensure the Park is considered as part future reviews and updates to the Seymour Structure Plan and Mitchell Shire Open Space Strategy.	High	Council and CoM	IR	N/A	Short
	49.	Ensure that the future planning and land management works into the use of Granite Park, the former raceway site and the land in-between, consider the environmental, historical, and recreational values of the Park.	High	Council and CoM	IR	N/A	Short

13. Monitoring and Evaluation

Regular ongoing monitoring and evaluation of the action plan are essential for assessing the effectiveness and relevance of all actions. An effective monitoring and evaluation framework:

An adaptive management approach will assist, to ensure that management can be adapted to changing social, economic, and environmental conditions over the next ten years.

Below are some key evaluation criteria to be used annually to assess the achievement of the management goals:

- Have the management actions been successfully implemented?
- Are stakeholders engaged and involved in the Parks management?
- Are resources being used effectively and are additional resources required?
- Has there been any significant changes (e.g. legislative) that require updates to the current management plan?
- Have illegal activities within the park reduced?
- Have the ecological values improved?
    - Management Zones goal states form part the technical background to measure and evaluate this key evaluation criteria.

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15. Appendices

Appendix 1. Flora - Seymour Bushland Park.

Common name	*Scientific name*	Observations	Status
Kingdom - Fungi **Division - Basidiomycota** ***Hygrophoraceae***			
Yellow Navel	*Lichenomphalia chromacea*	VBA	
Kingdom - Plantae **Flowering Plants - Magnoliopsida** **Order - Apiales** ***Araliaceae***			
Small Pennywort	*Hydrocotyle callicarpa*	PM & BM	
Stinking Pennywort	*Hydrocotyle laxiflora*	TREC	
Pittosporaceae			
Sweet Bursaria	*Bursaria spinosa*	TREC	
Sweet Pittosporum	*Pittosporum undulatum*	TREC	Australian native, not locally indigenous
Order - Asparagales ***Amaryllidaceae***			
Agapanthus	*Agapanthus praecox*	TREC	exotic
Asparagaceae			
Century Plant	*Agave americana*	TREC	exotic
Small Vanilla-lily	*Arthropodium minus*	PM & BM	
Chocolate Lily	*Arthropodium strictum s.l.*	VBA	

Common name	*Scientific name*	Observations	Status
Bridal Creeper	*Asparagus asparagoides*	TREC	exotic
Wattle Mat-rush	*Lomandra filiformis subsp. Coriacea*	TREC	
Wattle Mat-rush	*Lomandra filiformis subsp. filiformis*	TREC	
Spiny-headed Mat-rush	*Lomandra longifolia*	TREC	
Many-flowered Mat-rush	*Lomandra multiflora*	TREC	
Small Mat-rush	*Lomandra nana*	TREC	
Twining Fringe-lily	*Thysanotus patersonii*	VBA	
Asphodelaceae			
Bulbine Lily	*Bulbine bulbosa*	VBA	
Pale Flax-lily	*Dianella longifolia*	TREC	
Black-anther Flax-lily	*Dianella revoluta var. revoluta*	TREC	
Late-flower Flax-lily	*Dianella tarda*	TREC	FFG Listed: Critically Endangered
Yellow Rush-lily	*Tricoryne elatior*	TREC	
Small Grass-tree	*Xanthorrhoea minor subsp. lutea*	TREC	
Hypoxidaceae			
Tiny Star	*Pauridia glabella*	TREC	
Iris – Iridaceae			
Yellow Galaxia	*Moraea fugucissima*	PM & BM	exotic
Onion Grass	*Romulea rosea*	TREC	exotic
Orchids - Orchidaceae			
Pink Fingers	*Caladenia carnea*	PM & BM	
Dusky Fingers	*Caladenia fuscata*	PM & BM	
Musk Hood-orchid	*Caladenia moschata*	PM & BM	
Purple Beard-orchid	*Calochilus robertsonii*	PM & BM	
South African Weed-orchid	*Disa bracteata*	TREC	exotic

Common name	*Scientific name*	Observations	Status
Tiger Orchid	*Diuris sulphurea*	PM & BM	
Wax-lip Orchid	*Glossodia major*	VBA, PM & BM	
Dwarf Greenhood	*Pterostylis nana*	PM & BM	
Nodding Greenhood	*Pterostylis nutans*	VBA, PM & BM	
Forest Sun-orchid	*Thelymitra arenaria*	PM & BM	
Slender Sun-orchid	*Thelymitra pauciflora*	PM & BM	
Trim Sun-orchid	*Thelymitra peniculata*	PM & BM	
Salmon Sun-orchid	*Thelymitra rubra*	PM & BM	
Order - Asterales ***Daisys - Asteraceae***			
Cape Weed	*Arctotheca calendula*	TREC	exotic
Blue Pincushion	*Brunonia australis*	TREC	
Shiny Cassinia	*Cassinia longifolia*	PM & BM	
Drooping Cassinia	*Cassinia Sifton*	TREC	Australian native, not locally indigenous
Spear Thistle	*Cirsium vulgare*	TREC	exotic
Stinkwork	*Dittrichia graveolens*	TREC	exotic
Tiny Cudweed	*Gnaphalium indutum subsp. acuminatum*	VBA, PM & BM	
Smooth Cat' s-ear	*Hypochaeris glabra*	PM & BM	exotic
Flatweed	*Hypochaeris radicata*	TREC	exotic
Coarse Bottle-daisy	*Lagenophora gunniana*	TREC	
Jersey Cudweed	*Laphangium luteoalbum*	TREC	
Hairy Hawkbit	*Leontodon saxatilis*	TREC	exotic
Scaly Buttons	*Leptorhynchos squamatus*	PM & BM	
Grey Everlasting	*Ozothamnus obcordatus*	TREC	

Common name	*Scientific name*	Observations	Status
Slender Pomaderris	*Pomaderris racemosa*	TREC	
Rough Fireweed	*Senecio hispidulus*	PM & BM	
Slender Fireweed	*Senecio phelleus*	PM & BM	
Cotton Fireweed	*Senecio quadridentatus*	TREC	
Smooth Solenogyne	*Solenogyne dominii*	TREC	
Common Sow-thistle	*Sonchus oleraceus*	TREC	exotic
Dandelion	*Taraxacum officinale*	TREC	exotic
Common Sunray	*Triptilodiscus pygmaeus*	PM & BM	
Shiny Everlasting	*Xerochrysum viscosum*	TREC	
Campanulaceae			
Hairy Annual bluebell	*Wahlenbergia gracilenta*	TREC	
Fan Flowers - Goodeniaceae			
Black' s Goodenia	*Goodenia blackiana*	TREC	
Bent Goodenia	*Goodenia geniculata*	TREC	
Ivy Goodenia	*Goodenia hederacea subsp. hederacea*	TREC	
Spur Goodenia	*Goodenia paradoxa*	PM & BM	
Cut-leaf Goodenia	*Goodenia pinnatifida*	PM & BM	
Stylidiaceae			
Hairy Stylewort	*Levenhookia dubia*	PM & BM	
Grass Triggerplant	*Stylidium graminifolium*	PM & BM	
Order - Caryophyllales ***Caryophyllaceae***			
Common Mouse-ear Chickweed	*Cerastium glomeratum*	TREC	exotic
Chenopods - Chenopodiaceae			
Fat Hen	*Chenopodium album*	TREC	exotic

Common name	*Scientific name*	Observations	Status
Nodding Saltbush	*Einadia nutans*	TREC	
Sundews - Droseraceae			
Scented Sundew	*Drosera aberrans*	TREC	
Tall Sundew	*Drosera auriculata*	TREC	
Slender Sundew	*Drosera gunniana*	PM & BM	
Branched Sundew	*Drosera hookeri*	PM & BM	
Knotweeds - Polygonaceae			
Sheep Sorrel	*Acetosella vulgaris*	TREC	exotic
Slender Dock	*Rumex brownii*	TREC	
Order - Celastrales *Celastraceae*			
Creamy Stackhousia	*Stackhousia monogyna s.l.*	TREC	
Order - Dipsacales *Caprifoliaceae*			
Himalayan Honeysuckle	*Leycesteria formosa*	PM & BM	exotic
Order - Liliales *Colchicaceae*			
Milkmaids	*Burchardia umbellata*	TREC	
Common Early Nancy	*Wurmbea dioica*	PM & BM	
Order - Dilleniales *Dilleniaceae*			
Hoary Guinea-flower	*Hibbertia crinita*	TREC	
Spiky Guinea-flower	*Hibbertia exutiacies*	TREC	
Grey Guinea-flower	*Hibbertia obtusifolia*	TREC	

Common name	*Scientific name*	Observations	Status
Order - Ericales ***Heaths - Ericaceae***			
Honeypots	*Acrotriche serrulata*	TREC	
Daphne Heath	*Brachyloma daphnoides*	TREC	
Common Beard-heath	*Leucopogon virgatus*	TREC	
Urn Heath	*Melichrus urceolatus*	PM & BM	
Cranberry Heath	*Styphelia humifusa*	TREC	
Primulaceae			
Pimpernel	*Lysmachia arvensis*	TREC	exotic
Order - Fables ***Peas - Fabaceae***			
Gold-dust Wattle	*Acacia acinacea*	TREC	
Cootamundra Wattle	*Acacia baileyana*	TREC	Australian native, not locally indigenous
Bent-leaf Wattle	*Acacia flexifolia*	PM & BM	
Ploughshare Wattle	*Acacia gunnii*	PM & BM	
Lightwood	*Acacia implexa*	TREC	
Sallow Wattle	*Acacia longifolia subsp. longifolia*	TREC	Australian native, not locally indigenous
Black Wattle	*Acacia mearnsii*	TREC	
Blackwood	*Acacia melanoxylon*	TREC	
Hedge Wattle	*Acacia paradoxa*	TREC	
Golden Wattle	*Acacia pycnantha*	TREC	
Varnish Wattle	*Acacia verniciflua*	TREC	
Creeping Bossiaea	*Bossiaea prostrata*	TREC	
Gorse Bitter-pea	*Daviesia ulicifolia*	TREC	
Showy Parrot-pea	*Dillwynia sericea*	TREC	

Common name	*Scientific name*	Observations	Status
Purple Coral-pea	*Hardenbergia violacea*	PM & BM	
Austral Indigo	*Indigofera australis*	PM & BM	
Running Postman	*Kennedia prostrata*	TREC	
Large-leaf Bush-pea	*Pultenaea daphnoides*	TREC	
Loose-flower Bush-pea	*Pultenaea laxiflora*	TREC	
Rough Bush-pea	*Pultenaea scabra*	TREC	
Hare' s-foot Clover	*Trifolium arvense*	TREC	exotic
Order Fagales ***Casuarinaceae***			
Drooping She oak	*Allocasuarina verticulata*	CoM	planted
Order - Gentianales ***Gentians - Gentianaceae***			
Common Centaury	*Centaurium erythaea*	TREC	exotic
Slender Cicendia	*Cicendia filiformis*	PM & BM	exotic
Square Cicendia	*Cicendia quadrangularis*	PM & BM	exotic
Rubiaceae			
Common Woodruff	*Asperula conferta*	TREC	
Cleavers	*Galium aparine*	TREC	exotic
Variable Stinkweed	*Opercularia varia*	TREC	
Order - Geraniales ***Geraniums - Geraniaceae***			
Crane' s Bill	*Geranium retrorsum*	PM & BM	
Order – Lamiales ***Mints - Lamiaceae***			

Common name	*Scientific name*	Observations	Status
Austral Bugle	*Ajuga australis*	PM & BM	
Forest Mint	*Mentha laxiflora*	VBA	
Pennyroyal	*Mentha pulegium*	PM & BM	exotic
Orobanchaceae			
Red Bartsia	*Bellardia latifolia*	PM & BM	exotic
Plantaginaceae			
Pelisser' s Toad-flax	*Linaria pelisseriana*	PM & BM	exotic
Ribwort	*Plantago lanceolata*	TREC	exotic
Variable Plantain	*Plantago varia*	TREC	
Trailing Speedwell	*Veronica plebeia*	TREC	
Native Flax	*Linum marginale*	TREC	
Order - Laurales ***Laurels - Lauraceae***			
Slender Dodder-laurel	*Cassytha glabella*	TREC	
Order - Malpighiales ***Hypericaceae***			
Small St John' s Wort	*Hypericum gramineum*	TREC	
St John' s Wort	*Hypericum perforatum*	TREC	exotic
Order - Malvales ***Thymelaeaceae***			
Curved Rice-flower	*Pimelea curviflora*	TREC	
Common Rice-flower	*Pimelea humilis*	TREC	
Order - Myrtales ***Myrtles - Myrtaceae***			
Common Fringe-myrtle	*Calytrix tetragona*	PM & BM	

Common name	*Scientific name*	Observations	Status
River Red-gum	*Eucalyptus camaldulensis*	TREC	
Sugar Gum	*Eucalyptus cladocalyx*	TREC	Australian native, not locally indigenous
Red Stringybark	*Eucalyptus macrorhyncha*	TREC	
Grey Box	*Eucalyptus microcarpa*	TREC	
Red Box	*Eucalyptus polyanthemos*	TREC	
Forest Burgan	*Kunzea sp. (Upright form)*	TREC	
Rough-barked Honey-myrtle	*Melaleuca parvistaminea*	PM & BM	
Violet Honey-myrtle	*Melaleuca wilsonii*	PM & BM	Australian native, not locally indigenous
Order - Oxalidales			
Oxalidaceae			
Grassland Wood-sorrel	*Oxalis perennans*	TREC	
Soursob	*Oxalis pes-caprae*	TREC	exotic
Large-flower Wood-sorrel	*Oxalis purpurea*	TREC	exotic
Order - Poales ***Sedges - Cyperaceae***			
Tall Sedge	*Carex appressa*	TREC	
Knob Sedge	*Carex inversa*	TREC	
Drain Sedge	*Cyperus eragrostis*	TREC	exotic
Flecked Flat-sedge	*Cyperus gunnii*	TREC	
Tiny Flat-sedge	*Isolepis levynsiana*	TREC	exotic
Little Club-sedge	*Isolepis marginata*	PM & BM	
Common Rapier-sedge	*Lepidosperma filiforme*	TREC	
Variable Sword-sedge	*Lepidosperma laterale*	TREC	
Common Bog Rush	*Schoenus apogon*	TREC	
Rushes - Juncaceae			

Common name	*Scientific name*	Observations	Status
Hollow Rush	*Juncus amabilis*	TREC	
Austral Rush	*Juncus australis*	TREC	
Toad Rush	*Juncus bufonius*	TREC	exotic
Small-flower Rush	*Juncus pallescens*	TREC	exotic
Finger Rush	*Juncus subsecundus*	TREC	
Common Woodrush	*Luzula meridionalis*	TREC	
Grasses - Poaceae			
Brown-top Bent	*Agrostis capillaris s.l*	TREC	exotic
Delicate Hair-grass	*Aira elegantissima*	TREC	exotic
Common Wheat-grass	*Anthosachne scabra*	TREC	
Sweet Vernal grass	*Anthoxanthum odoratum*	TREC	exotic
Supple Spear-grass	*Austrostipa mollis*	TREC	
Veined Spear-grass	*Austrostipa rudis*	TREC	
Rough Spear-grass	*Austrostipa scabra*	TREC	
Bearded Oat	*Avena barbata*	TREC	exotic
Red-leg Grass	*Bothriochloa macra*	TREC	
Large Quaking-grass	*Briza maxima*	TREC	exotic
Lesser Quaking-grass	*Briza minor*	TREC	exotic
Soft Brome	*Bromus hordeaceus*	TREC	exotic
Kikuyu Grass	*Cenchrus clandestinus*	TREC	exotic
Couch	*Cynodon dactylon var. dactylon*	TREC	exotic
Rough Dog' s-tail	*Cynosurus echinatus*	TREC	exotic
Cocksfoot	*Dactylis glomerata*	TREC	exotic
Reed Bent grass	*Deyeuxia quadriseta*	TREC	
Long-hair Plume-grass	*Dichelachne crinita*	TREC	

Common name	*Scientific name*	Observations	Status
Panic Veldt-grass	*Ehrharta erecta*	TREC	exotic
Annual Veldt-grass	*Ehrharta longiflora*	TREC	exotic
Close-headed Lovegrass	*Eragrostis elongata*	Friends	
Yorkshire Fog	*Holcus lanatus*	TREC	exotic
Kangaroo Grass	*Themeda triandra*	TREC	
Common Blown grass	*Lachnagrostis filiformis*	TREC	
Rye Grass	*Lolium perenne*	TREC	exotic
Wimmera Rye-grass	*Lolium rigidum*	TREC	exotic
Weeping Grass	*Microlaena stipoides*	TREC	
Chilean Needle Grass	*Nassella neesiana*	TREC	exotic
Paspalum	*Paspalum dilatatum*	TREC	exotic
Toowoomba Canary-grass	*Phalaris aquatica*	TREC	exotic
Annual Meadow-grass	*Poa annua*	TREC	exotic
Common Tussock-grass	*Poa labillardierei*	TREC	
Soft Tussock-grass	*Poa morrisii*	TREC	
Grey Tussock-grass	*Poa sieberiana*	TREC	
Hill Wallaby-grass	*Rytidosperma erianthum*	TREC	
Copper-awned Wallaby-grass	*Rytidosperma fulvum*	TREC	
Silvertop Wallaby-grass	*Rytidosperma pallidum*	TREC	
Velvet Wallaby-grass	*Rytidosperma pilosum*	TREC	
Slender Wallaby-grass	*Rytidosperma racemosum*	TREC	
Bristly Wallaby-grass	*Rytidosperma setaceum*	TREC	
Slender Pigeon Grass	*Setaria parviflora*	TREC	exotic
Squirrel-tail Fescue	*Vulpia bromoides*	TREC	exotic
Rat' s-tail Fescue	*Vulpia myuros*	TREC	exotic

Common name	*Scientific name*	Observations	Status
White Marianth	*Rhytidosporum procumbens*	TREC	
Restionaceae			
Hairy Centrolepis	*Centrolepis strigosa*	PM & BM	
Typhaceae			
Narrow-leaf Cumbungi	*Typha domingensis*	TREC	
Order - Proteales ***Proteas - -Proteaceae***			
Cat' s Claw Grevillea	*Grevillea alpina*	TREC	
Rosemary Grevillea	*Grevillea rosmarinifolia*	PM & BM	Australian native, not locally indigenous
Silky Hakea	*Hakea sericea*	TREC	Australian native, not locally indigenous
Order - Ranunculales ***Ranunculaceae***			
Australian Buttercup	*Ranunculus lappaceus*	PM & BM	
Order - Rosales ***Roses - Rosaceae***			
Sheep' s-burr	*Acaena echinata*	TREC	
Large Leaf Cotoneaster	*Cotoneaster glaucophyllus*	TREC	exotic
Sweet Briar	*Rosa rubiginosa*	TREC	exotic
Order - Santalales ***Mistletoes - Loranthaceae***			
Box Mistletoe	*Amyema miquelii*	TREC	
Sandalwoods - Santalaceae			
Cherry Ballart	*Exocarpos cupressiformis*	TREC	
Order - Saxifragales ***Crassulas - Crassulaceae***			

Common name	*Scientific name*	Observations	Status
Spreading Crassula	*Crassula decumbens*	TREC	
Sieber Crassula	*Crassula sieberiana*	TREC	
Haloragaceae			
Common Raspwort	*Gonocarpus tetragynus*	TREC	
Order - Sapindales ***Rutaceae***			
White Correa	*Correa alba*	PM & BM	Australian native, not locally indigenous
Rock Correa	*Correa glabra*	PM & BM	
Common Correa	*Correa reflexa*	TREC	
Order - Solanales ***Solanaceae***			
Black Nightshade	*Solanum nigrum*	TREC	exotic
Class - Polypodiopsida **Order - Polypodiales** ***Pteridaceae***			
Green Rock-fern	*Cheilanthes austrotenuifolia*	TREC	
Class - Pinopsida **Order - Pinales** ***Cypress - Cupressaceae***			
Leyland Cypress	*Cupressus x leylandii*	TREC	exotic
Pines - Pinaceae			
Radiata Pine	*Pinus radiata*	TREC	exotic

Appendix 2. Bird species - Seymour Bushland Park.

Common name	Scientific name	Data source	Status	Supporting notes
Emu	*Dromaius novaehollandiae*	TREC incidental observation		4 individuals on roadside near northern boundary of Park. Translocated population.
Painted Button-quail	*Turnix varius*	Ebird 2022, VBA 1978	Listed VTWBC	
Peaceful Dove	*Geopelia striata*	Ebird 2018		
Common Bronzewing	*Phaps chalcoptera*	TREC fauna survey		Call
Crested Pigeon	*Ocyphaps lophotes*	VBA 2013		
Hoary-headed Grebe	*Poliocephalus poliocephalus*	Ebird 2022		
Great Cormorant	*Phalacrocorax carbo*	Ebird 2023		
Great Pied Cormorant	*Phalacrocorax varius*	Ebird 2022, VBA 2018		
Little Pied Cormorant	*Microcarbo melanoleucos*	Ebird 2021, VBA 1999		
Australasian Darter	*Anhinga novaehollandiae*	Ebird 2018, VBA 1998		
Australian White Ibis	*Threskiornis molucca*	TREC camera trapping		
Straw-necked Ibis	*Threskiornis spinicollis*	Ebird 2022, VBA 2013		
Yellow-billed Spoonbill	*Platalea flavipes*	Ebird 2014, VBA 1999		
White-faced Heron	*Egretta novaehollandiae*	TREC camera trapping		
White-necked Heron	*Ardea pacifica*	Ebird 2017, VBA 1978		
Nankeen Night-heron	*Nycticorax caledonicus*	Ebird 2013, VBA 1999		
Australian Wood Duck	*Chenonetta jubata*	TREC fauna survey		Adjacent to site, on golf course
Pacific Black Duck	*Anas superciliosa*	TREC fauna survey		
Grey Teal	*Anas gracilis*	Ebird 2022		
Brown Goshawk	*Accipiter fasciatus*	Ebird 2022, VBA 2013		
Collared Sparrowhawk	*Accipiter cirrocephalus*	Ebird 2022, VBA 1978		
Little Eagle	*Hieraaetus morphnoides*	ALA 2021, VBA 2013	FFG Vulnerable	ALA, 7 records, VBA, 3 records

Common name	Scientific name	Data source	Status	Supporting notes
Whistling Kite	*Milvus sphenurus*	VBA 2021		
Black Kite	*Milus migrans*	Ebird 2021, VBA 1999		
Square-tailed Kite	*Lophoictinia isura*	VBA 2019	FFG Vulnerable	4 records
Black-shouldered Kite	*Elanus axillaris*	Ebird 2011, VBA 1999		
Australian Hobby	*Falco longipennis*	Ebird 2021, VBA 1999		
Peregrine Falcon	*Falco peregrinus*	Ebird 2021		
Brown Falcon	*Falco berigora*	Ebird 2018, VBA 1978		
Barking Owl	*Ninox connivens*	EBird 2020, VBA 1999	FFG Critically Endangered; member VTWBC	VBA 2 records
Rainbow Lorikeet	*Trichoglossus moluccanus*	TREC fauna survey		
Musk Lorikeet	*Glossopsitta concinna*	TREC fauna survey		
Yellow-tailed Black-Cockatoo	*Calyptorhynchus funereus*	Ebird 2020		
Gang-gang Cockatoo	*Callocephalon fimbriatum*	Ebird 2022, VBA 1999	EPBC Endangered	VBA 4 records
Sulphur-crested Cockatoo	*Cacatua galerita*	TREC fauna survey		Call
Little Corella	*Cacatua sanguinea*	Ebird 2023		
Long-billed Corella	*Cacatua tenuirostris*	VBA 2021		
Galah	*Eolophus roseicapilla*	TREC fauna survey		
Australian King-Parrot	*Alisterus scapularis*	Ebird 2023		
Crimson Rosella	*Platycercus elegans*	TREC fauna survey		
Eastern Rosella	*Platycercus eximius*	Ebird 2023, VBA 2013		
Red-rumped Parrot	*Psephotus haematonotus*	Ebird 2021, VBA 2013		
Turquoise Parrot	*Neophema pulchella*	VBA 2018	FFG Vulnerable, member VTWBC	

Common name	Scientific name	Data source	Status	Supporting notes
Tawny Frogmouth	*Podargus strigoides*	TREC spotlighting		call
Australian Owlet-nightjar	*Aegotheles cristatus*	Ebird 2021, VBA 2013		
Oriental Dollarbird	*Eurystomus orientalis*	Ebird 2021, VBA 1978		
Laughing Kookaburra	*Dacelo novaeguineae*	TREC fauna survey		
Sacred Kingfisher	*Todirhamphus sanctus*	Ebird 2022, VBA 1999		
Rainbow Bee-eater	*Merops ornatus*	Ebird 2021, VBA 1999		
White-throated Needletail	*Hirundapus caudicutus*	VBA 2019	FFG Vulnerable	2 records. International migrant
Pallid Cuckoo	*Heteroscenes pallidus*	Ebird 2020, VBA 2013		
Fan-tailed Cuckoo	*Cacomantis flabelliformis*	Ebird 2022, VBA 1978		
Brush Cuckoo	*Cacomantis variolosus*	Ebird 2017		
Black-eared Cuckoo	*Chalcites osculans*	Ebird 2019		
Horsfield's Bronze-cuckoo	*Chalcites basilis*	Ebird 2022, VBA 2000		
Shining Bronze-cuckoo	*Chalcites lucidus*	Ebird 2022, VBA 1978		
Welcome Swallow	*Hirundo neoxena*	Ebird 2021, VBA 1999		
Tree Martin	*Petrochelidon nigricans*	TREC fauna survey		Abundant
Fairy Martin	*Petrochelidon ariel*	Ebird 2022		
Grey Fantail	*Rhipidura albiscapa*	TREC fauna survey		Abundant
Rufous Fantail	*Rhipidura rufifrons*	Ebird 2009		
Willie Wagtail	*Rhipidura leucophrys*	VBA 2021		
Leaden Flycatcher	*Myiagra rubecula*	Ebird 2023, VBA 1999		3 records
Jacky Winter	*Microeca fascinans*	Ebird 2018, VBA 2001	Member VTWBC	8 records
Scarlet Robin	*Petroica boodang*	VBA 2021		6 records
Red-capped Robin	*Petroica goodenovii*	Ebird 2022, VBA 2013	Member VTWBC	4 records

Common name	Scientific name	Data source	Status	Supporting notes
Flame Robin	*Petroica phoenicea*	Ebird 2022		
Eastern Yellow Robin	*Eopsaltria australis*	VBA 2021		
Golden Whistler	*Pachycephala pectoralis*	VBA 2021		5 records
Rufous Whistler	*Pachycephala rufiventris*	TREC fauna survey		Abundant
Grey Shrike-thrush	*Colluricincla harmonica*	VBA 2021		
Magpie-lark	*Grallina cyanoleuca*	Ebird 2023, VBA 2013		
Eastern Shrike-tit	*Falcunculus frontatus*	Ebird 2023, VBA 2001		9 records
Crested Bellbird	*Oreoica gutturalis*	Ebird 2021		
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*	Ebird 2023, VBA 2013		
White-bellied cuckoo-shrike	*Coracina papuensis*	Ebird 2017		
White-winged Triller	*Lalage suerii*	Ebird 2019, VBA 2013		
White-throated Gerygone	*Gerygone olivacea*	Ebird 2021, VBA 1998		
Western Gerygone	*Gerygone fusca*	VBA 2001	Member VTWBC	VBA 3 records
Weebill	*Smicrornis brevirostris*	VBA 2021		
Striated Thornbill	*Acanthiza lineata*	TREC fauna survey		
Yellow Thornbill	*Acanthiza nana*	VBA 2021		
Brown Thornbill	*Acanthiza pusilla*	VBA 2021		
Buff-rumped Thornbill	*Acanthiza reguloides*	VBA 2021		
Yellow-rumped Thornbill	*Acanthiza chrysorrhoa*	TREC fauna survey		
White-browed Scrubwren	*Sericornis frontalis*	TREC fauna survey/ camera trapping		
Speckled Warbler	*Pyrrholaemus sagittatus*	VBA 2021	FFG Endangered; Member VTWBC	24 records
Rufous Songlark	*Cinclorhamphus mathewsi*	Ebird 2020		

Common name	Scientific name	Data source	Status	Supporting notes
Superb Fairy-wren	*Malurus cyaneus*	TREC fauna survey/ camera trapping		
White-browed Woodswallow	*Artamus superciliosus*	Ebird 2018		
Dusky woodswallow	*Artamus cyanopterus*	Ebird 2022, VBA 2013		
Varied Sittella	*Daphaenositta chrysoptera*	Ebird 2023, VBA 2001		
Brown Treecreeper	*Climacturus picumnus*	VBA 2019	EPBC vulnerable; member VTWBC	4 records
White-throated Treecreeper	*Cormobates leucophaea*	VBA 2021		
Mistletoebird	*Dicaeum hirundinaceum*	Ebird 2022, VBA 2001		VBA 11 records
Spotted Pardalote	*Pardalotus punctatus*	VBA 2021		
Silvereye	*Zosterops lateralis*	Ebird 2023, VBA 1999		
White-naped Honeyeater	*Melithreptus lunatus*	VBA 2021		
Brown-headed Honeyeater	*Melithreptus brevirostris*	Ebird 2023, VBA 2013	Member VTWBC	
Scarlet Honeyeater	*Myzomela sanguinolenta*	Ebird 2021		
Black Honeyeater	*Sugomel niger*	Ebird 2014		Southern edge of range
Eastern Spinebill	*Acanthorhynchus tenuirostris*	Ebird 2023, VBA 2013		
Painted Honeyeater	*Grantiella picta*	VBA 2021	IUCN Vulnerable, FFG Vulnerable, EPBC Vulnerable, member VTWBC	
Fuscous Honeyeater	*Ptilotula fusca*	Ebird 2021	Member VTWBC	
Yellow-faced Honeyeater	*Lichenostomus chrysops*	VBA 2021		
White-eared Honeyeater	*Nesoptilotis leucotis*	VBA 2021		
White-plumed Honeyeater	*Ptilotula pencillata*	VBA 2021		

Common name	Scientific name	Data source	Status	Supporting notes
New Holland Honeyeater	*Phyllidonyris novaehollandiae*	Ebird 2020, VBA 1999		
Noisy Miner	*Manorina melanocephala*	Ebird 2022 VBA 1999		
Red Wattlebird	*Anthochaera carunculata*	TREC fauna survey		Abundant
Blue-faced Honeyeater	*Entomyzon cyanotis*	VBA 2021		
Noisy Friarbird	*Philemon corniculatus*	VBA 2021		
Little Friarbird	*Philemon citreogularis*	Ebird 2022, VBA 2013		
Diamond Firetail	*Staganopleura guttata*	ALA 2015, VBA 2000	IUCN Vulnerable, FFG Vulnerable, EPBC Vulnerable; Member VTWBC	ALA 2 records, VBA 10 records
Red-browed Finch	*Neochmia temporalis*	Ebird 2023, VBA 2013		
Olive-backed Oriole	*Oriolus saggitatus*	Ebird 2022, VBA 2000		
White-winged Chough	*Corcorax melanorhamphos*	TREC fauna survey/camera trapping		Abundant
Pied Currawong	*Strepera graculina*	TREC, sundry survey methods		Abundant
Grey Currawong	*Strepera versicolor*	TREC fauna survey		
Grey Butcherbird	*Craticus torquatus*	Ebird 2023		
Australian Magpie	*Gymnorhina tibicen*	TREC, sundry survey methods		Abundant
Restless Flycatcher	*Myiagra inquieta*	Ebird 2023, VBA 2001		9 records
Australian Raven	*Corvus coronoides*	TREC, sundry survey methods		Abundant

Common name	Scientific name	Data source	Status	Supporting notes
Little Raven	*Corvus mellori*			
Rock Dove	*Columba livia*	Ebird 2011, VBA 1978	Introduced	
Striated Pardalote	*Pardalotus striatus*	VBA 2021		
Common Blackbird	*Turdus merula*	TREC fauna survey	Introduced	
European Goldfinch	*Chloris chloris*	VBA 2019	Introduced	
Common Myna	*Sturnus tristis*	Ebird 2021, VBA 1999	Introduced	

**Excludes observations that were unable to be confidently identified.*

Appendix 3. Mammal species - Seymour Bushland Park[1]

Common name	Scientific name	Data source	Status	Comments
Short-beaked Echidna	*Tachyglossus aculeatus*	VBA 2013		
Brush-tailed Phascogale	*Phascogale tapoatafa*	VBA 2013	IUCN near-threatened, FFG Vulnerable	3 records
Common Wombat	*Vombatus ursinus*	iNat 2020		Single record, scat, and burrow only
Koala	*Phascolarctos cinereus*	VBA 2021	IUCN Vulnerable	7 records
Common Brushtail Possum	*Trichosurus vulpecula*	TREC Spotlighting		2 individuals
Common Ringtail Possum	*Psuedocheirus peregrinus convolutor*	TREC Spotlighting & camera trapping		8 individuals, abundant
Eastern Ringtail possum	*Psuedocheirus peregrinus*	VBA 2013		
Krefft' s Glider	*Petaurus notatus*	VBA 2013		2 records
Squirrel Glider	*Petaurus norfolcensis*	VBA 2009	FFG Vulnerable	2 records
Sugar Glider	*Petaurus breviceps*	VBA 2013		

[1] **Excludes observations that were unable to be confidently identified*

Common name	Scientific name	Data source	Status	Comments
Eastern Grey Kangaroo	*Macropus giganteus*	TREC sundry methods		Abundant
Black Wallaby	*Wallabia bicolor*	TREC sundry methods		Abundant
White-striped Free-tailed Bat	*Austronomus australis*	VBA 2013		2 records
Chocolate-wattled Bat	*Chalinolobus morio*	VBA 1978		Cryptic species
Lesser Long-eared Bat	*Nyctophilus geoffroyi*	VBA 2013		2 records
Gould' s Long-eared Bat	*Nyctophilus gouldii*	VBA 1978		Cryptic species
Southern Forest Bat	*Vespadelus regulus*	VBA 2013		2 records
Little Forest Bat	*Vespadelus volturnus*	VBA 2013		2 records
Microbats (not identified, although not A. australis)		TREC spotlighting		Abundant
Black Rat	*Rattus rattus*	VBA 2013	Introduced	
Red Fox	*Vulpes*	TREC camera trapping	Introduced	11 records
Brown Hare	*Lepus europaeus*	VBA 2013	Introduced	
European Rabbit	*Orictolagus cuniculus*	TREC sundry methods	Introduced	Abundant

Appendix 4. Reptiles and Amphibians - Seymour Bushland Park

Common name	Scientific name	Data source	Status
Common Eastern Froglet	*Crinia signifera*	CoM and Abzeco 2021	Least Concern
Eastern Sign-bearing Froglet	*Crinia parinsignifera*	CoM and VBA 2020	Least Concern
Eastern Banjo Frog/Pobblebonkl	*Limnodynastes dumerilii*	CoM and VBA 2020	Least Concern
Spotted Marsh Frog	*Limnodynastes tasmaniensis*	CoM and VBA 2020	Least Concern
Bibrons Toadlet	*Pseudophryne bibronii*	CoM and Abzeco 2021	FFG – Threatened

Appendix 5. Bibron's Toadlet Detailed information and Recommendations.

The Park retains a breeding population of the IUCN (near threatened) and FFG listed (endangered) Bibron's Toadlet.

Bibron's Toadlet occupies a diverse array of habitats including dry forest, shrubland, grassland and woodland, but particularly favours floodplains adjacent to elevated areas (Hero et al 1991; Howard et al 2010) and breeds during the autumn in sites where rain and localised flooding can wash eggs and tadpoles from covered burrows in terrestrial habitat into ephemeral water bodies such as large puddles, creek lines, wet depressions, water-filled ditches and ponds (Woodruff 1976). The breeding season is triggered by heavy rains in late summer or early autumn (Terry 2017). During this time, males call from concealed holes in the ground and low vegetation close to ephemeral water bodies (White 1993).

Notably Bibron's Toadlet can occupy modified pasture with exotic vegetation, provided suitable hydrology is retained (McDonnell et al 1978; Howard et al 2010; Terry 2017), so it is important not to discount the role that invasive grasses play as habitat for this species at the site (De Angelis 2021). Indeed, past surveys at Seymour Bushland Park have detected Bibron's Toadlet calling from Toowoomba Canary Grass patches within core habitat zones (De Angelis 2021).

It is critical that favourable hydrology is retained in order to accommodate the highly specific breeding conditions required by Bibron's Toadlet. This is particularly true within a destabilised climate cycle (Howard et al 2010; Terry 2017). Non-breeding zones of occupation require diverse and intact vegetative cover on the forest floor, including grass tussocks, creeping forbs, logs, rocks, leaf-litter, bark, and mossy areas (various sources cited in De Angelis 2021).

Targeted weed control and revegetation may present a direct risk to the survival of Bibron's Toadlet and as such should be undertaken in a staged approach and restricted to times outside the breeding season. This is especially critical along the upper reaches of the occupied drainage line, but also pertains to any future restoration of the disturbed flood plain to the east of the dam.

Any targeted maintenance works within designated Bibron's Toadlet habitat should follow standard recommended anti-chytrid fungus protocols (refer to Murray et al 2011).

Maintenance track

A maintenance track runs between the two identified breeding habitats (dam banks and south west drainage line section), may present a dispersal barrier to Bibrons Toadlets and should accordingly be maintained in a short, vegetated state via slashing (De Angelis 2021) during the months of June to early February and maintenance as a dry weather only track, unless a raised platform is installed for vehicles, whilst allowing frogs to cross beneath Track maintenance, weed control and revegetation required for this section of the Park should be undertaken from November to January and should follow the recommended protocols previously outlined by DeAngelis (2021), being mindful of the fire season.

Water security

Under sustained El Nino drought conditions spanning two years or more, the Bibron's Toadlet population may begin to incur recruitment failure, leading to population level risk. While it is assumed that toadlets will vary in activity between breeding seasons, a season of particularly low activity, followed by projected drought conditions over the following April-May should trigger intervention via addition of water to the top of the drainage line. This should be attempted in late February, using an appropriately sterile water tank, which can be used to discharge 100 L of water into the drainage line. By moistening the soil in this way, management may assist Bibrons Toadlet to activate over the next few weeks, and to improve the permeability of the drainage line to any available rain. However, it is critical that the drainage line is not inundated during such manipulation attempts, and that long lasting puddles are not created, or the breeding season may be upset, and key potential nest sites may be ignored or abandoned. Similarly, adding water to the drainage line in March will risk interfering with male toadlets establishing territories, and should not be attempted. After initial water addition, it may be beneficial to add more water on additional occasions, provided the above conditions are met.

The creek line may not support ideal hydrology for Bibron's Toadlet, which will need to be ascertained by observing its water levels throughout the year. Sections that hold continuous water are likely to be unsuitable for Bibron's Toadlet and thus dominated by more common competitor species of native frog (De Angelis 2021).

Conversely, if the habitat is too dry and no longer forms ephemeral puddles during the winter, small shallow ponds may be created along its length. However, it must be noted that these hollows dry up in summer. If undertaken, ponds should be roughly 1.5 m wide and 80 cm deep, lined with local clay and planted with appropriate surrounding aquatic vegetation (Table 4). Artificial ponds of this nature should hold water for at least 5 months from March-October and can be manually filled if conditions are dry to produce a stable shallow puddle about 30 cm in depth.

Biosecurity

The Bibron's Toadlet breeding habitat along the dam bank, and its associated riparian flora is repeatedly disturbed by off-track dog walkers and recreational fishers, which increases the risk of chytrid fungus to toadlets. Fencing off a strip of this habitat will provide better protection to this vegetative community. It is critical that any fencing installed includes a gap at ground level to allow toadlets to crawl underneath while dispersing between patches. Recreational fishing in general is deleterious to the biodiversity of the park and should be discouraged through installation of signage at key locations.

Recommended management actions

- Retain and increase coarse woody debris (>10cm in diameter), after tree thinning, by placing it on bare areas within (and adjacent to) Bibrons habitat, aiming for a density of 15-20 m per 20 m quadrat. Such works should be confined to the summer to minimise impacts.
- Revegetate areas of Bibrons Toadlet habitat. It is critical that care is made to keep tubestock sterile and chytrid free during production.
- Complete canopy restoration to ensure an open structure woodland within 250m of all core breeding habitat.
- Remove saplings and young shrubs from around the drainage line and western bank of the dam

Explore opportunities to change local hydrology to improve the Bibron's toadlet habitat e.g. maintain moist surface soils along drainage line by March each year to encourage toadlet breeding by artificial watering in drought conditions.

- Regularly monitor areas known to support Bibron's Toadlet and Survey other areas of potential Bibron's Toadlet habitat
- Protect the clay substrate from disturbances and foot traffic
    - Enforce that the maintenance track through the Bibron's Toadlet habitat area as a Dry Weather only track.
- Support further research into the species using the Park and methods for their protection.

Future restoration may seek to extend and improve other sections of the Park as Bibron's Toadlet habitat. Two key areas for consideration are the disturbed eastern floodplain adjacent to the dam, and the ephemeral creek line running north-south through the centre-west of the site.

Appendix 6. Invertebrates - Seymour Bushland Park

Taxonomic Description	Scientific name	Data Source	Supporting notes
Hymenoptera			
Ants Formicidae			
Southern Michelin Ant	*Amblyopone australia*	iNat 2023	
Leptomyrmecine Ant	*Froggattella kirbii*	iNat 2023	
Southern Meat Ant	*Iridomyrmex purpureus*	iNat 2023	
Army Ant	*Lioponera sp.*	iNat 2023, not research grade	Very seldom recorded genus.
Green-head Ant	*Rhytidoponera metallica*	iNat 2023	
Banded Sugar Ant	*Camponotus consobrinus*	iNat 2023	
Black-headed Sugar Ant	*Camponotus nigriceps*	iNat 2023	
Gold-tailed Sugar Ant	*Camponotus suffusus suffusus*	iNat 2023	Southwestern edge of distribution
Golden-tailed Spiny Ant	*Polyrhachis ammon*	iNat 2023	
Spiny Ant	*Polyrhachis hookeri*	iNat 2023	Cryptic and seldom observed species that is rare in Victoria.
Spiny Ant	*Polyrhachis phrye*	iNat 2023	
Spotted Muscleman Tree Ant	*Podomyrma adelaidea*	iNat 2023	
Gulosa-group Bull Ant spp Complex	*Myrmecia gulosa*	TREC fauna survey	
Golden-headed Bull Ant	*Myrmecia piliventris*	iNat 2023	
Small Jumping Ant	*Myrmecia picta*	iNat 2023	Rarely recorded in Victoria
Wasps - Apocrita			
Ichneumonid Wasp	*Anomalon sp.*	TREC fauna survey	
Lacewings and Allies - Neuroptera			
Beaded Lacewing	*Quasispermophorella neuropunctata*	iNat 2023	Extremely cryptic and rarely recorded, western edge of established Victorian population in central Victoria.
Typical Green Lacewing	*Mallada signatus*	iNat 2023	
Antlion	*Glenoleon meteoricus*	iNat 2023	Central Victorian distribution
Antlion	*Periclystus circuiter*	iNat 2023	Northern edge of range
Antlion	*Bandidus canifrons*	iNat 2023	
Caddisflies - Trichoptera			
Caddisfly	*Lingora coomata*	iNat 2023	Rarely seen species
Odonata – Dragonflies and Damselflies			
Tau Emerald	*Hemicordulia tau*	TREC sundry methods	
Wandering Percher	*Diplacodes bipunctata*	iNat 2023	
Blue Skimmer	*Orthetrum caledonicum*	TREC sundry methods	
Slender Ringtail	*Austrolestes analis*	TREC fauna survey	
Wandering Ringtail	*Austrolestes leda*	iNat 2023	
Butterflies and Moths – Lepidoptera			
Butterflies – Hedyloidea			
Yellow Admiral	*Vanessa itea*	iNat 2023, private record	
Klug' s Xenica	*Geitoneura klugii*	iNat 2023	North-western edge of distribution
Common Brown Butterfly	*Heteronympha merope*	TREC fauna survey	Abundant
Red-spotted Jezebelle	*Delias aganippe*	iNat 2023	
Moths (paraphyletic clade)			
Variable Anthelid	*Anthela varia*	TREC fauna survey	
Fruitworm Moth	*Sosineura mimica*	iNat 2023	
Leopard Moth	*Sympycnodes epicycle*	iNat 2023	
Comet Moth	*Labdia argophracta*	iNat 2023	
Comet moth	*Macrobathra chrysotoxa*	iNat 2023	
Comet Moth	*Macrobathra leucopeda*	iNat 2023	
Flat-bodied Moth	*Eupselia melanostrepta*	iNat 2023	
Flat-bodied Moth	*Eupselia beatella*	iNat 2023	
Concealer Moth	*Eulechria heliophanes*	iNat 2023, not research grade	A seldom recorded species.
Concealer Moth	*Notodryas sp.*	iNat 2023, not research grade	Undescribed species

Taxonomic Description	Scientific name	Data Source	Supporting notes
Concealer Moth	*Compsotropha strophiella*	iNat 2023	
Concealer Moth	*Garrha pudica*	iNat 2023	
Concealer Moth	*Heteroteucha translatella*	iNat 2023	
Concealer Moth	*Olbonoma triptycha*	iNat 2023	
Concealer Moth	*Philobota latifissella*	TREC fauna survey	
Concealer Moth	*Syringoseca rhodoxantha*	iNat 2023	
Red-spotted Delicate	*Epicyme rubropunctaria*	iNat 2023	
Subidaria Moth	*Epyaxa subidaria*	iNat 2023	
Dark-patch Carpet	*Xanthorhoe anaspila*	iNat 2023	
Golden Grass Carpet	*Anachloris subochraria*	iNat 2023	
Pomaderris Moth	*Casbia melanops*	iNat 2023	
Dashed Geometrid	*Dissomorphia australiaria*	iNat 2023	
Geometer Moth	*Dichromodes sp.*	iNat 2023, not research grade	Undescribed species of interest to Museums Victoria.
Red-lined Looper	*Crypsiphona ocultaria*	iNat 2023	
Diffundens Grey	*Hypobapta diffundens*	iNat 2023	
Apple Looper	*Phrissogonus laticostata*	iNat 2023	
Carpet Moth	*Eucymatoge scotodoes*	iNat 2023	
Broken Leaf Moth	*Circopetes obtusata*	iNat 2023	
Flecked Wave Moth	*Idaea philocosma*	iNat 2023	
Dolly Wave	*Idaea pseliota*	iNat 2023	
Clouded Wave	*Idaea nephelota*	iNat 2023	
White-edged Wave	*Idaea costaria*	iNat 2023	
Purple Wave	*Idaea inversata*	iNat 2023	
Common Gum Emerald	*Prasinocyma semicrocea*	iNat 2023	
Concealer Moth	*Oenochroa dinosema*	iNat 2023	Very seldom recorded species
Plantain Moth	*Scopula rubraria*	iNat 2023	
	Scopula spelaea	iNat 2023	
Labyrinthine Ghost Moth	*Abantiades labyrinthicus*	iNat 2023	Northern edge of distribution
Wattle Snout Moth	*Pararguda nasuta*	iNat 2023	
Blood-spotted Noctuid	*Proteuxoa sanguinipuncta*	iNat 2023	
Common Cutworm	*Hypoperigea tonsa*	iNat 2023	
Heliotrope Moth	*Utetheisa pulchelloides*	iNat 2023	
Clouded Footman	*Anestia ombrophanes*	iNat 2023	
Doubleday's Footman	*Castulo doubledayi*	iNat 2023	Northern edge of distribution
Lichen Moth	*Phaeophlebosia furcifera*	iNat 2023	
Tussock Moth	*Iropoca rotundata*	iNat 2023	North-western edge of distribution
Noctuid Moth	*Pantydia sparsa*	iNat 2023	
Brown Cutworm	*Agrotis munda*	iNat 2023	
Dowdy Plume Moth	*Stenoptilia zophodactylus*	iNat 2023	
Hayworm	*Hypsopygia albidalis*	iNat 2023	
Moss-eating Crambid Snout Moths	*Eudonia cleodoralis*	iNat 2023	
Kurrajong Bag Moth	*Dichocrocis clytusalis*	iNat 2023	
Pyralid Snout Moth	*Salma cholica*	iNat 2023	
Wattle Gall Moth	*Gauna aegusalis*	iNat 2023	
Moth	*Edosa fraudulens*	iNat 2023	
Wool Moth	*Monopis icterogastra*	iNat 2023	
Painted Cup Moth	*Doratifera pinguis*	iNat 2023	
Slug Caterpillar Moth	*Pseudanapaea denotata*	iNat 2023	
Flies - Diptera			
Stiletto Fly	*Taenogerella elizabethae*	iNat 2023	
Culicine Mosquitoe	*Aedes alboannulatus*	iNat 2023	
Metallic Green Tomato Fly	*Lamprolonchaea brouniana*	iNat 2023	
Australian Fruit Fly	*Austrotephritis poenia*	iNat 2023	
True Bugs - Hemiptera			

Taxonomic Description	Scientific name	Data Source	Supporting notes
Creaking Branch Cicada	*Auscala spinosa*	TREC fauna survey	A species on the southern edge of its range that is seldom recorded in Victoria
Redeye Cicada	*Psaltoda moerens*	TREC fauna survey	Abundant
Dirt-colored Seed Bug	*Remaudiereana inornata*	iNat 2023	
Thread Bug	*Empicoris rubromaculatus*	iNat 2023	
Orthoptera – Grasshoppers and Crickets			
Giant Green Slantface	*Acrida conica*	iNat 2023	
Common Gumleaf Grasshopper	*Goniaea australasiae*	iNat 2023	
Wingless Grasshopper	*Phaulacridium vittatum*	iNat 2023, private record	
Silent leaf-Runner Cricket	*Metioche vittaticollis*	iNat 2023, not research grade	Seldom recorded cricket
Leaf Katydid	*Protina guttulata*	iNat 2023	Nationally uncommon katydid previously unrecorded in Victoria on iNatuarlist.
Coleoptera - Beetles			
Rove Beetle	*Paederus cruenticollis*	iNat 2023	
Wattle longhorn	*Bethelium signiferum*	iNat 2023	Northern edge of range
Leaf Beetle	*Calomela satelles*	iNat 2023	
Leaf Beetle	*Calomela ioptera*	iNat 2023	
Leaf Beetle	*Polyoptilus sp.*	iNat 2023, not research grade	A member of an obscure genus of Leaf Beetle, seldom recorded nationally.
Botany Bay Diamond Weevil	*Chrysolopus spectabilis*	iNat 2023	
Weevil	*Oxyops fasciatus*	iNat 2023	
Fiddler Beetle	*Eupoecila australasiae*	iNat 2023, private record	
Christmas Beetle	*Anoplognathus pallidicollis*	iNat 2023	
Duck-billed Beetle	*Anoplognathus montanus*		
Mantodea - mantises			
Mallee Grass Mantis	*Archimantis sobrina*	TREC fauna survey	Ootheca only
Australian Garden Mantis	*Orthodera ministralis*	iNat 2023	
Purple-winged Mantis	*Tenodera australasiae*	TREC fauna survey	
Dermaptera – Earwigs			
Black Bush Earwig	*Nala lividipes*	iNat 2023	
Spiders			
Australasian Garden Orb-Weaver	*Hortophora biapicata*	TREC fauna survey	Abundant
Enamelled Spider	*Plebs bradleyii*	iNat 2023	
Tailed Forest Spider	*Argiope protensa*	iNat 2023	
Christmas Spider	*Austracantha minax*	TREC fauna survey	Abundant
Australian Golden Orb Weaver	*Trichonephila edulis*	TREC fauna survey	Abundant
Redback Spider	*Latrodectus hasselti*	iNat 2023	
Garden Wolf Spider	*Tasmanicosa godeffroyi*	TREC fauna survey	
Garden Jumping Spider	*Opisthoncus sexmaculatus*	iNat 2023, private record	
Country Crab Spider	*Tharpyna campestrata*	iNat 2023	
Black House Spider	*Badumna insignis*	TREC fauna survey	

Appendix 7 Rare and Threatened species – Seymour Bushland Park

Common name	Scientific name	Status *[2]
Flora		
Late-flower Flax-lily	*Dianella tarda*	FFG: Critically Endangered
Birds		
Painted Button-quail	*Turnix varius*	Listed VTWBC
Little Eagle	*Hieraaetus morphnoides*	FFG Vulnerable
Square-tailed Kite	*Lophoictinia isura*	FFG Vulnerable
Barking Owl	*Ninox connivens*	FFG Critically Endangered; member VTWBC
Gang-gang Cockatoo	*Callocephalon fimbriatum*	EPBC Endangered
Turquoise Parrot	*Neophema pulchella*	FFG Vulnerable, member VTWBC
White-throated Needletail	*Hirundapus caudicutus*	FFG Vulnerable
Red-capped Robin	*Petroica goodenovii*	Member VTWBC
Western Gerygone	*Gerygone fusca*	Member VTWBC
Speckled Warbler	*Pyrrholaemus sagittatus*	FFG Endangered; Member VTWBC
Brown Treecreeper	*Climacturus picumnus*	EPBC vulnerable; member VTWBC
Brown-headed Honeyeater	*Melithreptus brevirostris*	Member VTWBC
Painted Honeyeater	*Grantiella picta*	IUCN Vulnerable, FFG Vulnerable, EPBC Vulnerable, member VTWBC
Fuscous Honeyeater	*Ptilotula fusca*	Member VTWBC
Diamond Firetail	*Staganopleura guttata*	IUCN Vulnerable, FFG Vulnerable, EPBC Vulnerable; Member VTWBC
Mammals		
Brush-tailed Phascogale	*Phascogale tapoatafa*	IUCN near-threatened, FFG Vulnerable
Koala	*Phascolarctos cinereus*	IUCN Vulnerable
Squirrel Glider	*Petaurus norfolcensis*	FFG Vulnerable
Frogs		
Bibron's Toadlet	*Pseudophryne bibronii*	Threatened FFG

[2] VTWBC = Victorian Temperate Woodland Bird Community (Threatened Community under the FFG Act)

FFG = Flora and Fauna Guarantee Act 1994

EPBC =Environmental Protection and Biodiversity Conservation Act 1988

IUCN = International Union for Conservation of Nature

Appendix 8. Detailed Notable Species Management

This table summarises how specific actions included in the action table benefit notable species in the park.

Management	Target Species	Threat	Desired Outcome
Tree thinning: Complete *Eucalyptus* thinning throughout Park, removing dense clusters of saplings, and leaving cut logs >10 cm wide on the ground. Retain the largest and oldest trees, aiming for a density of one tree per 10 m. Fell all non-indigenous trees in the Park unless deemed to provide tree hollows (see below).	Speckled Warbler Painted Buttonquail Barking Owl Square-tailed Kite Brush-tailed Phascogale Squirrel Glider Koala Bibron' s Toadlet	Loss of woodland habitat structure. Various habitat modification processes have encouraged rapid regeneration of eucalypts without typical landscape scale processes to regulate this. The resulting structure dries surface soils, leading to a depauperate floral understorey and will not form the large, hollow-bearing trees required by a range of threatened flora. Existing hollow-bearing trees are stressed and threatened by over-crowding by saplings.	An open canopied woodland, with a rich and intact floral understorey with shrubby vegetation, and abundant coarse woody debris. The woodland is dominated by large old trees with tree hollows and structured suitably to favour producing this growth in new recruitment moving forward. The understorey and shrub layer support a rich invertebrate community providing food for threatened insectivores.
Retention of tree hollows: See above. Existing hollow-bearing stags should be retained, including on the edges of the woodland. If large non-indigenous trees are intended for removal, consider killing them by drill and fill and leaving them in place as stags. Existing hollows can be supplemented by nest box installation and attaching hollow bearing logs to trees. Explore opportunities to protect large old trees outside of the site as well, and to install nest boxes in the surrounding landscape.	Barking Owl Brush-tailed Phascogale Squirrel Glider Blue-winged Parrot White-throated Needletail Brown Treecreeper	Loss of woodland habitat structure. See above. Hollow-bearing trees are threatened at the landscape scale which is compounded by habitat fragmentation and loss of connectivity.	The site provides abundant tree hollows (or artificial substitutes) of various sizes, including large hollows with entrances >30 cm in diameter.
Protection/provision of food plants. Site maintenance should retain the presence of appropriate flora to support the feeding requirements of threatened fauna. When appropriate within restoration objectives consider inclusion of these species. Similarly, seek opportunities to protect these food plants (inc. Mistletoes) in adjacent habitats outside of the Park.	Koala: Grey Box, Red Box Painted Honeyeater: Box Mistletoe	Loss of food plants: an over-simplified woodland community lacking the presence of eucalypts favoured by Koalas will be unable to support this species. Migratory Painted Honeyeaters similarly require Box Mistletoes to occupy the Park.	The woodland includes the presence of multiple large, mature Grey Box and Red Box (~ 0 to 40 per ha) and retains Box Mistletoe as a habitat feature.
Retention of shrub layer: See tree-thinning. Tree maintenance, woody weed removal and plantings should seek to retain patches of sub-canopy shrub species, which may require supplementation in some areas through targeted planting (e.g., *Acacia*, *Bursaria*, *Grevillea*, *Xanthorrhoea*). Endeavour to retain/include plants that will provide nectar at all times of the year.	Diamond Firetail Fuscous Honeyeater Brown-headed Honeyeater Western Gerygone Red-capped Robin Jacky Winter Blue-winged Parrot	Reduced subcanopy structure: Loss of the native shrub layer exposes small insectivores and honeyeaters to predators, and in some cases can reduce available food for these species. This can arise through rapid competitive regeneration of eucalypts, woody weed invasion or population loss resulting from historic land usage.	The woodland includes a range of high-quality habitat types including patches of native shrubs. This shrub layer should not dominate and restrict the presence of a prevalent floristically rich understorey or the retention and replacement of large old trees. Shrub patches provide covering habitat for small passerines, feed and promote abundant insect prey species and provide nectar as a stable food source throughout the year.
Restoration of understory: See tree thinning and Retention of shrub layer. Restore a floristically rich understorey including native grasses, sedges, forbs, and wildflowers through planting and/or direct seeding. Seek to retain/create discrete patches of higher biomass (e.g., *Poa*, *Pimelea*, *Lomandra*). Retain and supplement coarse woody debris.	Speckled Warbler Diamond Firetail Painted Buttonquail Red-capped Robin Jacky Winter Blue-winged Parrot Bibron' s Toadlet	Degraded understorey: A sparse and degraded understorey removes a key foraging habitat for threatened species and exposes them to predators. This arises primarily through rapid eucalypt regeneration following disturbance but may be exacerbated by other processes including rabbit and macropod grazing.	Tree thinning and planting results in a floristically rich understorey with varied habitat structure including grassy clearings with inter-tussock spaces, dense patches of low growing shrubs and tussocks, wildflowers, and coarse woody debris. These microhabitats support a rich faunal community, supporting the presence of threatened species.
Fox control: Consider timed fox control to support other fauna objectives. Removing resident foxes at different times of year will assist the breeding seasons of various species.	Brush-tailed Phascogale Squirrel Glider Bibron' s Toadlet Painted Buttonquail Speckled Warbler	Invasive species predation: Foxes, particularly in disturbed/fragmented areas, place high stress on species reliant on the forest floor for nesting/foraging/dispersal, which can lead to recruitment failure and local extinctions. Foxes can also threaten hollow-dwelling marsupials during the winter when they are most vulnerable.	While foxes remain sporadically present within the Park, their impacts are minimised during the breeding periods of sensitive species. Complete eradication is untenable within the Park without installing a predator proof fence. In the interim, the impacts of a low-density fox population will be offset by a localised reduction in rabbit and hare numbers.

Appendix 8 Legislative Framework

A list of legislation, policies, strategies relevant to the management of the Reserve is provided below.

Trust for Nature Conservation Covenant

In 2006 Council placed a conservation covenant on the title for the Park.

A conservation covenant is a voluntary legal agreement made between a private landholder and Trust for Nature to permanently protect and conserve private land with natural, cultural, or scientific values. Conservation covenants are entered into under the Victorian Conservation Trust Act 1972 and registered on title, making them legally binding in perpetuity.

This was the first municipal conservation covenant registered in the Goulburn Broken Catchment. The conservation covenant is an agreement between Trust for Nature and the Mitchell Shire Council to protect and enhance the natural, cultural, and scientific values of the land in perpetuity.

There are two restrictions under the covenant, which are:

- *Dogs are to be kept under control at all times.*
- *The owner may remove live trees for the purpose of ecological thinning provided that good habitat for native fauna (hollow trees) is not removed.*

Federal

- Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
- *Australia's Strategy for Nature (2019-2030)*

State

- Flora and Fauna Guarantee Act 1988 (FFG Act)
- *Land Act 1958*
- *Crown Land (Reserves) Act 1978*
- *Country Fire Authority Act 1958*
- *Catchment and Land Management Act 1994 (CaLP Act)*
- *Wildlife Act 1975*
- *Planning and Environment Act 1987 (P and E Act)*
- *Aboriginal Heritage Act 2006*
- *Heritage Act 1995*
- *Domestic Animals Act 1994*
    - Due to the high conservation values of this site, Council has a limited order in place under Section 26 of the *Domestic Animals Act 1994* that requires dogs to be leashed at all times while in the Park.

Regional

- Goulburn Broken Regional Catchment Strategy (2021-2027)

Local

- Mitchell Shire Council Community Engagement Policy (2020)
- Seymour Structure Plan (2018)
- Mitchell Shire Council Open Space Strategy (2013-2023) (currently under review)
- Mitchell 2050 Community Vision
- Mitchell Shire Council Plan (2021-2025)
- Municipal Emergency Management Plan (2025-2028)
- Municipal Fire Management Plan 2024-2027
- Mitchell Shire Urban Forest Strategy 2023
- Mitchell Shire Climate Emergency Action Plan 2023
- Trust for Nature Conservation Covenant

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Mitchell Shire Planning Scheme

- The Park is zoned Public Conservation Resource Zone (PCRZ) and is covered by a Bushfire Management Overlay, Heritage Overlay and partly by a Vegetation Protection Overlay. The purpose of the zones and overlays must all be taken into consideration in the ongoing management of the Park

Public Conservation Resource Zone (PCRZ)

The purpose of the zone is.

- *"To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To protect and conserve the natural environment and natural processes for their historic, scientific, landscape, habitat, or cultural values.*

- *To provide facilities which assist in public education and interpretation of the natural environment with minimal degradation of the natural environment or natural processes.*
- *To provide for appropriate resource-based uses."*

Bushfire Management Overlay

The purpose of the Bushfire Management Overlay

- *"Ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.*
- *Identify areas where the bushfire hazard warrants bushfire protection measures to be implemented.*
- *Ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level."*

Heritage Overlay (HO297).

The Heritage Overlay (HO297) identifies the Australian Light Horse Memorial Park and surrounds, including Seymour Bushland Park and the neighbouring intersection of the Goulburn Valley Highway, and Telegraph Road.

Vegetation Protection Overlay 1

The Vegetation Protection Overlay aims.

- *To protect areas of significant vegetation.*
- *To ensure that development minimises loss of vegetation.*
- *To preserve existing trees and other vegetation.*
- *To recognise vegetation protection areas as locations of special significance, natural beauty, interest, and importance.*
- *To maintain and enhance habitat and habitat corridors for indigenous fauna.*
- *To encourage the regeneration of native vegetation.*

Schedule 1 to the Vegetation Protection Overlay (VPO1) applies to the Goulburn Valley Highway, road reserve on the southern frontage of the park and areas along the roadside of Telegraph Road that extend into the park itself.

The VPO Schedule 1 applied to the roadside of the Goulburn Valley Highway adjoining Seymour Bushland park and along the Telegraph Road frontage, which extends into park itself.

The objectives of the overlay area are to

- *Protect and preserve indigenous vegetation and rare and endangered flora and fauna species on linear reserves.*
- *Achieve high landscape quality on roadsides.*
- *Maintain and enhance habitat and corridor requirements for indigenous fauna.*