

# Mathison Park Management Plan



Prepared by:

Robin Crocker & Associates EDGe Environmental Design Pty Ltd Andy Jones

February 2002



## Mathison Park Management Plan

#### Prepared by:

- Robin Crocker & Associates: Robin Crocker

  2 9830 2242
- Andy Jones
   9534 3735

-For:

City of Latrobe

© February 2002

#### Acknowledgments

We acknowledge the valuable comments and information provided by members of the steering committee, local groups and individuals and staff from Latrobe City and a range of government agencies. Ken Harris assisted by providing a native plant list for the park.

Photographs: Robin Crocker Cover photo: Lake Hyland

This publication may be of assistance to you but the authors and Latrobe City Council do not guarantee that it is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims liability for any error, loss or other consequences which may arise from you relying on any information in this publication.

Mathison mgt plan feb15.doc

## **Contents**

ð	-	Commission of the Commission o	***************************************
1	Intro	oduction	***************************************
	1.1	The study area	
	1.2		
	1.3	Background and purpose of plan History of the area	
	1.4	Existing conditions, values and uses	
	1.5	Policy and regional context	
	1.6	The planning process	
2	Issu	es and trends	
	2.1	Park and open space trends SWOT analysis and issues	
	2.2	SWOT analysis and issues	9
3	Visio	on, principles and goals	
	3.1	Vision and future directions for Mathison Park	10
	3.2	Planning and management principles	11
	3.3	Key goals	
4	Actio	ons to achieve goals	13
	4.1	Goal 1: Developing the park as a regional attraction for informal recreation	n 13
	4.2	Goal 2: Conserving natural and cultural values	
	4.3	Goal 3: Enhancing community involvement and appreciation	
	4.4	Goal 4: Ensuring effective and sustainable management	
5	lmpl	ementing the plan	28
	5.1	Priority action plan	28
	5.2	Indicative costs	,
6	Refe	rences	32
Λ	nnandic	es	22
~			
	Append		
	Append		
Appendix 3 Appendix 4 Appendix 5			
			40
			41
Appendix 6			
Appendix 7 Appendix 8			
	Append	· · · · · · · · · · · · · · · · · · ·	
	,	IX 9 Allimais at Mathison Fark	47
Fi	gures		
			nd of plan
		indocapo pidir	nd of plan
Τέ	ables		
	1. Pr	iority action program	28



This plan was commissioned by Latrobe City to develop a shared vision, goals and actions for the sound future development and management of Mathison Park in Churchill.

The park caters for a range of informal recreation activities in a pleasant semi-rural setting. Features contributing to the area's popularity and visual appeal include Lake Hyland, bird life, bushland and plantings, walking paths and picnic facilities.

The plan was prepared by consultants working with the park's Advisory Committee, Council staff and the local community. The planning process included detailed analysis and assessment of the site and consultation with interested stakeholders. Issues were reviewed, management goals, actions and priorities developed and management and monitoring requirements determined.

issues identified include the extent of future development as a regional park, visitor facilities, planting policies, weed control, water quality and wetland development.

The key goals identified for the study area are:

- 1. Developing the park as a regional attraction for informal recreation
- 2. Conserving natural and cultural values
- 3. Enhancing community involvement and appreciation
- 4. Ensuring effective and sustainable management

## Major actions include:

- Progressively upgrade and extend pathways, boardwalks and bridges
- Progressively upgrade facilities, information and signs
- Develop events and activity programs for the park
- Arrange for the area of remnant vegetation along Tramway Road to be added to the park and managed actively
- Protect indigenous species and undertake additional wetland plantings with locally indigenous species
- Eradicate willows from the park and control other woody weeds, particularly Blackberry
- Progressively plan and implement planting programs with international, Australian, Victorian and Gippsland themes
- Ensure high quality ongoing maintenance of all plantings
- Plan for a future major visitor node off Tramway Road
- Integrate implementation of the plan into Council's budget process

A detailed action program was developed for future development and management of the area.

# 1 Introduction

Latrobe City identified the need to prepare a management plan for Mathison Park in Churchill to guide future development and management. The plan is to include a review of previous planning studies and be consistent with Council policies and objectives.

This introductory section of the plan defines the study area, outlines the purpose and context of the plan, and summarises the history, values and uses of the area and the planning process.

#### 1.1 The study area

The study area is located on Mackeys Road, Churchill, north-east of the town's main residential area. The park has an area of 38.7 ha and includes the 4.9 ha Lake Hyland, constructed in about 1966 (figure 1). Churchill has a population of about 6000.

The park is owned by Latrobe City and managed by a local Advisory Committee under powers delegated by Council in 2000.

## 12 Background and purpose of plan

Several plans have been prepared for Mathison Park but none has been fully implemented. Latrobe City commissioned this management plan to provide a clear framework to guide future development.

The plan is to foster community involvement, develop a sustainable approach to the landscape, promote biodiversity, provide equitable access, incorporate historical elements and consider funding opportunities.

#### 1-6 and istory of the area conservations

The interesting history of the area is outlined in appendix 2. In summary:

- The area was first occupied by the Gunai Aboriginal community.
- White settlement began from the 1840s.
- Robert Hare built a concrete farmhouse in about 1919 (still partly standing) and established a dairy farm.
- Lake Hyland was constructed in about 1966. Park development commenced in the 1970s and continued through to the present day, including extensive revegetation work.
- Mathison Park was named after Wal Mathison, the Shire Secretary of Morwell Shire during a period of rapid development. The lake was named after Sir Herbert Hyland, a leading figure in the National Party and leader from 1955 to 1964.

#### 1.4 Existing conditions, values and uses

Conditions and values are outlined in this section. Further details are provided in section 4.

#### Conditions and values

The area has moderate conservation values including relatively intact vegetation along parts of Tramway Road and near Mackeys Road and remnant Swamp Gums and understorey species along Eel Hole Creek and in low-lying areas.

Large sections of the park are dominated by introduced pasture species, and weeds, eg Blackberry, are a problem in some areas. Pasture areas are grazed by cattle under a licence agreement.

Substantial areas of the park have been planted with a range of Gippsland species.

Detailed fauna studies have not been undertaken but the area provides important habitat for native birds and some other fauna. Pest animals, including rabbits, foxes and introduced birds, have some impact on indigenous species.

Land use in the catchment area has some adverse impacts with Blue-green Algae occurring on Lake Hyland in some summers and litter evident in Eel Hole Creek.

The area has moderate landscape values with its attractive rural setting and panoramic views across the lake.

Public facilities in the study area include walking and bicycle paths, a parking area, toilet, picnic facilities and a small playground. Some facilities are also provided for model boat use. The facilities are mostly in satisfactory condition although a range of improvements could be made, eg to play equipment, parking and signs.

#### Üses

The major users of the area are:

- Local residents and students.
- Visitors from outside Churchill.

Informal recreation activities include walking, relaxing, cycling, picnicking, fishing, model boating and nature observation.

Churchill has high a proportion of people in 10-14, 15-19 and 20-24 age groups.

## 1.5 Policy and regional context

#### Policy context

A wide range of policies, strategies and reports are relevant to the management of Mathison Park. These are summarised in appendix 3.

Important documents and information include:

Latrobe City Corporate Plan 2000-2003	<ul> <li>Mission includes preservation of environmental assets and promotion of their significance.</li> </ul>
	<ul> <li>Environmental objectives include investigation of development potential of Mathison Park and implementation of Roadside Management Strategy.</li> </ul>
	<ul> <li>Passive open space objectives include provision of diverse activities and safe and comfortable facilities.</li> </ul>
Latrobe City, Draft Public Open Space Policy, 1998	<ul> <li>Includes open space categories of regional, town, district and neighbourhood.</li> <li><u>Regional</u> defined as attracting public participation from across and beyond shire. <u>Town</u> relates to major town facility. [Mathison is presumably 'Town' at present.]</li> </ul>
	<ul> <li>Principles include equity, good access, community participation, quality and responsive to changing needs.</li> </ul>

La Trobe Shire - Towards a Shire Environment	<ul> <li>Includes outline of relevant policies and strategies including the Regional Catchment Strategy and Victoria's Biodiversity Strategy.</li> </ul>
Policy, 2000	<ul> <li>Focus on sustainable development and conservation of diversity.</li> </ul>
	<ul> <li>For Mathison Park, relevant priorities include improved water quality and increased indigenous vegetation, particularly along waterways.</li> </ul>
A Plan for the Development of Mathison Park, Mathison Park Development Committee, 1999	<ul> <li>Submission prepared by Development Committee for Shire. Proposes Gippsland Flora and Fauna Park with bushlands and wetlands – for the Gippsland region, not just the Shire. Aims to enhance attractiveness of Churchill and encourage visits. Previous vision of botanic gardens seen as too narrow. Documents earlier plans in 1987, '90 and '93, none of which have been fully implemented.</li> </ul>
	<ul> <li>Proposes staged development for about 10 sections of park. Includes planting, path through deciduous trees, protection of remnant roadside vegetation, pest control, extended wetlands, vermin proof fence, bird hide, lookout platform, changes in water level, improved water quality, signs, information etc.</li> </ul>

Latrobe City owns and oversees the management of Mathison Park. Council has delegated the Advisory Committee to assist Council with planning, development and ongoing management and of the area.

Mathison Park is currently zoned Public Purpose Recreation Zone.

The management plan is to be prepared having regard to a Council resolution to develop the area as a regional park for the general community with an international focus. It is to include wetlands and elements of international, national, Victorian and Gippsland flora.

## Regional context

Mathison Park is currently a local and district attraction.

Major regional tourist and park attractions include Tarra-Bulga National Park, Grand Ridge Road, Walhalla, Baw Baw National Park, Morwell National Park, Powerworks and also wineries, cheese producers and Morwell Rose Garden.

Council is aiming to link Melbourne, Phillip Island and the Latrobe Valley as a triangle.

#### 1.6 The planning process

Council commissioned consultants to work closely with a project steering committee to develop the plan. The committee included representatives from the Council, Advisory Committee and Friends group (appendix 1).

Key steps in the process were:

Stage 1: Review of existing information and initial consultation

- Meet with steering committee and undertake 'SWOT' analysis.
- Collect, review and summarise existing reports and information.
- · Conduct field assessments.
- Seek comment from key stakeholders and document outcomes.
- · Publicise project in Park and local newspaper.

Stage 2: Options and concepts

 Assess site issues and opportunities and prepare existing conditions map.



- Identify and discuss issues and options for management.
- Facilitate and document stakeholder workshop.
- Develop initial concepts for development and management and discuss with steering committee

## Stage 3: Preparation of plan

- Synthesise information into initial draft plan, including mapping.
- Review with steering committee and revise.
- Prepare final plan for Council approval.

The stakeholder workshop was a valuable forum, providing useful discussion of issues and opportunities. Participants and points raised are outlined in appendix 4. These were later discussed further with the steering committee.

Issues identified during consultation are listed in section 2.

## 2 Issues and trends

This section provides an overview of recent park and open space trends, and lists issues identified for Mathison Park.

#### 2.1 Park and open space trends 🐇

Some of the important trends that may be relevant to Mathison Park are listed here. These are based on the outcomes of recent municipal park and open space studies undertaken in Victoria.

#### Recreation/use

- Increasing popularity of informal recreation eg walking, socialising and family recreation in pleasant settings.
- Expectations of better quality facilities, settings and maintenance.
- Recognition that safety and security are important to many people, particularly women
- Greater emphasis on fair/equal access.
- Recognised benefit of healthy lifestyles including increased use of open space
- The need for a diversity of open space settings from 'wilderness' to developed.
- An ageing population with needs for pleasant areas for walking, relaxing.
- · Concern about providing adequately for youth, eg spaces away from houses

#### Conservation

- Increased interest in natural and cultural values and commitment to ecologically sustainable development, water conservation etc.
- Recognition of the importance of protecting existing indigenous vegetation, and improved habitat and water quality
- Development of waterways as popular conservation and informal recreation corridors

#### Resources/management

- Need for clear management responsibility and appropriate level of maintenance and surveillance
- The need to ensure adequate recurrent funding following capital works developments
- Limits to Council resources
- The important contribution of volunteers
- External funding opportunities, eg grants

These issues and trends were considered in developing the vision, goals and actions for the park.

## 2.2 SWOT analysis and issues

An analysis of strengths, weaknesses, opportunities and threats ('SWOT') for Mathison Park was undertaken with the steering committee (appendix 5). The issues identified in this analysis, and in the planning process, included the following.

## Recreation/Interpretation

- Quality, range, layout and location of parking, facilities, information shelters and signs, particularly north of Lake Hyland
- Play equipment safety and compliance with standards
- Opportunities to extend path network and provide loop paths and different path standards
- Any new recreation activity needs to be compatible with conservation objectives
- Opportunities to interpret changes in land use and management, natural and cultural values etc.

#### Conservation

- High priority to clearly identify and protect/enhance remnant vegetation
- Need for clear policy and principles to guide revegetation work
- Blue green algal bloom and health hazard
- Opportunity to improve water quality and aquatic habitat. What form should wetland development take?
- Ongoing weed control important, eg willows and blackberries
- Need to protect historic values

## Community involvement and use

- Desirable to increase use and involvement, eg additional events, activities and facilities
- Greater support for Friends

## Planning, management and resources

- Previous planning uncoordinated
- Need to consider regional and statewide context
- Need to attract large numbers of visitors to proposed regional park
- Consider zoning of different areas to provide planning framework
- What is best long-term use of present grazing areas?
- Koorie garden area incomplete
- What resources are likely to be available for future maintenance?
- Opportunities for partnerships, eg with CMA and Department of Natural Resources and Environment (NRE)
- Consider roles of Committee and Council

## 3 Vision, principles and goals

## 840 - Vision and future directions for Mathison Park

The following vision was developed for the park.

#### Vision

In 2020, Mathison Park is a successful regional park providing a popular, peaceful and attractive setting for sightseeing, walking, socialising, observing nature and picnicking.

Many local residents and visitors from the Latrobe Valley and further afield frequently visit the park to relax and enjoy the high quality walking paths and facilities, attractive lake and wetlands and developing plantings.

Safe and well-designed paths connect the park to surrounding residential areas, community facilities and the University.

Plantings have provided a diverse range of settings with international, Australian, Victorian and Gippsland themes. The value of locally indigenous species has also been recognised and areas of remnant vegetation along the creek and western boundary are carefully managed and expanded.

Major weeds have been controlled and grazed areas are progressively being replaced with attractive, low maintenance plantings.

Water quality in Eel Hole Creek and Lake Hyland is steadily improving as residents and other people in the catchment appreciate the impacts of nutrient runoff and litter entering waterways.

The local community and education institutions have become more involved in the management and interpretation of the park and work actively to support the Friends group, Advisory Committee and Council.

The Churchill community and other visitors take pleasure in the park and its contribution to regional recreation and tourism is increasingly recognised.

The vision will help guide future development of the park.

## \$.2 Planning and management principles

The following principles provide guidance for the future planning, design and management of the park. They have been developed from other park studies and emphasise conservation and enhancement of flora and fauna, diversity of recreation experience, quality of settings and good access and maintenance.

#### Conservation

- Review the significance of existing flora and fauna and ensure protection of significant values
- Give high priority to improving habitat through the control of invasive woody weeds and revegetation with locally indigenous species.
- Protect natural and cultural sites from damage by recreational and management activities.

## Diversity, quality and design

- Build on the local character and values of the area and on Council's concept for a regional park for the general community with an international, Australian, Victorian and Gippsland focus.
- Provide a range of attractive settings for informal recreation.
- Provide high quality design, layout and facilities for safe and enjoyable use.

#### Access and equity

- Provide good access to major facilities for the whole community including people with disabilities.
- Provide a range of settings and compatible activities for different individuals and groups.
- Provide a series of walking tracks, including shared walking/cycling paths where safe.
- Continue to regulate vehicle movement
- Promote use of the area and the benefits of recreation.

#### Management and maintenance

- Use the approved management plan to guide all future management.
- Ensure clear accountability and responsibility for management, development and maintenance of the area.
- Provide adequate management, technical and funding resources to meet community needs.
- Provide quality maintenance to meet community and conservation objectives, within budget constraints.
- Actively involve the community in planning, development and care of the area.
- Periodically review the plan to ensure that it remains relevant to the community's requirements and interests.

#### ₹3 - Kévosais

Four key goals were identified for the study area.

## Goals for Mathison Park

- 1. Developing the park as a regional attraction for informal recreation
- 2. Conserving natural and cultural values
- 3. Enhancing community involvement and appreciation
- 4. Ensuring effective and sustainable management

The achievement of these goals is discussed in detail in section 4.



Walking path and bridge over Eel Hole Creek

# 4 Actions to achieve goals

This section discusses issues in more detail and sets out the actions required to achieve the key goals.

Many management actions are shown conceptually on the landscape plan drawing (figure 2).

An overall action program is shown in section 5.

# 4.1 Goal 1: Developing the park as a regional attraction for informal recreation

This plan endeavours to build on existing qualities of the park and incorporate Council's proposal of a regional park with wetlands and elements of international, national, Victorian and Gippsland flora. These elements are to form an important component of future development of the park.

Most current visitors to Mathison Park are thought to live in Churchill, with a small proportion coming from the Latrobe Valley or further afield. The population of Churchill is generally well provided with open space so substantial numbers of visitors will need to be attracted to the park to justify the resources needed for large-scale development as a regional park.

The park is currently moderately popular for walking, sightseeing, relaxing, nature observation, fishing and other informal recreation activities. Use has increased noticeably since a walking path was constructed through the park in 1998.

The demand for informal recreation experiences is growing in Victoria (Doolan 1998). Popular activities across the state include walking and cycling, relaxing, socialising, picnicking and nature observation.

To become a regional attraction, Mathison Park will need to provide for these types of recreational experiences in a very attractive and well maintained setting. Substantial facilities to service visitors will be required including bus and car access and parking, shared pathways, boardwalks, lookouts, picnic facilities, shelters, signs, toilets and possibly play facilities; a food outlet and information/retail centre. Wetlands with readily visible bird life and extensive plantings will also be needed. Proposals for a fast train service to the Latrobe Valley may assist in bringing additional visitors to the region.

It has been agreed that future development should be staged with progressive improvement of existing facilities followed by the development of a new visitor area off Tramway Road. The provision of meeting rooms and facilities for the community and local clubs, eg model boats and fishing, should be considered in this development.

Extensive planting will also be needed to meet Council's proposal for a regional park with botanical themes.

#### 4.1.1 Vehicle access

Surrounding roads provide good vehicle access to the park and good walk-in access is being provided.

Minor road works are proposed to improve access to a relocated parking area north of Lake Hyland.

Additional vehicle access from Tramway Road to a new visitor node is proposed in the medium to long term (figure 2). This will involve alterations to Tramway Road intersections to meet traffic safety requirements. Detailed engineering design will be required for this work.

#### Management actions

- 1. Improve vehicle access to a new parking area off Mackeys Road north of Lake Hyland.
- 2. Plan for vehicle access to proposed new facilities off Tramway Road in the medium to long-term.

## 4.1.2 Parking

Visitor parking is provided in a small carpark off Mackeys Road and along sections of surrounding roads. Few spaces are provided and first-time visitors would have difficulty locating existing parking facilities.

The Mackeys Road carpark is poorly designed, with a power pole intruding into the space and location close to the road. Minor relocation to the west would provide for improved amenity and safety (figure 2).

Substantial additional parking with main road access will be needed to cater for visitors attracted to the park when it is further developed. Both buses and cars need to be catered for. The most appropriate location is off Tramway Road (figure 2). Detailed planning for this area should be undertaken when more urgent tasks have been completed.

#### Management actions

- 3. Relocate and upgrade parking facilities off Mackeys Road providing for about 15 spaces.
- 4. Plan for a future bus and car park off Tramway Road.

#### 4.1.3 Walking and bicycle paths

#### In the park

Observations indicate that walking is the most popular activity in the park. Existing gravel and concrete paths are well used and there are many opportunities to extend the network and create loop tracks, which are likely to be popular with users.

New tracks could provide access around the east and west sides of the park, along the old Farmhouse Drive and through the area planted recently with Gippsland species (figure 2). These can be constructed progressively, opening up new walking and sightseeing opportunities.

Shared paths should be 2.5 m wide to meet current standards, but designed to limit speed and encourage fast cyclists to use adjacent roads.

Two grades of track are proposed:

- Level One to be 2500 mm wide gravel or bitumen shared pathways.
- Level Two to be 1500 mm wide gravel secondary paths.

Bridges, boardwalks and viewing platforms will be needed as indicated in figure 2. These are all to be designed and built to meet current safety standards.

## Links to the park

The existing gravel path through the park links with a path leading into Churchill but there are opportunities to improve linkages. These include:

- A short link connecting Northways Road footpath and the gravel path west of Kurnai College
- A link track to the University along McDonald Way and across the park to the path south of the Homestead ruins.
- Safer pedestrian access across Mackeys Road east of the Model Boat Club area.

#### **Entrances**

Existing entrances to the park are not well defined and should be upgraded to improve access and appearance.

## Management actions

- 5. Progressively upgrade and extend the pathway network, boardwalks and bridges, establishing two standards of path and providing links to adjacent areas (figure 2).
- 6. Progressively upgrade entrances.

## 4.1.4 Informal recreation facilities and activities

#### Facilities and activities

Existing facilities for informal recreation include a single toilet, picnic and barbecue facilities, tables, seats, old play equipment and signs. There is also a small fishing jetty. These facilities are of modest standard and should be progressively improved to meet current community expectations.

Additional seats are needed along walking tracks and additional picnic tables should be provided as demand increases, eg near the homestead ruins.

Fishing around the lake is moderately popular and the lake is stocked from time to time. This activity should continue but access to the water's edge will need to be regulated to minimise impacts on bird life, particularly along the southern and eastern edges of the lake.

Facilities provided at Mackeys Road for model boat activities are adequate for current use. Model boats should be confined to the northern section of the lake (as at present) to minimise impacts on water birds.

Rubbish bins should not be provided - a community education program should be used to promote recycling through cost-effective street-side collection services. Parks Victoria and other open space managers have had considerable success with no-bins policies in conjunction with visitor education programs.

The area is not suitable for horse riding or trail bike riding and these activities should generally not be permitted.

#### Signs

Standardised signs should be installed to provide orientation, information on tracks (time and destination), the location of facilities and basic regulations. Simple totems with symbol signs are proposed where applicable. Designs should conform to Latrobe City or Parks Victoria standards. Confusing signs at the Mackeys Road entry should all be removed and replaced with a single park name sign, symbol signs denoting key facilities and regulations, and walking track signs.

Following upgrading of the Mackeys Road picnic area and installation of track signs, large 'tourist attraction' signs should be provided at key locations on major roads indicating access to the park.

#### Future facilities

In the medium to long-term, detailed planning will need to be undertaken for a new visitor node off Tramway Road overlooking the park (section 4.1.2). A conceptual layout is shown in figure 2. A wide range of facilities should be considered for inclusion (see section 4.1).

#### Management actions

- 7. Develop standard designs for facilities and signs and progressively upgrade facilities and name, facility and track signs.
- 8. Retain fishing and model boat activities in designated areas.
- 9. In the medium to long-term, plan for development of a new visitor node off Tramway Road.

## 4.1.5 Plantings and landscape development

#### Recent plantings

A substantial amount of planting has been undertaken in the park since the 1980s. Species selection has varied with Blue Gums and Yarra Gums being planted early followed by a range of Gippsland species.

The Blue Gums planted in the 1980s have suffered considerable damage from borers and will need to be progressively replaced, preferably with mixed local species to ensure minimal maintenance and improved habitat values.

The Gippsland plantings have mostly grown well and there are opportunities to fill in gaps and perhaps provide a more thematic approach to plant groupings. There are also opportunities to provide improved walking track access through the recent plantings near the south-west corner of the park and interpret some the species present.

The Gippsland Koorie planting is incomplete and needs extensive additional planting and temporary fencing. The areas should merge with indigenous vegetation, including Swamp Gums, regenerating along the adjacent creek, and link to the nearby dam being developed with Aboriginal plants.

#### Future thematic plantings

Substantial future planting will be required to achieve Council's proposal for a regional park with strong flora themes. Much of this planting will be in current grazed areas, requiring progressive removal of grazing stock and fences and development of walking paths and maintenance tracks (figure 2).

To achieve sustainable and attractive landscapes, an extensive background planting of indigenous tree and shrub species is proposed. Species would include Swamp Gum, Narrow-leaf Peppermint, Apple Box, Candle Bark, White Sallee, Blackwood and Sweet Bursaria.

Pockets and areas of non-indigenous plant associations from appropriate parts of Victoria, Australia and overseas temperate countries will be developed to enhance views and provide visual interest and focal points of colour and form. Plant selection must consider factors such as hardiness and drought tolerance as well as size, colour and general suitability for the site. Plantings should be based on sustainable, ecologically sound groupings which will be easy to maintain, of visual appeal and provide habitat for native fauna.

The area of deciduous trees south west of the farmhouse is of variable quality with many Prunus, Ash and Oak trees lost due to damage by grazing cattle or other causes. A group of Oaks west of the farmhouse has grown reasonably well suggesting that additional introduced species may grow satisfactorily in this area.

The international theme proposed by Council is probably best located in these areas following detailed assessment of soil characteristics. Existing trees in poor condition will need to be removed as planting proceeds. Additional exotic plantings could provide visual interest at other key locations in the park.

Species requiring regular watering or fertilising are unlikely to be sustainable in the long-term and should generally be avoided.

Figure 2 provides a concept for the proposed additional plantings. This will need to be further developed and horticultural advice sought on detailed species selection and appropriate horticultural practices.

Indigenous revegetation actions are discussed separately in section 4.2.1 (actions 16-22).

## Management actions (see also figure 2)

- 10. Undertake detailed soil assessments, species selection and design layouts for future thematic plantings with international, Australian, Victorian and Gippsland species on an area-by-area basis as development proceeds.
- 11. Progressively implement thematic planting programs ensuring high quality ongoing maintenance of all plantings.

## 4.1.6 Providing for user safety

The safety of visitors is a high priority. Possible risks identified include falling limbs and fire. Roads, parking areas, steep slopes, the lake, play equipment and shared pathways also involve some risks. Some users, particularly females, may also consider personal safety an issue in secluded areas.

The play equipment and fishing jetty may be unsafe and should be assessed by Council and removed if appropriate. The provision of new playground equipment should be considered

Risk management and fire planning should meet Latrobe City standards.

#### Management actions

12. Ensure compliance with Council requirements for risk management including regular inspection of facilities and trees and timely action to deal with identified hazards.

- 13. Maintain an up to date fire plan for the area.
- 14. Assess the play equipment and fishing jetty for safety and remove if appropriate.

## 4.1.7 Regulations

Council's Local Laws apply to the park. These regulate use of the area and protect features. Dogs must be on leads at all times. No information on regulations is currently provided for visitors.

## Management actions

15. Post regulations in the reserves (on an information board) and use symbol signs to advise visitors of key requirements.

## 4.2 Goal 2. Conserving natural and cultural values

The park has areas with important natural values including remnant vegetation and diverse bird life. There are also some historical values associated with early farming activities.

## 4.2.1 Vegetation

## Indigenous vegetation

Mathison Park is located in the Gippsland Plains bioregion near the foothills of the Strzelecki Ranges. The area has deep alluvial soils and was probably covered by grassy woodlands until being extensively cleared for agriculture.

The long history of livestock grazing in the area has left only one substantial stand of remnant indigenous vegetation, on the easement between Tramway Road and the park boundary, on the west side of the park. Other areas identified for priority protection or enhancement are the reedy habitats around Lake Hyland, particularly the aquatic and semi-aquatic areas on the eastern side and to the south, and along Eel Hole Creek.

The small stand of woodland tree species on the eastern boundary and the few very old, isolated Swamp Gums near the Creek and southern border of the park have also been identified for priority protection. Old trees offer a range of potential benefits to landscapes and ecosystems including erosion and salinity control, a source of genetic diversity, habitat for native fauna and shade and visual amenity for visitors.

The remnant vegetation along the Tramway Road easement is an example of *Plains Grassy Woodland*, the most common Ecological Vegetation Class in the Gippsland Plains Bioregion. It is characterised by the presence of a few Eucalypt species of various heights and forms, most notably Narrow-leaved Peppermint, with Apple Box, Candle Bark and White Sallee less well represented. Sweet bursaria and Prickly teatree are conspicuous in the understorey, while the ground cover is rich in Kangaroo Grass, Spear Grass and Wallaby Grass, Lomandra species and a range of native lilies and orchids.

This remnant area is subject to some weed invasion and has been affected by past road works and possibly grazing. The La Trobe Shire Roadside Management Plan, Appendix 1 lists it as one of only seven 'Significant Roadside Areas' in the Shire. It is likely that prior to European settlement the majority of the park supported this type of habitat. This area should be added to the park to ensure ongoing protection. General management guidelines for this area are provided in appendix 8.

The vegetation along the western and northern banks of Lake Hyland is important for the stability of the bank but natives and local indigenous plants are currently not well represented. The aquatic or semi-aquatic communities of native sedges and tussocks along the eastern and southern banks are habitats for waterfowl, waterbirds, frogs, reptiles and invertebrates. These communities are important in limiting the rate of stormwater flow into Lake Hyland and removing suspended solids and nutrients.

The small stand of woodland tree species near the eastern boundary on Mackeys Road is dominated by Blackwoods with Eucalypt species less well represented. The understorey and ground cover species present in the Tramway Road remnant are not well represented here.

Vegetation around the dam north of the homestead has been trampled by cattle. Fencing is needed to prevent further damage and to reduce water contamination

#### Weeds

Due to the long history of grazing, introduced pasture species cover a large proportion of the park. Removal of all weeds from the park is clearly unrealistic and control efforts need to follow agreed priorities.

Protection of relatively intact vegetation areas is a high priority and can be achieved by careful weed removal. This may involve physical removal (including the Bradley method), spot spraying with appropriate herbicides and slashing and burning techniques. Muyt (2001) has provided a useful up to date guide to weed control and bush regeneration.

High priority should also be given to control of invasive woody species. Willows are regrowing in wet areas following earlier treatment. Their fine root systems slow water flows and choke out indigenous species. Blackberries dominate some low-lying areas and other woody weeds, eg Flax-leaf Broom, are growing strongly along the McDonald Way road reserve. Effective control techniques are available for most woody weeds.

An introduced Cumbungi species (and a native species) is prolific in Eel Hole Creek. There appears to be no practical way of controlling this species but the situation should be monitored and control undertaken in future if appropriate.

Most future plantings should aim to minimise weed growth by creating dense shade and intensive competition for water and nutrients.

The Draft West Gippsland Native Vegetation Plan identifies the priorities, principles and a hierarchy of actions for native vegetation management in the region (appendix 7). The La Trobe Roadside Management Plan provides practical advice for the maintenance of remnant grassy woodland habitats. These principles should be followed in Mathison Park.

Restoration and reconstruction of regionally representative habitat should be considered within the context of regional wildlife corridors (see plan prepared by Kevin Roberts, Latrobe City Council).

#### Management actions (see also figure 2)

- 16. Arrange for the area of remnant vegetation along Tramway Road to be added to the park.
- 17. Fence out remnant vegetation along Tramway Road and near Mackeys Road (if appropriate) and actively manage following suggested practices (appendix 7).
- 18. Retain isolated Swamp Gums and implement appropriate weed removal around these trees to encourage regeneration.
- 19. Protect indigenous species and undertake additional wetland plantings with locally indigenous species along Eel Hole Creek and the southern part of Lake Hyland (figure 2).
- 20. Progressively undertake clump planting of locally indigenous species along the western bank of Lake Hyland, to provide shade and improved habitat and amenity.
- 21. Eradicate willows from the park and control other invasive woody weeds, particularly Blackberry.
- 22. Use fencing to protect vegetation and soils around the dam north of the homestead and provide piped water for stock.

#### 4.2.2 Fauna

The area supports diverse bird life including a range of ducks, spoonbills, herons, egrets, ibis, coots, thornbills, robins, honeyeaters and parrots (appendix 9). Native mammals include the Eastern Grey Kangaroo and possibly the Koala. A range of amphibians and reptiles also occur including the Copperhead Snake and Rawlinson's Skink.

Maintenance of food chains and webs is vital to the health and function of wetlands and other ecosystems.

Other native terrestrial fauna will be encouraged to return to the park as remnant habitats and wildlife corridors improve.

Improved knowledge of fauna, eg through local surveys, would assist in long-term environmental management.

Overall, management should concentrate on protecting and enhancing habitat, for example by leaving fallen trees undisturbed (except where visitors are at risk).

## Management actions

- 23. Encourage fauna surveys with the assistance of the local community.
- 24. Manage the park to protect habitat values, eg by retaining fallen trees.

#### 4.2.3 Pest animals

Pest animals include rabbits, foxes and introduced birds, eg mynas, blackbirds and starlings. Dogs off leads can also be a problem. Pest animals adversely affect indigenous species, competing for space and resources.

The proposed wetland system will encourage nesting of waterfowl and birds that can be directly threatened by feral animals and domestic pets. Community education programs can assist in limiting impacts by dogs and cats.

Control of pest species needs to be undertaken on a systematic basis in cooperation with surrounding landowners, giving consideration to the regional context and prospects of reinvasion. The removal of dense woody weed growth may assist in reducing pest animal numbers.

#### Management actions

- 25. Monitor pest animal impacts and undertake cooperative pest control activities as appropriate.
- 26. Continue community education programs regarding responsible pet ownership.

## 4.2.5 Water quality and stormwater

Water quality in Lake Hyland is affected by catchment runoff and stormwater from the Churchill township entering Eel Hole Creek. Run-off from the Kurnai School grounds, Monash Campus grounds, adjacent golf links and surrounding grazed paddocks may have an adverse impact. Proposed developments along the creek in the campus include a filtration pond which should help improve water quality.

Stormwater can carry litter, suspended soil particles, weed propagules (especially Cumbungi), nutrients derived from garden fertilisers, traces of pesticides and other

pollutants. Council's is preparing a Stormwater Management Plan that will provide guidelines for addressing these issues.

The cultivated grounds of the school, university and golf course may contain nitrogen and phosphate-based fertiliser residues, which can lead to blue-green algae blooms.

Blue-green algal blooms occur in shallow, still or slow moving waters and are more prevalent in warmer waters where nutrient levels are high. The toxic genus *Anabaena* has been detected in bloom concentrations on a number of occasions in the lake, creating a significant health hazard through swallowing or skin contact. Warning signs have been erected at Lake Hyland on several occasions due to high algal levels and this practice should be supported.



Lake Hyland from the north

NRE has attempted to minimise nutrient and suspended matter in Lake Hyland by using peat hay as a filter in Eel Hole Creek, however the effectiveness of this strategy is not known.

Wetlands naturally remove nutrients and suspended matter from water bodies by slowing the water flow, allowing suspended matter to settle and nutrients to be consumed by microorganisms. The presence of reed beds contributes to this process by filtering suspended matter and providing a substrate for the microorganisms to live on. Constructed stormwater wetlands mimic this process successfully through the design of shallow pools and appropriate planting.

Wetland development in the park, including small roosting islands, will also improve habitat for birds and aquatic organisms and add to the visual appeal of the area.

#### Management actions

- 27. Install stormwater litter and silt traps in conjunction with Council's Stormwater Management Plan. Consider in conjunction with the Monash University Wetlands Project.
- 28. Develop wetlands to improve water quality and improve habitat values (fig 2).
- 29. Support the monitoring of threats to water quality, and warning systems for blue-green algae.

#### 4.2.6 Cultural values

There is little recorded history of the area prior to the establishment of Churchill township. Available information is summarised in appendix 2.

There are no known Aboriginal sites in the area and, given the level of disturbance, it appears unlikely that any will be found.

The main sites of cultural significance are the ruins of a concrete farmhouse built by farmer Robert O'Hare in about 1919, and two nearby brick wells. One well was associated with the O'Hare homestead, and the other with a simple earlier house (since destroyed) built by Thomas O'Halloran near the present Pepper tree.

The homestead walls survive and provide an interesting example of improvisation using locally available materials. The wells are largely intact. The structures are thought to be of local significance.

An associated driveway and various exotic trees also remain from the period of early settlement.

Taken collectively, the structures and trees provide valuable clues to an earlier era and should be protected and interpreted for visitors (section 4.3). Weeds and debris should be removed to enable visitors to explore the homestead. Debris should be removed from the wells and fencing used to enable safe viewing. The remaining trees should be managed to maximise their life. A simple gravel walking track could be constructed to facilitate visitor access to the main cultural sites.

#### Management actions

- 30. Remove debris and weeds from the homestead and wells and provide for safe visitor access.
- 31. Previde ongoing protection for the homestead, wells and associated trees.

#### 4.3 Goal 3: Enhancing community involvement and appreciation

## 4.3.1 Involving the community in planning and management

The park's Advisory Committee and Friends group currently provide strong local input into park development and management. Ongoing involvement by the local community is important to the success of this plan and should continue to be actively supported by Council.

Service clubs have made valuable contributions and should continue to be encouraged.

Cooperative activities with the Morwell-Churchill Corridor Landcare Group and government agencies, particularly the West Gippsland Catchment Management Authority and NRE, are also very important, e.g. for cooperative weed control and planting programs and water quality improvement.

'Friends' and other community members should be encouraged and supported to undertake further activities identified in this plan, e.g. assist with weed control and revegetation, monitor flora and fauna, assist with funding applications, prepare newsletters, keep information shelters up to date and interpret the area's values. Council could assist with technical support and supervision especially with revegetation work.

Schools and the University could assist with revegetation activities and help develop educational materials and activities.

Groups using the park for model boats and fishing could also be encouraged to assist with maintenance of areas around the lake.

#### Management actions

32. Support and encourage local groups and organisations to assist with revegetation, wildlife monitoring, maintenance and educational uses of the park.

#### 4.3.2 Information

Community support is a vital ingredient in sound park management. This can be fostered by providing accurate information, interesting interpretation and education, positive promotion and innovative events and activities.

These services aim to encourage appropriate use, foster appreciation of natural and cultural values, gain support for management practices and contribute to an environmentally aware community.

Basic information should be provided to inform visitors of recreation opportunities and encourage appropriate use. This could include simple name, direction and regulation signs, publications and information shelters.

Existing information shelters do not have any information on the park. These need to be completed and up to date information provided. This could include a large map of the park with paths and features marked, information on things to see and do, and graphical information on natural and cultural values and management issues.

Leaflets would help inform visitors as the park develops further.

In the long term, an information center could be considered although experience in other parks indicates that this will incur substantial capital and ongoing costs and is unlikely to attract large numbers of visitors.

## Management actions

33. Provide up to date information in information shelters and, information leaflets as the park develops.

## 4.3.3 Interpretation and education

**Interpretation** is an informal education activity designed to increase community understanding, appreciation and enjoyment of natural and cultural features.

Opportunities in the park include interpretive signs and publications, guided walks and activity programs. Community involvement in the provision of these services is desirable and should be encouraged and supported. Important themes to be interpreted include wetlands and birds, planting themes, revegetation and historical features.

Guided walks featuring stories about natural and cultural values would be worthwhile, particularly if combined with social activities.

**Education** activities should be encouraged particularly relating to flora and fauna and management issues such as water quality and revegetation. Local schools could be increasingly involved in environmental monitoring and investigation of impacts on the park. School groups could also be encouraged to undertake revegetation activities.

## Management actions

- 34. Encourage the Friends of Mathison Park and other groups to assist with the provision of interpretive services including guided walks and signs.
- 35. Encourage local schools to undertake monitoring and revegetation activities.

## 4.3.4 Promotion, activities and events

The health benefits of open space use are well established but need ongoing promotion, including publicity of informal activities such as walking in parks.

There are also opportunities to promote the park more actively and encourage increased use through compatible activities. As the park develops, organised events and festivals will become more important to raise awareness of Mathison Park and encourage more first-time and repeat visits.

Regular media releases and stories, on-site events, public relations activities, advertising and incorporation of the park in major tourist promotions will be needed in the longer-term.

#### Management actions

- 36. Include the park in programs supporting healthy use of open space.
- 37. Develop and promote special events and festivals to encourage greater use and enjoyment of the park.

## 4.4 Goal 4. Ensuring effective and sustainable management

## 4.4.1 Sustainable management

Sustainable management principles should be applied to facilities and services in the park. These include minimising use of water, energy and non-renewable resources, recycling, providing effective waste treatment, having no adverse impact on ecological processes and maintaining compatible recreational and educational opportunities.

Ongoing audits should be undertaken to monitor management practices and minimise energy use and adverse impacts on the park environment.

Future developments in the park should be sustainable with low uses of energy, fertilisers and pesticides, and minimal impacts on natural values.

#### Management actions:

38. Monitor management activities and ensure sustainable practices.

## 4.4.2 Management responsibility and budget allocation

Effective management requires clear accountability for management and development works, ongoing funding and the ability to make sound decisions on conservation and recreation issues as they arise.

The current arrangements are broadly satisfactory with Council having overall responsibility and providing support to the Advisory Committee. However, the committee does not have guaranteed funding and has to regularly approach Council for funds. Agreed annual allocations would assist with forward planning and a change in funding arrangements is highly desirable.

Current expenditure is modest, of the order of \$10,000 annually.

As the park develops, substantial increases in allocations will be required and consideration given to a new management arrangement with Council taking a lead role and providing substantial ongoing technical, marketing, administrative, human resource and management input.

This plan has not attempted to determine future levels of use of the park. It is important that more detailed planning and costing is undertaken by Council and the tourist potential and cost effectiveness of the proposed development assessed before proceeding with major development off Tramway Road.

External funding needs to be vigorously perused to build on past successes in gaining funding support. External sources include businesses in the Latrobe Valley, the Victorian Community Grants Program, Parks Victoria, NRE, Sport and Recreation Victoria grants, and the Natural Heritage Trust – Stage 2. Supported employment programs, e.g. the Green Corp, may also assist in implementation.

The plan should be used as the basis for future management and resource allocation. Progress should be reviewed each year and a major review undertaken in 5 to 10 years time.

#### Management actions:

39. Integrate implementation of the plan into Council's budget process and arrange an annual Council allocation to the Advisory Committee for park management and development.

- 40. Undertake more detailed assessment of the tourism potential and cost effectiveness of the proposed large-scale development of a visitor node off Tramway Road.
- 41. Actively seek external funding to implement initiatives in the plan.
- 42. Use the priority action program (table 1) as the basis for future annual budgets and 3-year plans.
- 43. Review implementation of the Management Plan annually.
- 44. Review the effectiveness of the Management Plan in 5-10 years time.

# 5 Implementing the plan

## 5:1 Priority action plan

Major actions, priorities and proposed timing are set out in table 1. Note that additional details for some actions are provided in section 4 and figure 2.

Table 1: Priority action program

Aci		Priority	Timing*	Prime responsibility	Key stakeholde
God	alf. Developing the park as a regional attraction for i	nformal rec	reation		
1.	Improve vehicle access to a new parking area off Mackeys Road north of Lake Hyland.	High ●●●	Year 2-4	Committee**	Community
2.	Plan for vehicle access to proposed new facilities off Tramway Road in the medium to long-term.	Low	Year 10-15	Committee, Council	Community VicRoads
₿,	Relocate and upgrade parking facilities off Mackeys Road providing for about 15 spaces.	High	Year 2-4	Committee	Community
4.	Plan for a future bus and car park off Tramway Road.	Low •	Year 10-15	Committee, Council	Community
5.	Progressively upgrade and extend the pathway network, boardwalks and bridges, establishing two standards of path and providing links to adjacent areas (figure 2).	High/ Ongoing	Year 2-10	Committee	Community
6.	Progressively upgrade entrances.	High	Year 2-4	Committee	Community
7.	Develop standard designs for facilities and signs and progressively upgrade facilities and name, facility and track signs.	High	Year 2-4	Council	Committee, Community
8.	Retain fishing and model boat activities in designated areas.	Ongoing	Year 1 onwards	Committee	Community
9.	In the medium to long to long-term, plan for development of a new visitor node off Tramway Road.	Low	Year 10-15	Committee, Council	Community
10.	Undertake detailed soil assessments, species selection and design layouts for future thematic plantings with international, Australian, Victorian and Gippsland species.	Medium ●●	Year 3-5	Committee, Council	Community
11.	Progressively implement thematic planting programs ensuring high quality ongoing maintenance of all plantings.	Medium ••	Year 5-9	Committee, Council	Community
12.	Ensure compliance with Council requirements for risk management including regular inspection of facilities and trees and timely action to deal with identified hazards.	Very High	Year 1 onwards	Committee, Council	Community
13.	Maintain an up to date fire plan for the area.	Very High ●●●●	Year 1 onwards	Committee, Council	Community
14.	Assess the play equipment and fishing jetty for safety and remove if appropriate.	Very High ●●●●	Year 1	Council, Committee	Community
Goz	lf 2 Conserving natural and cultural values				
15.	Post regulations in the reserves (on an information board) and use symbol signs to advise visitors of key requirements.	High ●●●	Year 2-4	Committee	Community

A	ion	Priority	i inings	Prime 3	<b>Kev</b>
				responsibility	stakeholder
16	. Arrange for the area of remnant vegetation along Tramway Road to be added to the park.	Very High	Year 1	Council	Community
17	Fence out remnant vegetation along Tramway Road and near Mackeys Road and actively manage following suggested practices (appendix 7).	Very High	Year 1	Committee	Community
1.8	Retain isolated Swamp Gums and implement appropriate weed removal around these trees to encourage regeneration.	High	Year 1 onwards	Committee	Community
19	Protect indigenous species and undertake additional wetland plantings with locally indigenous species along Eel Hole Creek and the southern part of Lake Hyland (figure 2).	High	Year 2-4	Committee, CMA	Community
20	Progressively undertake clump planting of locally indigenous species along the westem bank of Lake Hyland, to provide shade and improved habitat and amenity.	High	Year 2-4	Committee	Community
27.	Eradicate willows from the park and control other invasive woody weeds, particularly Blackberry.	Very High	Year 1 onwards	Committee, CMA	Community
22.	Use fencing to protect vegetation and soils around the dam north of the homestead and provide piped water for stock.	Very High ●●●●	Year 1	Committee	Lessee
23	Encourage fauna surveys with the assistance of the local community.	Medium ••	Year 2-4	Committee	Community
24.	Manage the park to protect habitat values, eg by retaining fallen trees.	Ongoing	Year 1 onwards	Committee	Community
25.	Monitor pest animal impacts and undertake cooperative pest control activities as appropriate.	Medium ●●	Year 5-9	Committee	Community
26.	Continue community education programs regarding responsible pet ownership.	Ongoing	Year 1 onwards	Council	Community
27.	Install stormwater litter and silt traps in conjunction with Council's Stormwater Management Plan. Consider in conjunction with the Monash University Wetlands Project.	High ●●●	Year 2-4	Council, CMA	Committee, Community
28.	Develop wetlands to improve water quality and improve habitat values (figure 2).	High	Year 2-4	Committee, CMA	Community
29.	Support the monitoring of threats to water quality, and warning systems for blue-green algae.	Very High	Year 1 onwards	Committee	Council, Community
30.	Remove debris and weeds from the homestead and wells and provide for safe visitor access.	High ●●●	Year 2-4	Committee	Community
31.	Provide ongoing protection for the homestead, wells and associated trees.	High	Year 2-4	Committee	Community
Go	of 3 Enhancing community involvement and apprecia	ition	TATING THE MANY OF		
	Support and encourage local groups and organisations to assist with revegetation, wildlife monitoring, maintenance and educational uses of the park.	High	Year 2-4	Committee	Community
33.	Provide up to date information in information shelters and information leaflets as the park develops.	Very High ●●●●	Year 1 onwards	Committee	Community
34.	Encourage the Friends of Mathison Park and other groups to assist with the provision of interpretive services including guided walks and signs.	Medium ●●	Year 5-9	Committee	Community

Act	ion	Priority	Timing*	Prime responsibility	Key stakeholder
35.	Encourage local schools to undertake monitoring and revegetation activities.	Medium ••	Year 5-9	Committee	Community
36.	Include the park in programs supporting healthy use of open space.	High ●●●	Year 2-4	Council	Committee, Community
37.	Develop and promote special events and festivals to encourage greater use and enjoyment of the park.	Medium ●●	Year 5-9	Committee, Council	Community
Goa	վ 4՝ Ensuring effective and sustainable managemen				
38.	Monitor management activities and ensure sustainable practices.	Ongoing	Year 1 onwards	Committee	Council, Community
39.	Integrate implementation of the plan into Council's budget process and arrange an annual Council allocation to the Advisory Committee for park management and development.	Very High ●●●●	Year 1 onwards	Council, Committee	Community
40.	Undertake more detailed assessment of the cost effectiveness of the proposed large-scale development of a visitor node off Tramway Road.	Medium ●●	Year 5-9	Council	Committee, Community
41.	Actively seek external funding to implement initiatives in the plan.	Very High ●●●●	Year 1 onwards	Council, Committee	Community
42.	Use the priority action program (table 1) as the basis for future annual budgets and 3-year plans.	Very High ●●●●	Year 1 onwards	Committee, Council	Community,
43.	Review implementation of the Management Plan annually.	High	Year 2 onwards	Committee, Council	Community
44.	Review the effectiveness of the Management Plan in 5-10 years time.	Low	Year 5-10	Committee, Council	Community

- \* Assumes adequate resources available to implement actions
- \*\* Mathison Park Advisory Committee

## 5.2 Indicative costs

Mathison Park is currently managed with a small allocation of funds from Council and considerable volunteer input by members of the Advisory Committee, Friends Group and Apex. Several grants in recent years have assisted in development projects (see appendix 2).

Very substantial funding will be required to develop the area as a regional park as outlined in this plan, and to provide high quality ongoing management. Detailed costs have not been determined, but experience at other regional parks suggest that development costs could be of the order of \$10 million and operating costs perhaps \$100,000 per annum, assuming one to two staff, the contracting out of major maintenance tasks and substantial ongoing volunteer input. Costs will be highly dependant on the complexity of plantings, the level of maintenance required and the built facilities provided.

Approximate operating costs for parks with some similarities with Mathison are:

- Tim Neville Arboretum, Knox, with equivalent of 1 to 2 staff: \$100,000 pa.
- Nyerimilang Park, near lakes Entrance, with equivalent of 1 to 2 staff: \$80,000 pa. (plus major Friends support)

At the top of the range, the recently constructed Roma Street Parklands in Brisbane (an elaborate botanic gardens with over 100,000 plants) has eight horticultural staff

plus contractors, management and administration staff. The park was constructed at a cost of \$72 million.

# 6 References

Doolan, B et al 1998. Searching for Measures of Choice in Public Land Recreation Proceedings of Parks and Leisure Australia Conference, Melbourne (CD)

Muyt, A. 2001. Bush Invaders of South-east Australia, Adam Muyt

Note: Other references are listed in appendices 2 and 3.

# **Appendices**

#### Appendix ( Reople involved in the plan

Members of the steering committee overseeing development of the plan:

- Cr White
- David Martyn
- Ken Harris
- Tom Lawless
- Anton Wray
- David Egan
- Terry Key
- John Lee
- Phillip Rayment
- Shane Bailey
- Robin Crocker (consultant team)

People providing assistance or detailed information and comments included:

- Cr Hanning
- Cr Middlemiss
- Ruth Park
- Phil Taylor
- David Zeibell
- Dieter Melzer
- Kevin Roberts
- Steve Kurec
- Graham Jackson
- David Addis
- Reg Grisotto
- Paul Burns

## Appendix 2 Background notes on history of the area

Notes prepared to provide an overview of history and management of the park area. Based on sources provided by Latrobe City and local stakeholders.

Date	Information /Activity	Source'
Pre 1844	The Gunai Aboriginal community occupied much of Gippsland with an	File 2
?.,	estimated population of 3-5000	-25
	The population declined dramatically following white settlement. No	
1844	evidence of Gurnai culture remains in the park.	
1044	Crown land selected then leased as pastoral run. Leases granted and, later, most farms claimed as freehold by 1900.	File 2,
1876		Short
1070	Thomas O'Hailoran purchased land and farmed from about 1876 to 1919.  Built basic wattle and daub house (south of present pepper tree, near original	History
	well	
1920s – 60's	Concrete farmhouse built by Robert Hare in about 1919. Thought to be of	. Ob
10200 000	local significance. Said that sand came from creek and stone from nearby	Short
	ground. Scraps of iron and wire used as reinforcing. Old well west of house	History, Rob de
	is from earlier O'Halloran House	Souza-
	Area largely cleared. Developed as dairy farm and crops grown possibly	Daw
•	including oats, millet, potatoes and flax.	Daw
	Farm sold to William and Ann Dobbin in 1950 who moved into house.	
	Outbuildings destroyed by fire in about 1964; dairying abandoned.	
1963	Present park area compulsorily acquired for township of Churchill.	File 1
Ca 1960's	Housing Ministry saw area as regional Botanical Gardens to be supported by	File 1
•	the four Councils that now make up Latrobe City. Only Morwell Council	1 110 1
•	provided any significant resources.	
Ca 1966	Lake Hyland constructed.	
1978	Blue gums planted by volunteers. Use of insecticide and planting of	File 1
	understorey proposed in letter of May 1996.	
Ca 1978	Students planted trees in SW corner	Develop
		ment
		Plan
1982	Deciduous trees planted in southwest corner, provided by Council. Letter of	File 1
	Sept 1998 indicates that maintenance has been poor but rejects proposal to	
4004	relocate or remove trees. Proposes replanting in spaces.	
1984	Request to upgrade lake edge for model boat championships	File 1
1986	Churchill Post-Primary School (later Kurnai College) opened following	File 2
1986	excision and sale of land.	·
	Area east of creek leased to Tom Lawless	File 1
Ca 1987	Noted that Lake Hyland had been constructed by Housing Commission as	File 1
1987	water feature: area 4.85 ha.	
1901	Urban Land Authority proposed developing about half of reserve for housing	File 1
1987, July	and handing rest to Council. Opposed by Council.	
1907, July	Apex plan for park including tracks, planting etc.	Apex
Ca 1987	\$63,000 works program propaged including well-in-the Late	Plan
Ca 1907	\$63,000 works program proposed including walking tracks, fencing, planting	File 1
1987	of W.A. and Mediterranean sections, blackberry eradication.	
1907	Deputation from Shire to Min for Housing (Wilkes) re price to be paid for land. States that park was to be regional park for Churchill which was	File 2
	originally expected to grow to 40,000 by 2000. Revised estimate up to	
	15,000 with Mathison still to be major regional park.	
Ca 1987	City of Morwell purchased land	Fil- 0
1988	Picnic area extended and opened as Apex Bicentennial Park. (Maintained by	File 2
	Apex until 1999, then Lions).	Develop
	י יין אין אין אין אין אין אין אין אין אי	ment
		Plan
1989	Progress report on \$35,000 nature consequation great (CEL)	F31 - 4
1989	Progress report on \$35,000 nature conservation grant (CFL) works at Mathison. Include gravel path, concrete path, grading, blackberry spraying,	File 1

Date	Information /Activity	Source
1989	Council approved Aust Model boat championships on lake	File 1
1991	Council report outlines background and proposes terms of reference for Advisory Committee. Sees potential for park to be major passive recreation area for Churchill and sub-regional park drawing people from Traralgon and	File 1
	Moe. Proposed 'Development Committee' to review existing proposals and prepare costed development strategy for Council.	
1992	Advisory Committee first meeting August 25th 1992	
Ca 1992	A4 drawing by D Egan showing proposed planting scheme for area north of Switchback Rd, east of creek.	File 1
1993	Report: 'Mathison Park Development Strategy', prepared by Advisory Committee. Proposed botanic gardens with species indigenous to Latrobe Valley, assessable for a wide range of passive recreation pursuits.	Ken Harris
1993	Development Committee formed.	File 1
1993	Transfer of land from Ministry for Housing (or ULA?) to Council. Cost \$125,000. Title shows area of 38.68 ha.	File 1
1994-95	Grazing lease specifications for 5+5 years include fencing and weed control.  Three areas offered at \$100 pa each. Map included. Mr A Hall successful.  Extension offered in 1998.	File 1
1998	Parks Victoria grant of \$4072 for planting of indigenous species	File 1
1998	Tree Planting proposal prepared re Edison Energy offer of 6000 trees –	Develor
	divides park into 12 units.	ment Plan
1998	3000 Edison Mission Energy trees planted on mid west side and near Eel Hole Ck.	File 1
1998	State Govt Pride of Place grant of \$110,000 received by Community Assoc. and Uni. for gravel walking path	File 1
1998, Nov	Application for Federation Community Projects grant - \$20,000 for Federation Lawn and Koorie Grove (includes concept drawings)	File 2
1998-99	Vic Model Power Boat Racing Club re-formed – about 10 current members use lake.	Ruth Place
1999, Jan	Committee proposed removal of blue gums with grub infestation, and plan for fern gully on west side of path.	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1999, March	Submission - Plan for Development of Mathison Park- prepared by Development Committee for Shire. Proposes Gippsland Flora and Fauna Park with bushlands and wetlands – for the Gippsland region, not just the Shire. Aims to enhance attractiveness of Churchill and encourage visits. Previous vision of botanic gardens seen as too narrow. Documents earlier	Develop ment Plan
:	plans in 1987, 90 and 93, none of which have been fully implemented. Proposes staged development for about 10 sections of park. Includes planting, path through deciduous trees, protection of remnant roadside vegetation, pest control, extended wetlands, vermin proof fence, bird hide, lookout platform, changes in water level, improved water quality, signs, information etc.	
999, July	No formal response to plan by Council.  Article by Reb do Source Day providing information on history of park and	01
	Article by Rob de Souza-Daw providing information on history of park and Wal Mathison and Bert Hyland. Mathison was Shire Secretary of Morwell Shire through period of rapid development. Sir Herbert Hyland was a leading figure in the National Party and leader from 1955 to 1964. He won 15 elections in the seat of Gippsland South and supported development of the	Churchi News, 15-7-99
999, August	region.  Grant of \$20,000 from State Govt Rural Communities Development Scheme	
	for visitor facilities (toilet etc).	F11. 0
999, lovember	Public forum with about 20 participants identified four botanical garden options for park. Some favoured Gippsland focus, some international focus. Wetland also supported.  Motion passed by committee for development of park with international focus and containing wetlands and elements of foreign, Australian, Victorian and	File 2
	Gippsland flora.	
2000, Feb	Field Nats survey reported increase in birds.	File 2

Date	Information /Activity	Source*	
	Fly Fishing Club keen to build small club room near Mackeys Rd.		
2000, March	Letter to lessee (Hall) requesting weed control.	File 2	
2000, March	, March Committee agreed to development of Koorie Grove and Arboretum in SW corner. Sketch of Koorie Garden, 7-7-00, attached.		
2000, June	Council delegation of certain powers to new Advisory Committee. Role to assist Council with planning and development of park as a regional park for the general community with an international focus  Budget allocations include \$8000 for maintenance and \$20,000 for Koorie	File 2	
2000?	Grove and Federation Lawn (arboretum)		
	Wetland proposal developed by Steve Kurec		
2001, Sept	Consultant team engaged to prepare management plan with Council, Committee and Friends.		

# \* Sources

File 1

Council file: Mathison Park CP939-0101 Part 1

File 2

Council file: Mathison Park CP939-0101 Part 2

Churchill News

15 July, 1999 (on File 2)

Development Plan

A Plan for the Development of Mathison Park, Mathison Park

Development Committee, 1999

Apex Plan

Plan for Mathison Park, 1987

**Short History** 

A Short History of the Land Designated 'Mathison Park' 1998, notes by

Tom Lawless, 1-7-98

Rob de Souza-Daw
Tom Lawless

Ruth Place

# Appendix 3. Notes on strategies, reports and files

Summary of information relevant to Mathison Park Management Plan

Document	Key information/issues
State-wide policies, s	
Parks and reserves statutory and policy documents: www.nre.vic.gov.au	<ul> <li>Many conventions, Acts, Regulations, policies and related documents affect the management of Victoria's parks and reserves. Some are relevant to open space in Churchill. A comprehensive list is provided on the DRNE web site under Parks &amp; Reserves - Statutory and Policy Framework</li> </ul>
Restoring our Catchments - Victoria's Draft Native Vegetation Management Framework, NRE, 2000	<ul> <li>Framework providing strategic direction for retention and enhancement of vegetation. Includes the goal of a net gain in native vegetation and actions including revegetation, protection, incentives, monitoring and research. Includes statement that the State Government's policy is to: "incorporate environmental and conservation considerations into all aspects of planning and build the principles of ecologically sustainable development into decision-making across the whole of Government."</li> </ul>
The Draft Victorian Pest Management Framework, 2001, NRE	<ul> <li>Proposes consistent approach to pest management on public and private land. Includes rapid response to new pest appearances, reducing pest impacts and focussing on results.</li> </ul>
Victorian Trails Strategy 2001- 2004 (draft) Victorian Trails Coordinating Committee, 2001	<ul> <li>Draft strategy providing details of existing trails, uses and benefits, and setting out a strategy for the future. Notes importance of short trails and attractive and diverse settings. Research indicates Victorians want trails with good surfaces, signs, information and services. Proposes well- managed major trails, completion of gaps and closing of trails that cannot be maintained.</li> </ul>
Play Area Development Policy for Local Govt in Victoria, Playgrounds and Rec. Assoc. of Victoria, 2001	<ul> <li>Describes role of playgrounds, and sets out principles for planning, siting and design. Includes detailed information on children's needs, safety, vandalism etc. and on open space planning. (See also relevant Australian Standards).</li> </ul>
2 Regional/Latrobe poli	cies, strategies and reports
Regional Catchment Strategy, 1997, West Gippsland Regional Catchment & Land	<ul> <li>Outlines natural resource management issues and processes across the region and specific to Regional Management Units (RMU), the programs to address regional priorities and the responsible agencies.</li> </ul>
Protection Board	<ul> <li>Details two phases. The first describes the condition, management and broad priorities of the region and analyses the costs of degradation based on economic, environmental and social impacts. The second outlines future resource management, develops coordination arrangements and monitoring and evaluation processes.</li> </ul>
Draft West Gippsland Native Vegetation Plan, 2000, West Gippsland CMA	<ul> <li>A strategic approach to native vegetation management in the West Gippsland catchment region. The plan focuses on privately owned land and was developed from a community and stakeholder consultative process.</li> </ul>
	<ul> <li>Identifies six key themes and details the responsible agent, guiding principles and specific actions and targets for their implementation. Briefly, these themes are; protect, sustain and enhance, revegetate and rehabilitate, inform and educate, utilise, monitor.</li> </ul>
	<ul> <li>Lists the priorities and principles of native vegetation management and hierarchy of actions. These are relevant to future planning at Mathison Park (see attached – p3).</li> </ul>
Latrobe City Corporate Plan 2000-2003	<ul> <li>Mission includes preservation of environmental assets and promotion of their significance.</li> </ul>
	<ul> <li>Environmental objectives include investigation of development potential of Mathison Park and implementation of Roadside Management Strategy.</li> </ul>
	Passive open space objectives include provision of diverse activities and

Document	Key Information/issues safe and comfortable facilities.
Latrobe City, Draft Public Open Space Policy, 1998	Includes open space categories of regional, town, district and neighbourhood. <u>Regional</u> defined as attracting public participation from across and beyond shire. <u>Town</u> relates to major town facility. [Mathison is presumably 'Town' at present.]
	<ul> <li>Principles include equity, good access, community participation, quality and responsive to changing needs.</li> </ul>
	Churchill has high proportion of people in 10-14, 15-19 and 20-24 age groups.
La Trobe Shire - Towards a Shire Environment Policy, 2000	<ul> <li>Includes outline of relevant policies and strategies including the Regional Catchment Strategy and Victoria's Biodiversity Strategy.</li> </ul>
2000	Focus on sustainable development and conservation of diversity.
	<ul> <li>For Mathison Park, relevant priorities include improved water quality and increased indigenous vegetation, particularly along waterways.</li> </ul>
Latrobe City Stormwater Management Plan - Workshop No. 1, 2001	<ul> <li>Threats include residential land use runoff (sediment, nutrients etc), road runoff (litter, hydrocarbons) and degraded waterways (weeds, vegetation loss, poorly controlled stock etc).</li> </ul>
	<ul> <li>Values include in-stream habitat, remnant vegetation and landscape and recreational amenity. The study aims to enhance these and other values.</li> </ul>
Latrobe Region Nature Guide, 2001, Latrobe Valley Field Naturalists Club (leaflet)	<ul> <li>Guide to sites with natural values. Includes Mathison Park and other reserves in region including Moe Botanic Gardens and reserves at Moe and Morwell.</li> </ul>
3 Local policies, strated	iles and reports
A Plan for the Development of Mathison Park, Mathison Park Development Committee, 1999	Submission prepared by Development Committee for Shire. Proposes Gippsland Flora and Fauna Park with bushlands and wetlands – for the Gippsland region, not just the Shire. Aims to enhance attractiveness of Churchill and encourage visits. Previous vision of botanic gardens seen as too narrow. Documents earlier plans in 1987, 90 and 93, none of which have been fully implemented.
	<ul> <li>Proposes staged development for about 10 sections of park. Includes planting, path through deciduous trees, protection of remnant roadside vegetation, pest control, extended wetlands, vermin proof fence, bird hide, lookout platform, changes in water level, improved water quality, signs, information etc.</li> </ul>
Council file: Mathison Park CP939-0101 Parts 1 and 2	Detailed information on park. See notes in file: report notes1

Date:

Thursday 15 November, 5.00 - 7.00 pm

Location:

Crofton Hatsell Room, Monash Uni, Churchill

Participants Cr White, Cr Hanning, Cr Middlemiss, Anton Wray (Advisory

Committee). David Addis (Hazelwood Power), John Lee (Churchill Lions/ Friends group), Ruth Place (Friends of Mathison Park), Reg Grisotto (Churchill Lions), Paul Burns (Edison Mission Energy), Ken Harris (Advisory Committee), Tom Lawless (Advisory Committee), Phillip

Rayment (Latrobe Valley Field Nat's Club)

Also Robin Crocker, Michael Sandford and Andy Jones - Consultants

# Agenda

#### 1. Welcome and introduction to management plan project

Cr White welcomed participants and introduced project. He indicated that it is important to incorporate Council vision for park into plan, i.e. international, national, state and local planting themes. Park is seen as potentially most important park in municipality, drawing visitors from Valley and further afield.

# 2. Opportunities and directions for the future. Discussion items summarised.

#### Recreation

Important to offer range of recreation opportunities, eg, tracks, boardwalk, playground, sightseeing, fishing.

May need to limit areas used for model boats and fishing.

Playground facilities need to be audited for compliance with Australian Standards - Council to arrange.

#### Water quality

Some see as important issue, eg blue-green algae problem at times.

#### Roadside land

Agreed that remnant vegetation along western boundary needs to be carefully managed. Agreed that land should be transferred to park and managed by Committee. Management plan to include management guidelines.

Agreed that loop walking tracks should be developed to increase use and enjoyment. Tracks should keep away from southeast part of lake for wildlife protection.

Opportunities to provide tracks - on east side of lake, linking to Uni, along old homestead track, through Gippsland plantings and around west boundary.

#### Wetland

Plan to incorporate components of previous concept plan.

Litter traps important on creek - refer to stormwater strategy.

# Vegetation

Options discussed. Costs of establishing and maintaining major plantings an important consideration. Ecological basis and suitability of plants for site also needs to be considered. Some weeds important, eg blackberry, broom, willows and introduced cumbungi. Some of these are on roadside reserves and away from visitor areas.

#### Staging

Staging important - development may take decades.

Start by building on existing strengths.

Pasture areas may remain grazed pasture for significant time.

# Appendix 5 SWOT analysis

Steering Committee SWOT analysis

9 October 2001

Strengths	Weaknesses	Opportunities	Threats/ Constraints
<ul> <li>Lake</li> <li>Locality – good access</li> <li>Pathways (high use)</li> <li>Large size</li> </ul>	Water flow –     blocked     Degraded creek     Weed growth	Increase range of recreation opportunities     Improve water quality     Develop paddocks	Willows and other weeds including introduced Cumbungi     Limited finance     Time required
<ul> <li>Varied topography</li> <li>Vistas to hills</li> <li>Fishing</li> <li>Bird life (increased with planting)</li> <li>Good climate, fertility</li> <li>Remnant vegetation (Tramway rd and waterholes)</li> <li>Tree planting / diversity</li> <li>Part of linear park through town</li> </ul>		<ul> <li>Increase wetlands, eg nesting areas</li> <li>Attract more visitors</li> <li>Provide regional facility</li> <li>Nature study</li> <li>Building for committee meetings and user groups</li> <li>Promote environmental values, Koorie garden</li> <li>Productive partnership between council and Committee of Management</li> </ul>	Vandalism (some)     Limited community involvement/ volunteers     Security some trees close to paths

# Appendix 6 Native plants growing at Mathison Park

# Prepared by Ken Harris 24th October 2001

#### PTERIDOPHYTA - Ferns

Blechnaceae - Water-ferns

Blechnum minus

Soft water-fern

Dennstaedtiaceae

Hypolepis rugosula

Ruddy ground-fern

Azollaceae

Azolla ficuloides

Pacific azolla

#### MONOCOTYLEDONEAE

#### Centrolepidaceae

Centrolepis strigosa

Hairy centrolepis

#### Cyperaceae - Sedges

Carex appressa Carex gaudichaudiana Carex inversa

Eleocharis acuta Eleocharis sphacelata Gahnia radula Tall sedge Sedge Sedge Common spike-rush Tall spike-rush Thatch saw-sedge

#### Hydrocharitaceae

Ottelia ovalifolia

Swamp lily

#### Juncaceae - Rushes

Juncus sarophorus Juncus sp. Rush Rush

#### Liliaceae - Lilies

Arthropodium strictum
Burchardia umbellata
Caesia calliantha
Chamaescilla corymbosa
Dianella longifolia
Dianella revoluta
Hypoxis hygrometrica
Hypoxis vaginata
Thysanotus patersonii
Tricoryne elatior
Wurmbea dioica

Chocolate lily
Milkmaids
Blue grass-lily
Blue stars
Pale flax-lily
Black-anther flax-lily
Golden weather-glass
Yellow star
Twining fringe-lily
Yellow rush-lily
Early Nancy

#### Orchidaceae - Orchids

Diuris corymbosa Microtis parviflora Microtis unifolia Pterostylis nutans Wallflower orchid Small-flower onion-orchid Common onion- orchid Nodding greenhood Thelymitra pauciflora

Slender sun-orchid

Poaceae - Grasses

Danthonia procera Danthonia racemosa Poa labillardieri Stipa rudis Themeda triandra

Tall wallaby-grass Wallaby-grass Tussock-grass Spear grass Kangaroo grass

Potamogetonaceae

Potamogeton tricarinatus

Floating pondweed

Typhaceae

Typha domingensis

Cumbungi

Xanthorrhoeaceae

Lomandra filiformis Lomandra longifolia Wattle mat-rush Spiny-headed mat-rush

DICOTYLEDONEAE

**Apiaceae** 

Centella cordifolia

Centella

Asteraceae - Daisies

Cotula coronopifolia Euchiton involucratus Ozothamnus ferrugineus Senecio glomeratus Water buttons Common cudweed Tree everlasting Annual fireweed

Clusiaceae

Hypericum gramineum

Small St John's wort

Convolvulaceae - Bindweeds

Dichondra repens

Kidneyweed

**Droseraceae - Sundews** 

Drosera peltata Drosera whittakeri Pale sundew Sundew

Fabaceae - Peas

Bossiaea prostrata Daviesia latifolia Kennedya prostrata Creeping bossiaea Bitter-leaf Running Postman

Goodeniaceae

Goodenia ovata

Hop goodenia

Haloragaceae - Raspworts

Gonocarpus tetragynus

Common raspwort

Linaceae - Flaxes

j

Linum marginale

Native flax

#### Mimosaceae - Wattles

Acacia mearnsii Acacia melanoxylon Acacia verniciflua Black wattle Blackwood Varnished wattle

#### Myrtaceae - Myrtles

Eucalyptus bridgesiana
Eucalyptus ovata
Eucalyptus pauciflora
Eucalyptus radiata
Eucalyptus viminalis
Leptospermum continentale

Apple box Swamp gum White sallee Narrow-leaved peppermint Manna gum Prickly tea-tree

#### Onagraceae

Epilobium pallidiflorum

Showy willow-herb

#### Pittosporaceae

Billardiera scandens Bursaria spinosa Rhytidosporum procumbens Common apple-berry Sweet bursaria Mary's flower

#### Polygonaceae

Persicaria decipiens

Slender knotweed

#### Rosaceae - Roses

Achaena echinata Rubus parvifolius Sheep's burr Small-leaf bramble

#### Rubiaceae

Opercularia ovata Opercularia varia Broad-leaf stinkweed Variable stinkweed

#### Santalaceae

Exocarpus cupressiformis

Cherry ballart

#### Scrophulariaceae

Veronica gracilis

Slender speedwell

#### Thymelaeaceae

Pimelea humilis

Common rice-flower

#### Violaceae - Violets

Viola hederacea

lvy-leaf violet

# Appendix 7. Native vegetation management, priorities and principles

Source: Draft West Gippsland Native Vegetation Plan, 2000, West Gippsland CMA

#### **Priorities:**

- · protect and reconstruct existing remnant vegetation
- · protect and reconstruct the habitats of rare and threatened species
- protect and increase quality and area of native vegetation revegetation
- protect and establish corridors

# **Guiding Principles:**

- maintenance of ecological processes
- · retention and management of native vegetation
- · protection of viable habitats
- · conservation of adequate proportions of non-threatened vegetation communities
- integration with land protection and resource use
- large remnants are inherently more important than a similar area made up of patches (other things being equal)
- · landscape approach based on specific region or sub-unit within
- multiple patches of the same vegetation community must be retained across geographic range
- · recognition of role of remnants within landscape

## **Hierarchy of Actions:**

- 1. protection of remnants
- 2. management of existing remnants
- 3. enhancement of degraded remnants
- 4. enhancement of connectivity and integrity through re-creation of habitat
- 5. re-creation of isolated areas of habitat
- 6. revegetation works of lower orders

See also other publications for additional detail, eg Muyt, A. 2001. Bush Invaders of South-east Australia

# Appendix 8. Guidelines for roadside vegetation management

Source: La Trobe Shire Roadside Management Plan, 1998

# Guidelines for roadside management in Latrobe:

- Unless Municipal Fire Prevention Plan specifies otherwise, retain all habitat components on the roadside.
- Consult with all authorities and take into account firebreaks, wildlife corridors, drains, utility services, historical and cultural sites etc.
- Plan re-vegetation one year in advance to allow for seed collection from locally adapted plants.
- Consult NRE before removing any vegetation from medium or high conservation value roadsides.
- Clean all machinery before starting work at a new site.

# Guidelines for management of high conservation grassy woodlands:

Remove road spoil.

#### **Burning:**

- Implement mosaic pattern of burning in late summer or early autumn at a frequency of no less than 6 or 7 years.
- Burn into the wind for a hotter cleaner burn.
- Do not use mineral earth fire breaks

#### Weeds:

- Allow natives to set seed in late summer, then mow with a high cut and remove cut grass by raking and baling.
- Selectively spot spray to reduce specific weed infestations when natives are dormant in winter or where they are unaffected by herbicides.
- Weed seed sources should be removed prior to burning.
- Undertake weed control annually.

#### Conservation:

- Use local seed
- No grazing
- Avoid any soil disturbance

# Guidelines for management of old isolated trees:

- Prune for safety.
- Avoid root damage.
- Slash around base in Spring to reduce weed infestation and fuel load.
- Plan a replanting program prior to the removal of diseased or dangerous trees.

# Appendix 9. Animals at Mathison Bark

Animals Recorded at Mathison Park, Churchill to 29th January 2002

List compiled by Ken Harris, with major contributions from Rob de Souza-Daw and Latrobe Valley Field Naturalists Club

Chordata - VERTEBRATES

Aves - BIRDS

Accipitriformes

Accipitridae

Aquila audax Elanus notatus Circus approximans

Wedge-tailed eagle Black-shouldered kite Swamp harrier

Falconidae - Falcons

Falco berigora Falco cenchroides

Brown falcon Nankeen kestrel

Anseriformes

Anatidae - Ducks, Geese and Swans

Anas castanea
Anas gracilis
Anas superciliosa
Aythya australis
Chenonetta jubata
Cygnus atratus
Tadorna tadornoides

Chestnut teal
Grey Teal
Pacific black duck
Hardhead
Australian wood duck
Black swan

Australian shelduck

Charadriiformes

Charadriidae - Lapwings and Plovers

Vanellus miles

Masked lapwing

Scolopacidae-Sandpipers

Gallinago hardwickii

Latham's snipe

Ciconiiformes

Ardeidae - Herons

Ardea novaehollandiae Ardea pacifica

Egretta alba Egretta garzetta White-faced heron White-necked heron Great egret Little egret

Plataleidae - Ibis and Spoonbills

Platalea flavipes Threskiornis molucca Threskiornis spinicollis Yellow-billed spoonbill Sacred ibis Straw-necked ibis

Columbiformes

Columbidae - Doves and pigeons

Phaps chalcoptera \*Streptopelia chinensis ·

Common bronzewing Spotted dove

Coraciiformes

Alcedinidae - Kingfishers

Dacelo novaeguineae Todiramphus sanctus Laughing kookaburra Sacred kingfisher

Gruiformes

Rallidae - Rails

Fulica atra Gallinula tenebrosa Porphyrio porphyrio Eurasian coot Dusky moorhen Purple swamphen

Passeriformes - Passerines

Acanthizidae - Thornbills and Scrubwrens

Acanthus chrysorrhoa Acanthus lineata Acanthiza nana Acanthus pusilla Acanthus reguloides Yellow-rumped thornbill
Striated thornbill
Yellow thornbill
Brown thornbill
Buff-rumped thornbill

Campephagidae - Cuckoo-Shrikes

Coracina novaehollandiae

Black-faced cuckoo-shrike

Corvidae - Crows and Ravens

Corvus coronoides Corvus mellori Australian raven Little raven

#### Cracticidae - Butcher-Birds

Cracticus torquatus Gymnorhina tibicen Grey butcherbird Australian magpie

Grallinidae

Grallina cyanoleuca

Magpie lark

Hirundinidiae - Swallows

Hirundo neoxena

Welcome swallow

Maluridae - Fairy-wrens

Malurus cyaneus

Superb fairy-wren

Meliphagidae - Honeyeaters

Acanthorhynchus tenuirostris Anthochaera carunculata Lichenostomus chrysops Manorina melanocephala Melithreptus lunatus

Eastern spinebill
Red wattlebird
Yellow-faced honeyeater
Noisy miner
White-naped honeyeater

Motacillidae - Pipits and Wagtails

Anthus novaeseelandiae

Richard's pipit

Muscicapidae - Thrushes and Flycatchers

Colluricincla harmonica Pachycephala pectoralis Petroica multicolor Petroica phoenicea Rhipidura fuliginosa Rhipidura leucophrys Turdus merula Grey shrike-thrush Golden whistler Scarlet robin Flame robin Grey fantail Willie wagtail Common blackbird

Pardalotidae - Pardalotes

Pardalotus punctatus Pardalotus striatus

Spotted pardalote Striated pardalote

Ploceidae - Weaver finches

Neochmia temporalis

Red-browed finch

Sturnidae - Starlings

\*Acridotheres tristis

\*Sturnus vulgaris

Common mynah Common starling

## Sylviidae - Warblers

Acrocephalus stentoreus Cisticola juncidis Megalurus gramineus Clamorous reed-warbler Zitting cisticola Little grassbird

#### **Pelicaniformes**

#### Pelicanidae - Pelicans

Pelicanus conspicillatus

Australian pelican

# Phalacracoracidae - Cormorants

Anhinga melanogaster
Phalacracorax carbo
Phalacracorax melanoleucos
Phalacracorax sulcirostris

Darter
Black cormorant
Little pied cormorant
Little black cormorant

# **Podicipediformes**

#### Podicipedidae - Grebes

Podiceps novaehollandiae

Australasian grebe

### **Psittaciformes**

#### Cacatuidae - Cockatoos

Cacatua galerita Cacatua roseicapilla Calyptorhynchus funereus Callocephalon fimbriatum Sulphur-crested cockatoo Galah Yellow-tailed black cockatoo Gang-gang cockatoo

## Loriidae - Lorikeets

Glossopsitta concinna

Musk lorikeet

## Platycercidae - Rosellas

Platycercus elegans Platycercus eximius Crimson rosella Eastern rosella

#### Strigiformes

#### Tytonidae – Barn owls

Tyto alba

Barn owl

#### Mammalia - MAMMALS

#### Diprotodonta

# Macropodidae - Kangaroos

Macropus gigantea

Eastern grey kangaroo

#### Vombatidae - Wombats and Koala

Phascolarctos cinereus

Koala

#### Carnivora

#### Canidae

\*Vulpes vulpes

Fox

#### Ambhibia - AMPHIBIANS

#### Anura - Frogs

# Hylidae - Tree frogs

Litoria ewingii Litoria verreauxii

Southern brown tree frog Whistling tree frog

#### Myobatrachidae

Crinia signifera Lymnodynastes peroni Lymnodynastes tasmaniensis Eastern froglet Striped marsh frog Spotted marsh frog

#### Reptilia - SNAKES AND LIZARDS

#### Chelonia - Turtles and tortoises

#### Chelidae - Long-necked tortoises

Chelodina longicollis

Eastern long-necked tortoise

#### Squamata/Sauria - Lizards

#### Scincidae - Skinks

Eulamprus tympanum Lampropholis delicata Nanoscincus maccoyi Southern water skink Delicate skink MacCoy's skink Pseudemoia rawlinsonii Saproscincus mustelinus Rawlinson's skink Weasel skink

# Squamata/Serpentes - Snakes

# Elapidae - Groove-fanged snakes

Austrelaps superbus Pseudechis porphyriacus Copperhead Red-bellied black snake

Pisces - FISH

#### Anguilliformes

# Anguillidae - Freshwater eels

Anguilla australis

Short-finned eel

# Arthropoda - ARTHROPODS

#### Arachnida - ARACHNIDS

Acari - MITES .

#### Erythraeidae

Leptus sp.

Mite

#### Araneida - SPIDERS

# Araneidae - Orb weavers

Araneus circulisparsus Araneus dimidiatus Araneus eburnis Eriophora biapicata Eriophora pustulosa Phonognatha graeffei Orb-web spider
Orb-web spider
Orb-web spider
Orb-web spider
Orb-web spider
Leaf-curling spider

#### Clubionidae - Sac spiders

Clubiona sp.

Stout sac spider

#### Desidae

Badumna insignis Badumna longinqua Black house spider Small black house spider

#### Heteropodidae - Huntsmen

Delena cancerides Isopoda montana

Communal huntsman Huntsman

Lamponidae

Lampona cylindrata

White-tailed spider

Lycosidae - Wolf spiders

Trochosa sp.

Wolf spider

Nicodamidae - Red-and-black spiders

Nicodamus semiflavus

Red-and-black spider

Pisauridae

Dolomedes sp.

Fishing spider

Salticidae - Jumping spiders

Hypoblemum sp.

Jumping spider

Tetragnathidae - Long-jawed spiders

Tetragnatha ferox

Long-jawed spider

Scorpiones - Scorpions

Scorpionidae - Scorpions

Cercophonius squama

Wood scorpion

Chilopoda - CENTIPEDES

Scolopendromorpha

Scolopendridae

Cormocephalus aurantipes

Centipede

Crustacea - CRUSTACEANS

Decapoda

Atyidae

Paratya australiensis

Freshwater shrimp

Parastacidae

Engaeus hemicirratulus

Burrowing crayfish

Insect - INSECTS

Blattodea - Cockroaches

Blaberidae

Laxta granicollis

Rock cockroach

Coleoptera - Beetles

Cerambycidae - Longhorn beetles

Phoracantha synonyma

Longicorn beetle

Hemiptera – Bugs

Belostomatidae - Giant water-bugs

Diplonychus rusticus

Giant water-bug

Notonectidae - Water boatmen

Anisops sp. Enithares bergtrothi

Backswimmer Backswimmer

Hymenoptera - Bees, wasps and ants

Formicidae - Ants

Myrmecia forficata

Bull ant

Lepidoptera - Butterflies and Moths

Anthelidae

Anthela sp.

Satyridae – Brown butterflies

White-stemmed gum-moth

Geitoneura klugi

Heteronumpha merope

Klug's xenica Common brown

Mollusca - MOLLUSCS

Gastropoda

Stylommatophora - SLUGS AND SNAILS

Planorbidae - Orb snails

Glyptophysa cf. gibbosa Helicorbis australiensis Freshwater snail Freshwater snail



