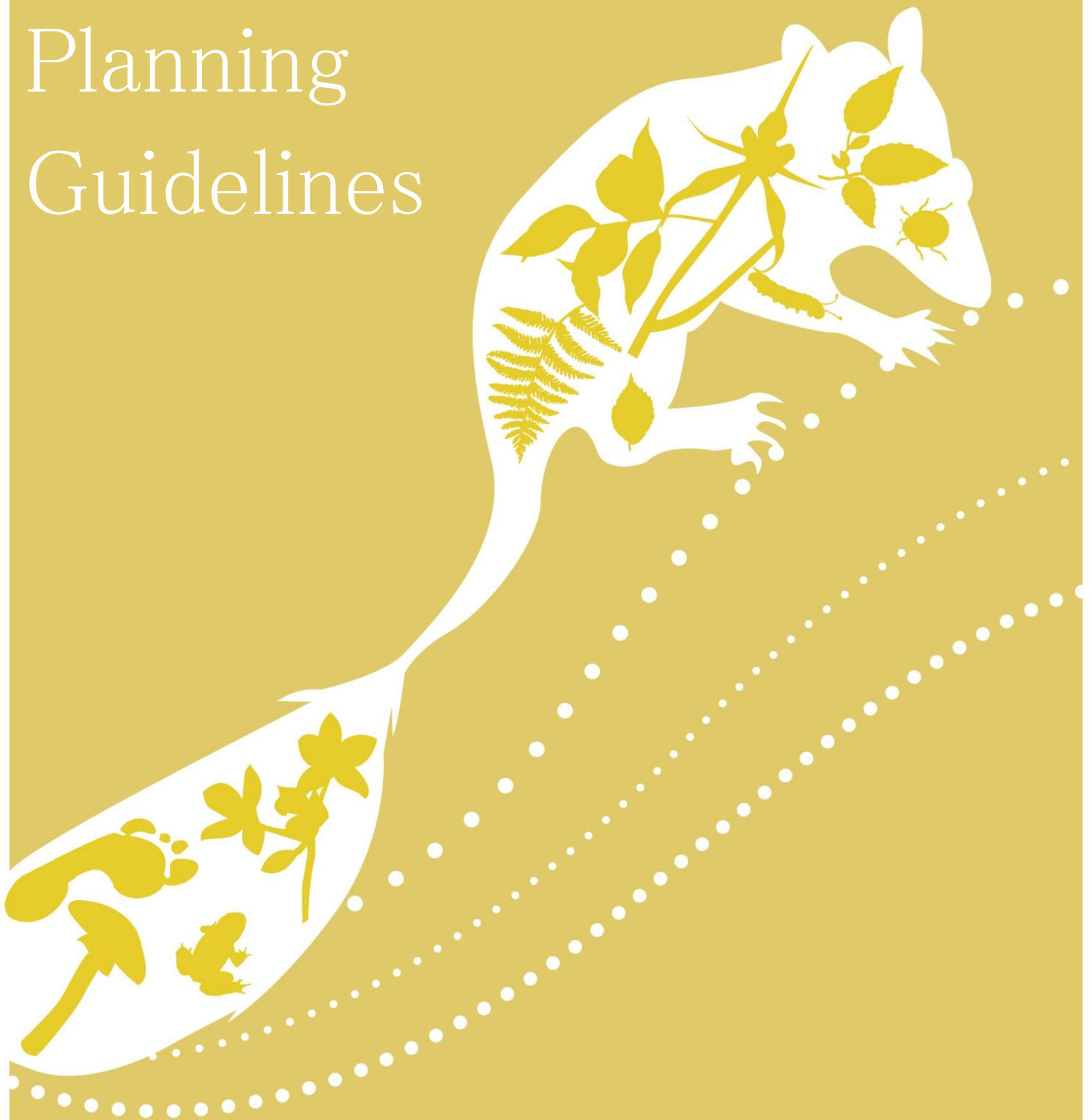


Environmental Works



# Bushland & Wetland Reserves Prioritisation & Planning Guidelines



Prepared: August 2013



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# 1 Executive Summary

Nillumbik Shire Council is responsible for the management of 99 bushland and wetland reserves covering an area of 495 hectares. The primary purpose of these reserves is for the conservation of natural values; however they are also important from a social, recreational, cultural and historical perspective. These reserves are home to an array of native plants and animals, and often provide the last remaining refuges for threatened and endangered species in a fragmented landscape.

The significance of these reserves is under constant threat from a range of processes such as weed invasion, predation by and competition with pest animals, pressure from residential development, altered fire regimes and habitat destruction.

On an annual basis Council develops works programs for a number of these reserves including activities such as weed control, revegetation, fire prevention, trail maintenance, fencing and pest animal management to protect and enhance their biodiversity and community values.

Historically these annual works programs have been developed in response to a range of factors such as community expectations and pressures, management of threatened species, presence of threatening processes or the presence of an active Friends Group.

However with limited budget and resources, a more strategic and consistent process is required to ensure that Council's bushland and wetland reserves are managed for their long-term sustainability, on-ground actions are prioritised and that Council's resources are used efficiently and effectively.

These guidelines will assist Council to holistically plan management actions by ensuring that reserves are prioritised for management according to their biodiversity, social and cultural values, the threats that may impact upon them and that Council's finite resources are used to achieve best long-term outcomes.

These guidelines also establish a level of service for the management of these reserves, as well as providing a uniform methodology for Council officers to plan and implement on-ground conservation programs.



**Figure 1: Gawa Reserve, Kangaroo Ground**



## 2 Introduction

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### 2.1 Council's Bushland Reserves

Nillumbik Shire Council is responsible for the management of 99 environmentally significant or bushland and wetland reserves covering an area of 495 hectares (Appendices A & B). Council's bushland and wetland reserves are located on both Council freehold land and Crown Land Reserves where Council is the Committee of Management.

These reserves cover a diverse range of habitats from degraded urban blocks to remnant bushland across Nillumbik's peri-urban landscape. Many of these bushland and wetland reserves are also connected with areas of open space such as ovals or recreational trails. Council also provides on-going support for 21 Friends Groups working throughout the Shire on Council-managed reserves (Appendix F).

Nillumbik's bushland reserves are all located within the Highlands Southern Fall (HSF) Bioregion. The HSF bioregion occurs through the foothills along the southern edges of the Great Dividing Range from Melbourne to East Gippsland and much of it is undeveloped areas of public land. This means that the Shire of Nillumbik is a developed area in a relatively undeveloped bioregion.

The local topography and soils of Nillumbik support indigenous vegetation that is predominantly of a forest type. The forests on the hills are typically drier and dominated by Box and Stringybark trees with an open, grassy understory. In the north of the Shire where altitude increases, vegetation is generally taller and denser. Therefore, a continuum exists from south to north, roughly consistent with rainfall and altitude where the vegetation changes from drier, grassy open forest towards taller denser forest with increased shrub and canopy vegetation.

Forests on the floodplains are dominated by Manna Gums and thicker riparian forest with more understorey trees and shrubs. Throughout many parts of the Shire such as Eltham, Diamond Creek and Greensborough, much of the original vegetation has been cleared leaving reserves and roadsides with many of the last remnants of the original vegetation of the area. However, in more rural parts of the Shire, bushland reserves often form habitat corridors when adjoining remnant vegetation on privately owned land or other publically owned land.

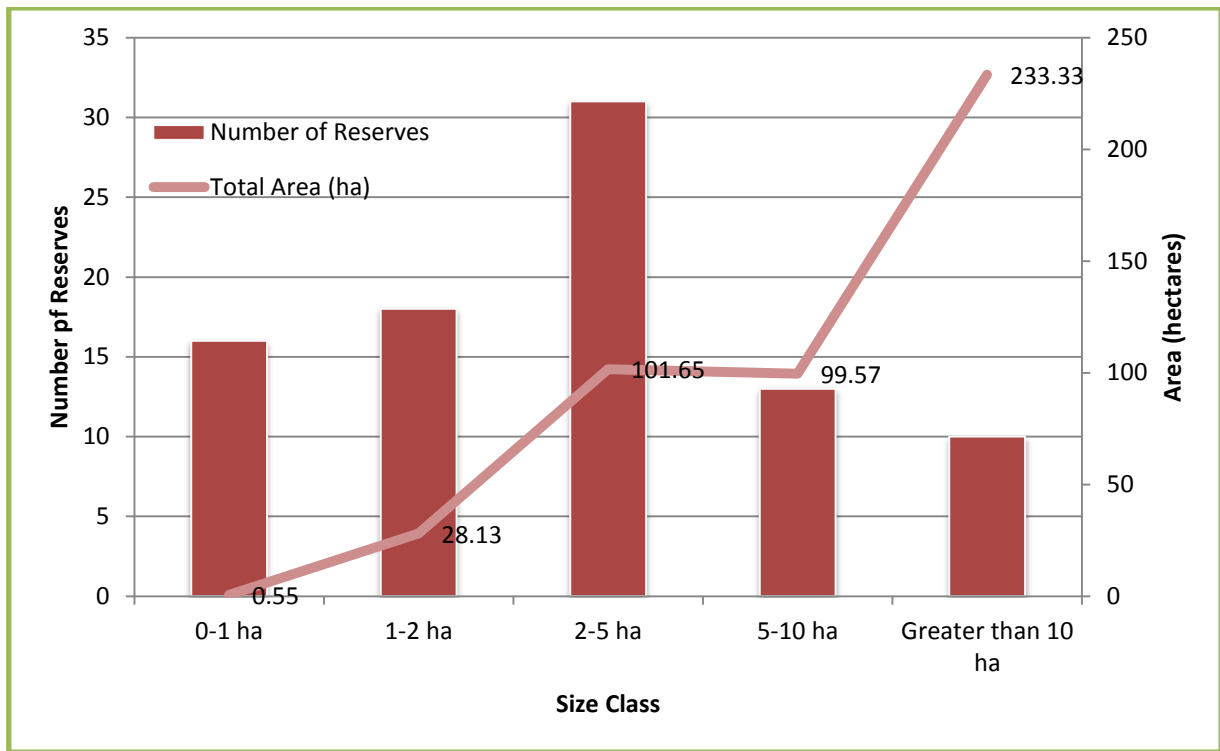
The Ecological Vegetation Classes (EVCs) most commonly found in Council's bushland and wetland reserves within the Shire are approximately consistent with those EVCs most commonly occurring in the Shire including, from most to least common:

- Grassy Dry Forest
- Valley Grassy Forest
- Herb-rich Foothill Forest
- Heathy Dry Forest
- Riparian Forest
- Box-Ironbark Forest



Bushland often refers to land *which has vegetation that is either a remnant of the natural vegetation on the land or, if altered, is still representative of the structure and floristics of the native vegetation* (Manningham 2012). Bushland reserves can have areas of native vegetation, vegetated or open wetlands or waterways (rivers, streams, and creeks), rock outcrops, bare ground (generally sand or mud).

The majority of Council’s bushland reserves are smaller than 5 ha (Figure 2). The largest of Council’s bushland reserves is Bunjil Reserve in the Panton Hill Bushland Reserves System which covers an area of 67ha. The smallest of Council’s bushland reserves is Danita Drive Reserve which covers an area of 0.1ha.



**Figure 2: Number and Area of Council's Bushland Reserves by Size Class**

Particularly within the more urban areas of the Shire, Council’s bushland reserves are located within fragmented landscapes, and many reserves are surrounded by urban and peri-urban development. This often increases their conservation importance, as many reserves are the last remaining refuge for rare, threatened or endangered species.

In some cases the reserves are grouped together for management purposes based on their geography, proximity or values. This is the case for reserves such as the Panton Hill Bushland Reserves or the Eltham Copper Butterfly Reserves, This approach simplifies the need to develop multiple management plans and can often streamline the delivery of on-ground works programs.

## 2.2 Why are Council’s bushland reserves significant?

The primary value of Council’s bushland reserves is for the conservation of natural values in a peri-urban setting. Many of Council’s bushland reserves support threatened or endangered vegetation communities, as well as providing habitat for rare or threatened

species. These reserves are home to a number of threatened species at a national, state and local level such as the Eltham Copper Butterfly (*Paralucia pyrodiscus lucida*), Brush-tailed Phascogale (*Phascogale tapoatafa*), Rosella Spider Orchid (*Caladenia rosella*) and Clover Glycine (*Glycine latrobeana*).

Many of Council's bushland reserve also support low-impact recreation and have high community values, with many reserves being cared for by active Friends Groups. The reserves also have aesthetic and scientific/educational value, as well as both European and Indigenous cultural heritage values.

Council's bushland reserves are significant because they:

- Have important natural values including conservation of biodiversity.
- Provide important habitat for native plants and animals.
- Contribute to corridors for the movement of migratory and nomadic animals, particularly birds and arboreal mammals.
- Support some of the last remaining populations of threatened species such as the Eltham Copper Butterfly or Clover Glycine.
- Provide protection and security for native vegetation from development.
- Provide a 'green space' in the built environment, contributing to the landscape quality and scenic amenity of peri-urban areas as well as providing mental health benefits.
- Contain waterways and water bodies which support aquatic biodiversity and which also contribute to improved water quality.
- Enable residents to undertake recreational pursuits in a bushland setting.
- Provide context and protection for Aboriginal and European cultural heritage sites.
- Are important for scientific studies, providing a record of the original landscape and vegetation and the changes wrought by development.
- Are an important educational resource, often the first point of contact with nature for many residents and providing nearby schools and other educational institutions with natural areas which can be visited and studied.
- Provide a range of other ecosystem functions and services, including carbon cycling and the trapping of nutrients.
- Provide opportunities for the community through environmental groups such as Friends Groups to actively work together on a common interest.



**Figure 3: Eltham Copper Butterfly**

## 2.3 Environmental Works Team

The management and maintenance of Council's bushland reserves and wetlands is undertaken by Council's Environmental Works (EW) Team. As managers of bushland, wetland and conservation reserves, the EWT is responsible for conserving and enhancing the values of this land for future generations. To achieve this, EW undertakes the roles of both land manager and planner to ensure these significant areas are protected. EW works in partnership with a variety of other internal teams such as Environmental Planning and Open Space Maintenance, as well as external agencies such as Melbourne Water and the Department of Environment and Primary Industries, and community group and residents.

The vision for Council's Environmental Works Team is:

*Council's bushland reserves, wetlands and significant roadsides play an important role in landscape scale ecosystem connectivity and resilience, and provide a focus for the community to take action and protect biodiversity.*

To achieve this vision EW has established a Strategic Plan 2012 - 2016 which outlines the units Goals and Objectives of the unit. Figure 4 below outlines the planning framework for the EW.



**Figure 4 : Environmental Works Planning Framework**

EW develops yearly works plans for a number of the bushland reserves. Historically, yearly works plans have been developed in response to a number of factors including:

- Community expectations and pressures
- Presence of rare or threatened species or communities

- Presence of threatening processes
- Conservation value of the reserve
- Presence of an active Friends Group
- On-going historic management of the reserves
- Development of a Conservation Management Plan

These works plans are then awarded to contractors on the EW Contractor Panel for implementation through a tender process consistent with Nillumbik's Procurement Policy. Officers from the EW then monitor the progress/success of the implementation of the works plans through quarterly site visits and meetings with the responsible contractor.

Whilst the EWU aims to be proactive in the development of yearly works plans, adhoc works are often still required often in response to community requests, climatic events or new and emerging threats, and these are managed through general works specifications which are then passed onto contractors to implement.



**Figure 5: Pea Flower**



### 3 Legislative Drivers & Council Plans

EW manages Council's Bushland Reserves in response to a number of legislative and local policy drivers.

Level	Legislation	Significance to Bushland Reserve Management
National	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>	The EPBC Act is the Federal Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. The EPBC Act applies to reserves where proposed modifications or projects may have a significant impact on matters of national environmental significance.
	<i>Catchment and Land Protection Act 1994</i>	The <i>Catchment and Land Protection Act 1994</i> (CaLP Act) provides a framework for the integrated management and protection of catchments. It encourages all landowners of either private and public land to take all reasonable steps to avoid causing or contributing to land degradation.
State	<i>Flora and Fauna Guarantee Act 1988</i>	<p>The Flora and Fauna Guarantee Act 1988 (FFG Act) was legislated to ensure the continued survival of all Victorian species of flora and fauna and all Victorian communities of plants and animals. The Act builds on broader national and international policy, including the principles of biodiversity conservation.</p> <p>A number of threatened species of flora and fauna, and communities listed under the FFG Act occur with Council's reserves, these include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Eltham Copper Butterfly <i>Paralucia pyrodiscus lucida</i></li> <li>• Brush-tailed Phascogale <i>Phascogale tapoatafa</i></li> <li>• Powerful Owl <i>Ninox strenua</i></li> <li>• Rosella Spider Orchid <i>Caladenia rosella</i></li> <li>• Matted Flax-lily <i>Dianella amoena</i></li> <li>• Clover Glycine <i>Glycine latrobeana</i></li> </ul>
	Country Fire Authority Act	Section 43 of the <i>Country Fire Authority Act 1958</i> requires public authorities, councils and VicRoads to take all practicable steps to prevent and minimise fires or the spread of fires on land or roads under their control or management.
	The Permitted clearing of native vegetation – Biodiversity assessment guidelines 2013	The Permitted clearing of native vegetation – Biodiversity assessment guidelines outline how impacts on Victoria's biodiversity are assessed when an application to remove native vegetation is lodged. The guidelines are an incorporated document in all Victorian planning schemes. The guidelines are applied alongside other requirements of the planning scheme when an application for a permit to remove native vegetation is considered by the responsible authority.
	Draft Port Phillip and Westernport Regional Catchment Management Strategy 2013	The purpose of the draft RCS is to protect the environmental assets that are the cornerstones of healthy and resilient ecosystems in the Port Phillip and Western Port region - native vegetation, native animals, waterways and wetlands, the hinterland, coasts and marine waters;
Regional	Port Phillip & Westernport Native Vegetation Plan 2006	The PPW Native Vegetation Plan aims to establish a coordinated and strategic approach to managing the region's native vegetation, consistent with the Native Vegetation Framework. It seeks to establish regional priorities and targets for retaining, protecting, enhancing and restoring native vegetation, but also seeks to provide direction to authorities who consider permit applications to clear native vegetation.
	Council Plan 2013 - 2017	<p>The Council Plan provides the strategic direction for the management of all Council related activities. A number of strategies within the Council Plan relate to the conservation and management of bushland and wetland reserves, these include:</p> <ul style="list-style-type: none"> <li>• We will work to protect the Shire's biodiversity and ensure that ecosystems are</li> </ul>

Level	Legislation	Significance to Bushland Reserve Management
		<p>healthy, resilient, productive and connected across the landscape</p> <ul style="list-style-type: none"> <li>We will provide leadership and opportunities for our community to participate in the conservation of natural resources through best practice land management</li> <li>We will responsibly manage our conservation reserves and open spaces with an emphasis on fire prevention and weed eradication</li> </ul>
	Biodiversity Strategy 2012	Council's Biodiversity Strategy provides the strategic direction for biodiversity management across Nillumbik to inform programs, standards and targets for the Shire. It seeks to develop a coordinated approach to ensure that ecosystems are healthy, resilient, productive and connected across the landscape for future generations. The Strategy identifies threats to ecosystem functions and opportunities to enhance and protect these functions.
	Roadside Management Plan 2012	Council's Roadside Management Plan is aimed at focusing roadside management activities on the major impacts and management issues of roadsides within the current legislative and policy context and with the assistance of community sector comment. It seeks to balance the sometimes competing interests on roadsides between human safety, fire risk, management of remnant native vegetation located on roadsides and ensuring a safe and efficient transport network and utility corridor
	Environmental Education Strategy 2012	This Environmental Education Strategy provides a coordinated approach to the delivery of environmental education programs across different sections of Council, including identification of responsibilities for the delivery and management of those programs.
	Recreational Trails Strategy 2011	The Recreational Trails Strategy guides the planning and decision making in the provision of recreation trails. It outlines Council's key priorities for the expansion of the trail network and proposed actions to achieve these objectives over the next 10 years.
	Nillumbik's Rabbit Action Plan 2009	The overarching vision established by this plan is to achieve effective rabbit control in Nillumbik in order to protect areas of high biodiversity, productive agricultural land and community facilities under threat of damage by rabbits.
	Nillumbik's Weed Action Plan 2008	Weed Action Plan aims to provide a clear framework for understanding and addressing weed issues throughout the Shire, as well as identifying priorities for action.
	Green Wedge Management Plan 2010	The Nillumbik Green Wedge Management Plan contains a long term vision for the green wedge and a range of existing and new initiatives that work towards delivering that vision.
	Municipal Fire Management Plan 2013	The purpose of the Nillumbik Municipal Fire Management Plan is to address potential fire threats on both public and private land across the prevention, preparedness, response and recovery spectrum
	Open Space Strategy 2005	The Open Space Strategy defines Council's vision and strategic direction for the development and management of open space. Through its recommendations, the Strategy aims to coordinate actions arising from State, regional and local policies that impact on Council's open space.
	Environmental Works Team Strategic Plan	The Environmental Works Team Strategic Plan translates strategies from the Council Plan 2013-2017 into on-ground actions and projects to protect and enhance Council's bushland and wetland reserves.

## 4 Bushland Reserves Planning Process

To plan and prioritise the delivery of on-ground works, the EW follows the process below. The process prioritises the reserves at a landscape scale, establish a level of service for each reserve based on their prioritisation, develop a Conservation Management Plan (CMP), implement works as defined by the CMP and monitor/review the success of the implementation.

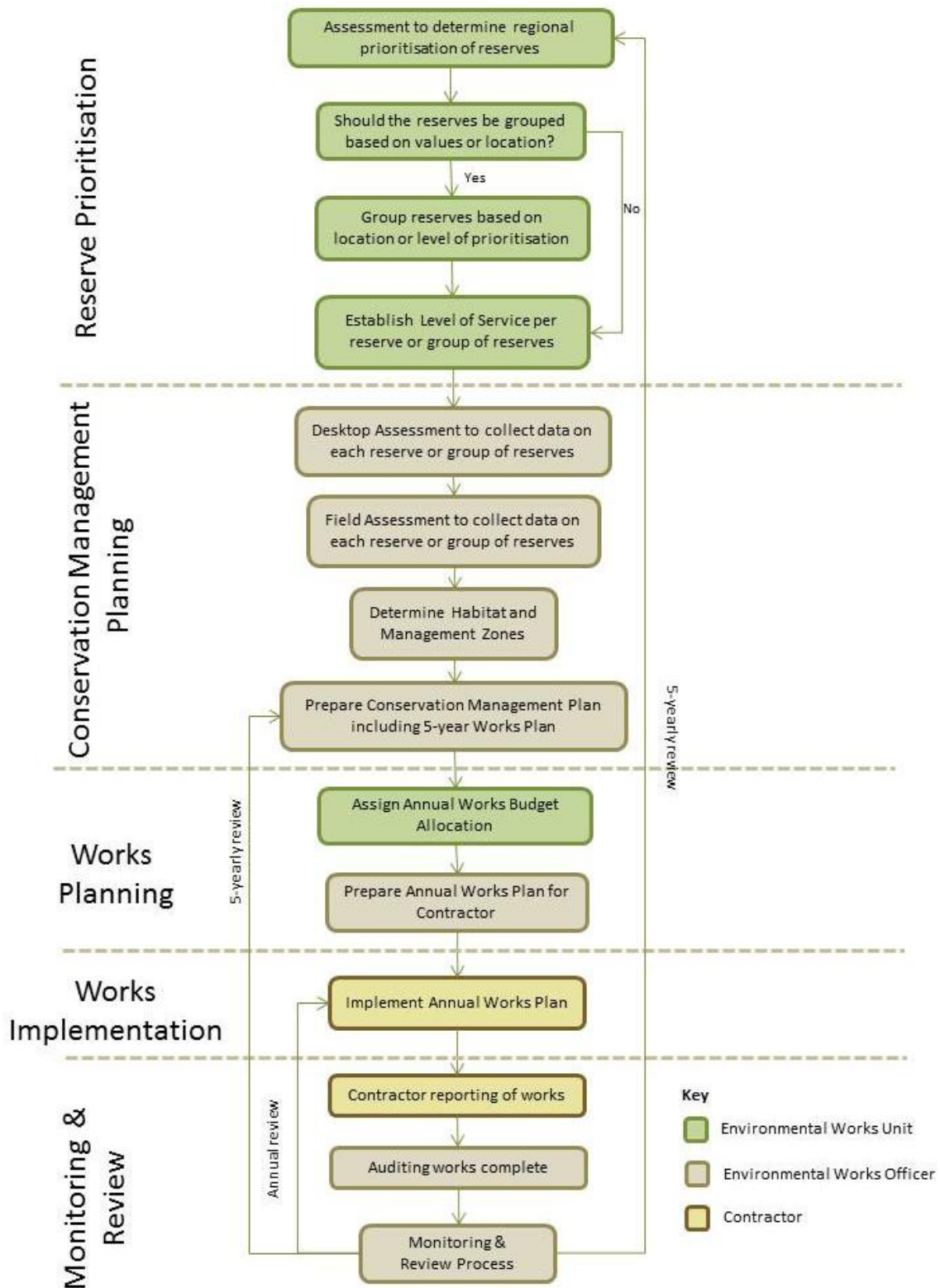


Figure 6: Bushland and Wetland Reserves Prioritisation and Planning Process

## 5 Reserve Prioritisation

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### 5.1 Prioritisation of Bushland Reserves

To ensure the most efficient and effective allocation of resources to protect Council's bushland and wetland reserves, Council prioritises these reserves at a landscape scale. The aim of this prioritisation is to assist Council in strategically planning the management of these reserves that reflects the biodiversity, social and cultural values of each reserve.

By prioritising local reserves for management actions, the following is achieved:

- Bushland reserves are managed strategically for their long term sustainability;
- Actions are focused in areas that have the greatest biodiversity and community values and the best long-term chance of retaining high conservation values;
- Funding requests are justifiable on the basis of sound biodiversity conservation principles;
- Resources are used efficiently and effectively; and
- Relevant bushland management factors are considered and integrated into management action planning according to best practice natural area management principles.

#### 5.1.1 Landscape Scale Desktop Assessment

The method of prioritisation outlined within these guidelines prioritises Council's bushland and wetland reserves according to their ecological and community values at a landscape scale. A number of landscape and local level factors are used to prioritise Council's bushland reserves. These factors are outlined in further detail in Appendix C but include:

- Is the site classified as Biosite and at what level?
- Does the site provide habitat for nationally or state level threatened flora or fauna?
- Does the site contain rare or threatened Ecological Vegetation Classes (EVCs)?
- What is the overall condition of vegetation at the site?
- Does the site have natural features such as waterways or wetlands?
- What is the size and shape of the reserve?
- Does the reserve provide passive or active recreational opportunities?
- Are there active Friends Groups at the site?
- Are cultural heritage features both Indigenous and European present at the site?

This approach to prioritisation of reserves uses a range of mapped and modelled data, imagery, and assumptions to generate a list of priorities.

The scores for each criterion are then weighted based on their relative level of importance (Appendix C). Each reserve receives a score out of possible 68 and is assigned a Conservation Priority.



### 5.1.2 Grouping of Reserves

In many cases reserves can be grouped together to ensure the delivery of consistent level of service. Reserves may be grouped based on a number of factors:

- Presence of significant species i.e. Eltham Copper Butterfly
- Geographic proximity and contribution to a habitat corridor i.e. Panton Hill Bushland Reserves
- Friends Group activity i.e. Friends of Karingal Yalloc

Where reserves are required to be grouped together they may be given the same level of Conservation Priority despite their individual score.

### 5.2 Establishing Level of service

The landscape scale desktop assessments provides each of Council's bushland and wetland reserves with a weighted Conservation Priority and categorises them into one of five regional Conservation Priorities. By establishing regional priorities, a level of service can then be assigned to a specific reserve.

Table 1 provides a broad description and objectives for the level of service for each level of Conservation Priority. These levels of service are used as the basis for establishing reserve Conservation Management Plans, Works Objectives and actions. Specific objectives may vary from the assigned level of service depending on:

- the biodiversity assets to be protected
- level of the threat
- extent of the infestation
- weed's ecology
- ownership of the land
- accessibility
- feasibility of control

It should be noted that the Levels of Service are established for Council's works programs however active Friends Groups may wish to apply for external funding to increase the



**Figure 7: Orchids at Heard Avenue, Plenty**



**Table 1: Description of Council's Level of Service for bushland and wetland reserves**

Council Level of service	Conservation Management Plan	Monitoring and Mapping	Weed Control	Pest Animal Control	Other Threats	Fire Preparation Works	Habitat Enhancements /Revegetation	Friends Groups	
<b>Conserve &amp; Connect</b>	<ul style="list-style-type: none"> <li>Develop CMP in 2013</li> <li>Review 5-yearly</li> </ul>	Two-monthly site inspection	<ul style="list-style-type: none"> <li>Set up photopoints and retake photos at least once a year</li> <li>Map all high threat weed infestations (through the works program)</li> <li>List all other weeds present</li> <li>Monitor and map for changes in presence, cover and extent of new and emerging and high threat weeds at least every two years (through the works program)</li> <li>Observe changes in weed presence, cover and extent during site inspections</li> <li>Undertake fauna and flora monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate all high threat weeds new to the reserve if feasible</li> <li>Reduce the cover and extent or eliminate high threat weeds within the core areas</li> <li>Prevent the cover and extent of high threat weeds increasing within rehabilitation areas</li> <li>Prevent the high threat weeds within degraded areas spreading into higher priority areas</li> <li>Control other weeds as required to limit impacts on biodiversity</li> <li>Manage specific weeds according to regional priorities</li> </ul>	<ul style="list-style-type: none"> <li>Seek collaboration within the local area to achieve integrated pest animal management</li> <li>Manage pest animal threats according to regional priorities</li> <li>If feasible, consider rabbit proof fencing to protect specific biodiversity values</li> </ul>	<ul style="list-style-type: none"> <li>Minimise impacts on specific biodiversity values</li> <li>Manage according to regional priorities</li> </ul>	<ul style="list-style-type: none"> <li>Minimise impacts on public safety and assets</li> <li>Minimise impacts on specific biodiversity values</li> </ul>	<ul style="list-style-type: none"> <li>Plan and undertake planting or habitat enhancements to restore diversity and structure within priority areas, to buffer and connect priority areas and/or provides habitat for threatened species</li> <li>Support works undertaken by Friends Groups</li> </ul>	<ul style="list-style-type: none"> <li>Support the efforts of existing Friends Groups.</li> <li>Encourage and support the formation of new Friends Groups.</li> <li>Develop Friends Group Works Plans in partnership with the group.</li> </ul>
<b>Conserve &amp; Enhance</b>	<ul style="list-style-type: none"> <li>Develop CMP in 2014</li> <li>Review 5-yearly</li> </ul>	Quarterly site inspection	<ul style="list-style-type: none"> <li>Set up photopoints and retake photos at least every two years</li> <li>List all high threat weeds present</li> <li>Survey for new and emerging weeds at least every two years</li> <li>Observe changes in weed presence, cover and extent during site surveillance visits</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate all high threat weeds found within the reserve new to the local area if feasible</li> <li>Minimise impacts on specific biodiversity values</li> <li>Prevent the cover and extent of high threat weeds increasing within rehabilitation and core areas if practical</li> <li>Prevent high threat weeds within degraded areas spreading into higher priority areas</li> <li>Manage specific weeds according to regional priorities</li> </ul>	<ul style="list-style-type: none"> <li>Manage pest animal threats according to regional priorities</li> </ul>		<ul style="list-style-type: none"> <li>Plan and undertake planting or habitat enhancement in partnership with active Friends Groups</li> <li>Focus on planting which contributes to regional priorities by increasing habitat connectivity or providing habitat for threatened species</li> </ul>	<ul style="list-style-type: none"> <li>Support the activities of existing Friends Groups.</li> <li>Encourage existing Friends Groups to work within priority areas of the reserve</li> <li>Develop Friends Group Works Plans in partnership with the group.</li> </ul>	
<b>Conserve &amp; Rehabilitate</b>	<ul style="list-style-type: none"> <li>Develop CMP in 2015</li> <li>Review 5-yearly</li> </ul>	Tri-annual site inspection	<ul style="list-style-type: none"> <li>Set up photopoints and retake photos at least every two years</li> <li>List all high threat weeds present</li> <li>Survey for new and emerging weeds at least every two years</li> <li>Observe changes in weed presence, cover and extent during site surveillance visits</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate all high threat weeds found within the reserve new to the local area if feasible</li> <li>Minimise impacts on specific biodiversity values</li> <li>Prevent the cover and extent of high threat weeds increasing within rehabilitation and core areas if practical</li> <li>Prevent high threat weeds within degraded areas spreading into higher priority areas</li> <li>Manage specific weeds according to regional priorities</li> </ul>	<ul style="list-style-type: none"> <li>Manage pest animal threats according to regional priorities</li> </ul>		<ul style="list-style-type: none"> <li>Plan and undertake planting or habitat enhancement in partnership with active Friends Groups</li> <li>Focus on planting which contributes to regional priorities by increasing habitat connectivity or providing habitat for threatened species</li> </ul>	<ul style="list-style-type: none"> <li>Support the activities of existing Friends Groups.</li> <li>Encourage existing Friends Groups to work within priority areas of the reserve</li> <li>Develop Friends Group Works Plans in partnership with the group.</li> </ul>	
<b>Monitor &amp; Maintain</b>	<ul style="list-style-type: none"> <li>Develop CMP in 2016</li> <li>Review 5-yearly</li> </ul>	Bi-annual site inspection	<ul style="list-style-type: none"> <li>Set up photopoints and retake photos at least every two years</li> <li>List all high threat weeds present</li> <li>Survey for new and emerging weeds at least every two years</li> <li>Observe changes in weed presence, cover and extent during site surveillance visits</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate all high threat weeds found within the reserve new to the local area if feasible</li> <li>Minimise impacts on specific biodiversity values</li> <li>Prevent the cover and extent of high threat weeds increasing within rehabilitation and core areas if practical</li> <li>Prevent high threat weeds within degraded areas spreading into higher priority areas</li> <li>Manage specific weeds according to regional priorities</li> </ul>	<ul style="list-style-type: none"> <li>Manage pest animal threats according to regional priorities</li> </ul>		<ul style="list-style-type: none"> <li>Plan and undertake planting or habitat enhancement in partnership with active Friends Groups</li> <li>Focus on planting which contributes to regional priorities by increasing habitat connectivity or providing habitat for threatened species</li> </ul>	<ul style="list-style-type: none"> <li>Support the activities of existing Friends Groups.</li> <li>Encourage existing Friends Groups to work within priority areas of the reserve</li> <li>Develop Friends Group Works Plans in partnership with the group.</li> </ul>	
<b>Monitor</b>	<ul style="list-style-type: none"> <li>Develop CMP in 2017</li> <li>Review 5-yearly</li> </ul>	Annual site inspection	<ul style="list-style-type: none"> <li>Set up photopoints and retake photos at least every two years</li> <li>List all high threat weeds present</li> <li>Survey for new and emerging weeds at least every two years</li> <li>Observe changes in weed presence, cover and extent during site surveillance visits</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate all high threat weeds found within the reserve new to the local area if feasible</li> <li>Minimise impacts on specific biodiversity values</li> <li>Prevent the cover and extent of high threat weeds increasing within rehabilitation and core areas if practical</li> <li>Prevent high threat weeds within degraded areas spreading into higher priority areas</li> <li>Manage specific weeds according to regional priorities</li> </ul>	<ul style="list-style-type: none"> <li>Manage pest animal threats according to regional priorities</li> </ul>		<ul style="list-style-type: none"> <li>Limited revegetation or habitat enhancement works</li> </ul>	<ul style="list-style-type: none"> <li>Encourage new Friends Groups to work within higher priority reserves.</li> </ul>	

<sup>1</sup> Map and monitor to a level practical and useful for the reserve

<sup>2</sup> It may not be practically possible to eliminate or reduce the extent of some grassy, herbaceous or difficult to control weeds. When this is the case the aim will be to contain these infestations

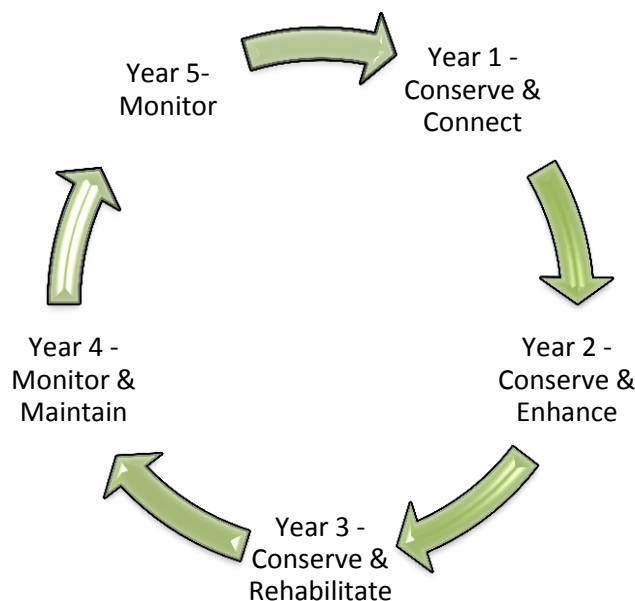
<sup>3</sup> Only undertake planting where the capacity exists to maintain planting sites in the long term

## 6 Conservation Management Planning

All Bushland and Wetland Reserves will have Conservation Management Plans (CMPs) developed for them by 2018 which outline the values, threats and management actions for that reserve based on the given level of service. Each CMP will outline management objectives for a period of five years to assist in long-term planning and holistic reserve management.

It is recommended that for every CMP, the Victorian Habitat Hectares methodology is applied to determine the extent, condition and conservation significance of indigenous vegetation on the site. This methodology involves the assessment of a number of site-based habitat and landscape components against a pre-determined benchmark relevant to the vegetation type being assessed.

A template CMP has been developed which will be applied to every bushland and wetland reserve. Some reserves may have pre-existing management plans or other documents which may be used and adapted to fit into the new template CMP. The development of CMPs will be undertaken in a staged approach over a period of 5 years, commencing with Conserve and Connect Reserves in 2013. These plans will then be reviewed on a 5-yearly cycle.



**Figure 8: Cycle of Conservation Management Plan Preparation and Review\***

\*Note: there will be flexibility built into the model above and should a CMP not be completed within a given year, it may be carried forward to the following year.

### 6.1 Desktop Assessment

Prior to commencing planning for an individual reserve (or group of reserves), Environmental Works Officers undertake a desktop assessment to collect as much information as possible about the particular reserve. This may include information such as:

- Size of the reserve

- Review of aerial photography showing vegetated and cleared areas
- Geology, topography and aspect
- Potential habitat corridors surrounding the reserve
- Pre-1750 and current mapped Ecological Vegetation Classes
- Contours and location of waterways within and surrounding the reserve
- Presence of VROT or AROT using the Victorian Biodiversity Atlas
- Known threatening processes
- Community values and activities
- History of conservation works previously undertaken
- Fuel reduction works and reports
- Adjoining landowners or landuse

Much of this information is available from existing corporate systems such as Geographic Information Systems. Some reserves may have additional information such as:

- Flora and fauna reports
- NetGain Reports or Offset Management Plans
- Fire Management Plans

This information is collected prior to undertaking a field assessment.

## 6.2 Field Assessment

During the field assessment the Environmental Works Officer collects and records site specific information about the reserve. This includes:

- Native vegetation present on site
- Native/exotic fauna observed or impacts of these species observed
- Weeds species present on site
- Undertaking a Vegetation Quality Assessment (Habitat Hectares)
- Undertaking an Overall Fuel Hazard Assessment
- Identification of Management Zones
- Mapping tracks and trails
- Mapping other assets such as fences, gates and signs
- Recording other issues such as rubbish, encroachments,
- Establishing photopoints

### 6.2.1 Vegetation Quality Assessment

During the site inspection the Environmental Works Officer undertakes a Vegetation Quality Assessment using the Habitat Hectares approach to determine the quality, extent and bioregional conservation significance of the native vegetation within the reserve. This information is used to determine the scope of works required to improve the vegetation quality at the site, but also assists to develop a benchmark to compare change in vegetation quality at the site over-time.

### 6.2.2 Identifying Management Zones

During the site inspection and using aerial photography, the Environmental Works Officer will determine Management Zones within the reserve including Fuel Management Zones. Table 2 outlines some of the Management Zones which could be identified during the planning of reserve works.



**Table 2: Identification of Zones for Reserve Management (adapted from the Warrandyte to Kinglake Habitat Corridor Urban Fringe Weed Management Initiative Operational Plan)**

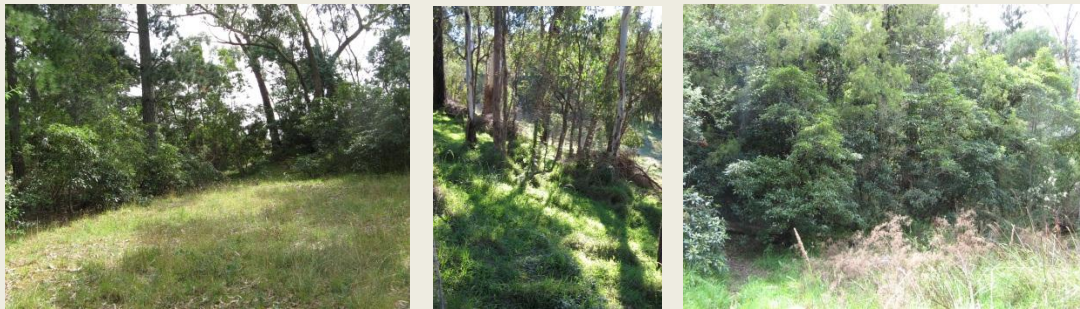
**Core Habitat (& Biodiversity Hotspots)**

- Areas of **Core Habitat** provide refuge for native plants and animals to live, reproduce and flourish. Protecting, improving and connecting core habitat areas is the highest priority for nature conservation, to maintain ecological function at a landscape scale.
  - Within these **Core Habitat** areas may be hotspots of biodiversity (**Biodiversity Hotspots**). Biodiversity Hotspots provide important habitat for the most sensitive species and/or contain a particularly high diversity native plants and animals. The presence of sensitive species and/or habitat means that even low numbers of weeds may significantly impact these areas.
  - Core habitat has most of the following attributes:
    - Structurally intact - contains under-storey, mid-storey and canopy species with a broad age class distribution (depending on the vegetation type)
    - Support a high diversity of native plants and animals
    - Old growth, hollow bearing trees (although much high quality bushland in Nillumbik has no or few old growth trees due to extensive logging in the past)
    - Contribute to healthy creeks and rivers (when present)
    - Large and connected to other bushland by wide (>50m) corridors of vegetation
    - Support threatened and significant plants and animals
- Note:** Very little bushland in Victoria meets all these criteria; so consider an area to be core habitat if it contains most of these attributes.
- Because these areas are largely intact, they are resilient to most weed invasion and regenerate easily after control works.
  - Weed control has immediate and long-term benefits.



## Rehabilitation Areas

- **Rehabilitation areas** are areas of lower quality bushland compared to core habitat. These areas may:
  - Be missing important structural elements (e.g. under-storey, mid-storey or canopy species)
  - Have a moderate or low diversity of native species
  - Be isolated within an agricultural or urban landscape
  - Have been subject to significant disturbance in the past
- Although degraded these areas may:
  - provide a buffer to weed and pest animal invasion between cleared areas and core habitat
  - provide corridors for movement of animals between areas of core habitat
  - provide habitat for the more common native plants and animals
- Rehabilitation areas are:
  - prone to weed invasion and may provide a source of weeds to core habitat
  - don't regenerate easily after control works and are therefore subject to reinvasion by weeds
- Weed control has limited benefits in the short-term except to protect surrounding core habitat and prevent further degradation.
- In the long-term, concerted effort in these areas provide the greatest opportunity to expand the areas of core habitat and improve ecological function at a landscape scale.

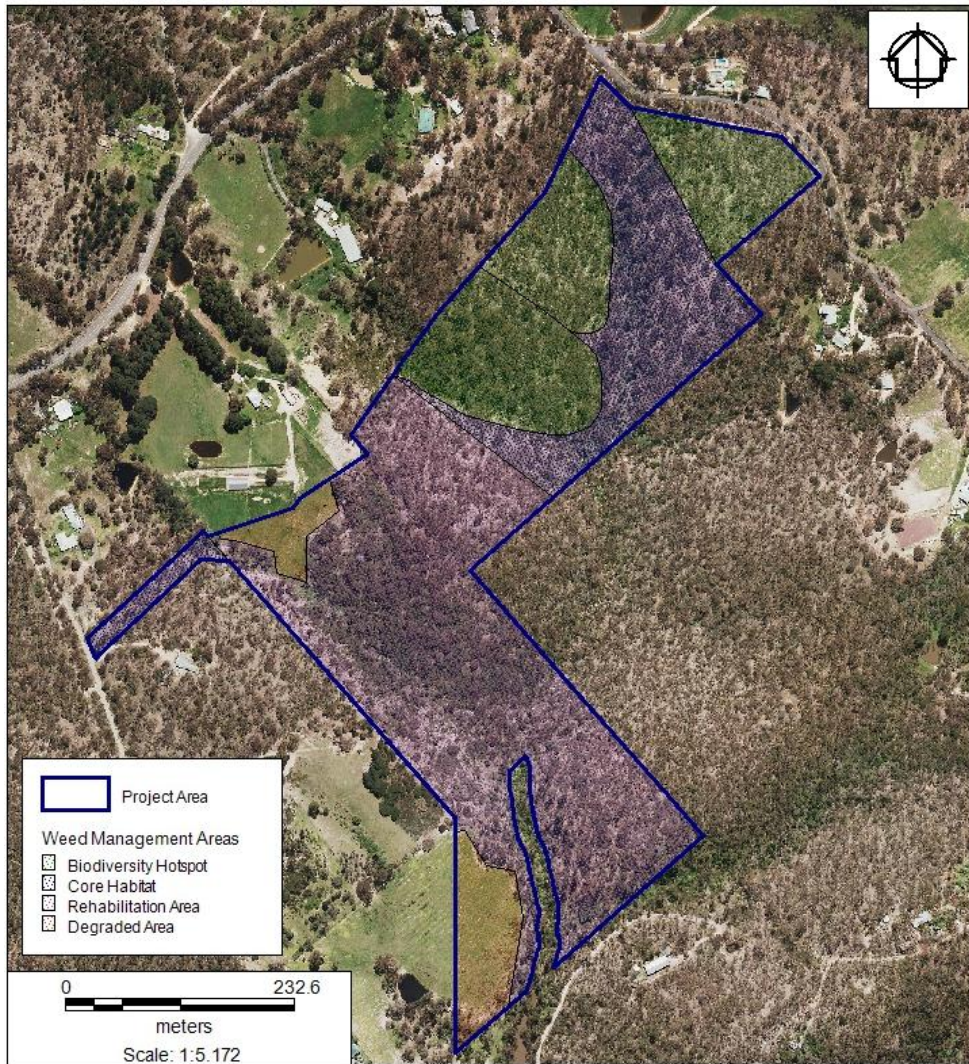


## Cleared/degraded areas

- **Cleared or degraded areas** are areas that support mostly exotic and few native plants
- Cleared or degraded areas:
  - are often heavily invaded by weeds and may provide a source of weeds to other areas
  - don't regenerate easily after control works and are therefore subject to reinvasion by weeds.
- Weed control has limited benefits except to manage source infestations that may spread into higher quality areas.
- Weed control will probably require a significant change in associated land management (e.g. restrict disturbance and manage nutrient inputs (e.g. exclude stock & rabbits)
- Cleared or degraded areas provide a potential for revegetation of native species to buffer or link core habitat areas.







**Figure 9: Example of establishing management zones – Bulwidj Reserve**

# 7 Works Planning & Works Implementation

## 7.1 Works Planning

On an annual basis, Council’s Environmental Works Officers prepare annual works plans using the template below (Figure 10).

These annual works plans are linked to a longer-term 5 year strategic management goal for addressing a threatening process or improving habitat quality. The management objective should be based on the level of service outlined in 5.2 Establishing Level of service.

Works plans define specific goals and actions to address a threatening process or improve habitat conservation value. It should bring together the identification of natural values, areas to be protected, identification of threats and the over-arching levels of service.

Works Plan			Year 1					Year 2	
			Annual Works Plan					Actual Works	...
Works ID	Weed/Threat/Issue	Five year goal	Action	Control Method/s	Timing	Estimated Time (hrs)	Estimated Cost (\$ exGST)	...	...

Figure 10: Example of a Works Plan Template

## 7.2 Works Implementation

Conservation works within bushland and wetland reserves are undertaken by professional environmental contractors and Friends Groups members. The two primary documents for guiding the implementation of on-ground works are:

- Contractor Environmental Specifications 2013
- Contractor Reporting Procedure
- Friends Group Manual 2012

These documents detail what works can be undertaken in Council’s bushland and wetland reserves by Contractors and Friends Groups and how these works will be delivered. These documents also outline OH&S requirements for Contractors and Friends Groups and how these will be managed by the Environmental Works Team.



## 8 Monitoring and Review

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### 8.1 Review of Regional Prioritisation

The regional prioritisation of Council's bushland and wetland reserves will be reviewed on a five-yearly cycle. This will involve reviewing all information pertaining to the reserves at a regional level and how they compare to each other.

However, at any time and individual reserves priority may be reviewed as information becomes available. This may be due to a variety of reasons such as the identification of a previously unknown or undetected threatened species at the site, or the establishment of a new Friends/Community Group.

In addition, Council often receives new parcels of land as a result of land purchases, developer contributions or as a result of becoming a Committee of Management. As these parcels of land are transferred to Council they will be reviewed to determine their regional prioritisation and level of service.

### 8.2 Review of Conservation Management Plans

The review of Conservation Management Plans for Council's bushland and wetland reserves will be reviewed on a five-yearly cycle as outlined in Figure 8. This review will involve updating the CMP with new information relating to the reserve and undertaking a review of the original Habitat Hectares Assessment.

The updated CMP should also include a review/analysis of the previous five-years of on-ground works and establish if these works have achieved or met the original objectives. The aims of reviewing the CMPs will be to determine:

- Has the condition of the native vegetation improved?
- Has there been an increase in suitable habitat, or cover and abundance of threatened species?

### 8.3 Annual Works Review

The Environmental Works Officer will undertake an annual review of the works plan. This review will aim to determine:

- Accurate estimations of costs and hours
- Actions have been completed as planned
- A reduction in costs over time and a reduction in time spent on managing threatening processes
- Reduction in weed cover and abundance
- Objectives have been achieved or exceeded

Based on the outcomes of the annual works review, Environmental Works Officers may:

- Review the works plan – change goals, actions, estimations of costs and time
- Change resource allocations (money and time)
- Change methods of addressing threatening processes
- Change goals or actions



## 8.4 Contractor Reporting Procedure

Environmental Works *Contractor Reporting Procedure*, contains the reporting procedures for contractors for Nillumbik Shire Council's bushland reserves. This procedure is designed to allow contractors to easily collect meaningful information, helping Council and contractors to:

- plan works
- report achievements
- invoice works
- justify expenditure
- keep a history of reserves

**Figure 11: Works planning, mapping and reporting procedure for contractors**

## 8.5 Photo-point Monitoring

Photopoints are used to provide a visual record of changes overtime. Council uses photopoints to demonstrate how issues such as vegetation condition and weed cover change. In general photos are taken in spring and repeated once a year.



**Figure 12: Example of photopoint (growth of grassy weeds before and after a wet year)**





## 9 References

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Keighery, B.J 1994, *Bushland plant survey. A guide to plant community survey for the community*. Wildflower Society of WA (Inc.), Nedlands, Western Australia.

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Nillumbik Shire Council 2013, *Urban Fringe Weed Management Operational Plan*, Report prepared by Nillumbik Shire Council for the Urban Fringe Weed Management Project.

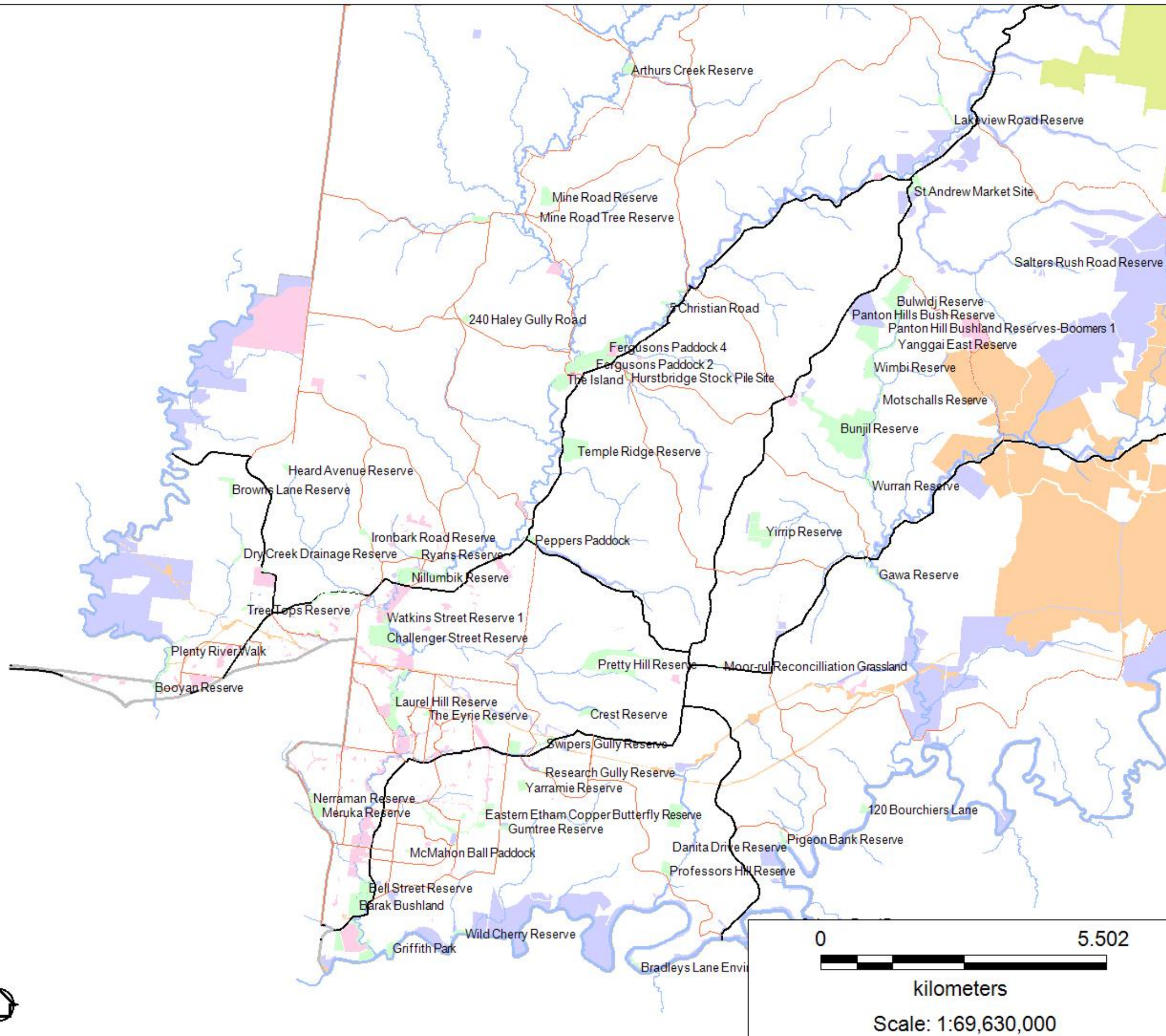




Appendix A  
Nillumbik's Bushland Reserves

Legend

- Council Bushland Reserve
- Council Open Space Reserve
- National Park
- Crown Land or Parks Victoria Reserve
- Melbourne Water Land
- Arterial Road
- Secondary Road
- Tertiary Road
- Creek or River
- Tributary
- Shire Boundary



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## Appendix B - Bushland Reserves Table

Reserve Name	Asset Id	Area (ha)
Danita Drive Reserve	91920	0.11
Diosma Road Reserve	92020	0.17
Pitt Street Environmental Reserve	92090	0.25
McMahon Ball Paddock	91941	0.30
Panton Hill Bushland Reserves-Boomers 1	92194	0.31
Mine Road Tree Reserve	91952	0.33
Panton Hills Bush Reserve	92197	0.36
Research Gully Reserve	92154	0.38
Alistair Knox Wetland	91872	0.42
Meander Knowles Reserve	92042	0.65
Moor-rul Reconciliation Grasslands	91924	0.66
Fergusons Paddock 1	91911	0.72
Western Eltham Copper Butterfly Reserve	92024	0.74
Quarry Reserve	100489	0.78
David Hockney Environmental Reserve	92142	0.86
Yan Yean Road Environment Reserve	92117	0.89
Hurstbridge Stock Pile Site	91908	0.93
The Eyrie Reserve	91892	0.97
Tree Tops Reserve	92109	1.01
Lenister Farm	92166	1.13
Booyan Reserve	91965	1.22
Motschalls Reserve	92196	1.26
Eastern Eltham Copper Butterfly Reserve	91881	1.47
Peppers Paddock	91931	1.48
Bradleys Lane Environment Reserve	92141	1.48
Nerraman Reserve	91900	1.49
The Island	100488	1.49
Heard Avenue Reserve	91973	1.60
St Andrew Market Site	91906	1.60
Dianella Court Reserve	114208	1.72
Gumtree Reserve	100492	1.76
Watkins Street Reserve 1	91977	1.80
Research SEC Easement	91882	1.81
Yarra Valley Water Eltham Copper Butterfly	100486	1.81

Reserve Name	Asset Id	Area (ha)
Lenister Farm	92163	1.87
Kalbar Environmental Reserve	91960	1.92
Swipers Gully Reserve	91948	1.93
Wild Cherry Reserve	91895	2.08
Salters Rush Road Reserve	92147	2.18
Dianella Court Wetland	114,208	
240 Haley Gully Road	91935	2.19
Lenister Farm Wetlands	92167	2.20
Ryans Reserve	91966	2.23
Fergusons Paddock 3	91914	2.25
Wurran Reserve	92202	2.42
Osborne Road Reserve	91954	2.43
Bell Street Reserve	213130	2.50
Yanggai East Reserve	92199	2.53
Pigeon Bank Reserve	91956	2.57
120 Bouchiers Lane	91905	2.63
Ironbark Road Reserve	114224	2.66
Dry Creek Drainage Reserve	92161	2.70
Nillumbik Park	92056	2.79
Windy Mile Tree Reserve	92058	2.90
Eltham Lower Park	92165	2.92
Gipson Street Reserve	92009	3.40
Campbell Street Reserve	91978	3.47
Yarramie Reserve	91963	3.52
Arthurs Creek Reserve	91939	3.76
Gawa reserve	92204	3.76
Jack Bassett Reserve	92121	3.87
Crest Reserve	91918	3.91
Hurstbridge Horse and Pony Club Reserve	91912	3.92
Long Gully Road Reserve	92201	4.02
St Andrew Market Site	92170	4.04
Lakeview Road Reserve	91942	4.12
Griffith Park	92150	4.17
Professors Hill Reserve	91921	4.43
5 Christian Road	91909	4.72
Hohnes Hill Reserve	92168	4.85

Reserve Name	Asset Id	Area (ha)
Woodridge Linear Reserve	91888	5.29
Browns Lane Reserve	114225	5.46
Research Park	91949	5.48
Wingrove Park	92169	6.15
Ben Friley Reserve	91929	6.29
Meruka Reserve	91898	6.88
Plenty River Walk	92148	6.92
Nillumbik Reserve	92008	7.45
Mine Road Reserve	91953	8.11
Wimbi Reserve	92200	8.59
Fergusons Paddock 4	91910	9.22
Barak Bushland	92082	9.61
Laurel Hill Reserve	91975	9.69
Murrays Wetland	92134	9.89
The Chase Reserve	91907	11.21
Yanggai Reserve	92198	15.18
Fergusons Paddock 2	91913	15.93
Temple Ridge Reserve	91930	17.45
Yirrip Reserve	92203	18.37
Challenger Street Reserve	91976	19.49
Bulwidj Reserve	92195	21.26
St Andrew Horse and Pony Club Reserve	91916	21.68
Pretty Hill Reserve	91927	25.01
Bunjil Reserve	92193	67.75



# Appendix C - Reserves Priority Setting Tool

Ecological Criteria				
Criteria	Rationale	Weighting	Level	Score
<b>Level of Significance</b>				
Site of Biological Significance	A BioSite is a physical area of land or water containing biological assets with particular attributes, such as the presence of rare or threatened flora, fauna or habitat required for their survival and/or rare or threatened vegetation communities.	X 2	National	4
			State	3
			Regional	2
			Local	1
			None	0
<b>Native Vegetation Condition</b>				
Vegetation Condition (based on Keighery 1994)	A rapid assessment of vegetation condition at a reserve level was undertaken to determine what the quality of vegetation was. Scores ranked from Pristine-no obvious signs on disturbance to Completely Degraded.	X 5	Pristine	6
			Excellent	5
			Very Good	4
			Good	3
			Modified / Revegetation	2
			Degraded	1
			Completely degraded	0
Ecological Vegetation Class Bioregional Conservation Value	A bioregional conservation status is provided for each EVC within a bioregion. It is a measure of the current extent and quality for each EVC, when compared to its pre-1750 extent and condition.	X 1	Endangered	5
			Rare	4
			Vulnerable	3
			Depleted	2
			Least Concern	1
<b>NEROC Assessment Data</b>				
Sites of Faunal Significance		X 1	National	3
			State	2
			Regional	1
			None	0
Habitat Link		X 1	Regional	2
			District	1
			None	0
Habitat Significance		X 1	Very High	3
			High	2
			Medium	1
			None	0
<b>Threatened Flora &amp; Fauna</b>				
Flora	Contains Nationally Endangered Species	X2	Present	1
			Absent	0
Flora	Contains Victorian Rare or Threatened	X2	Present	1

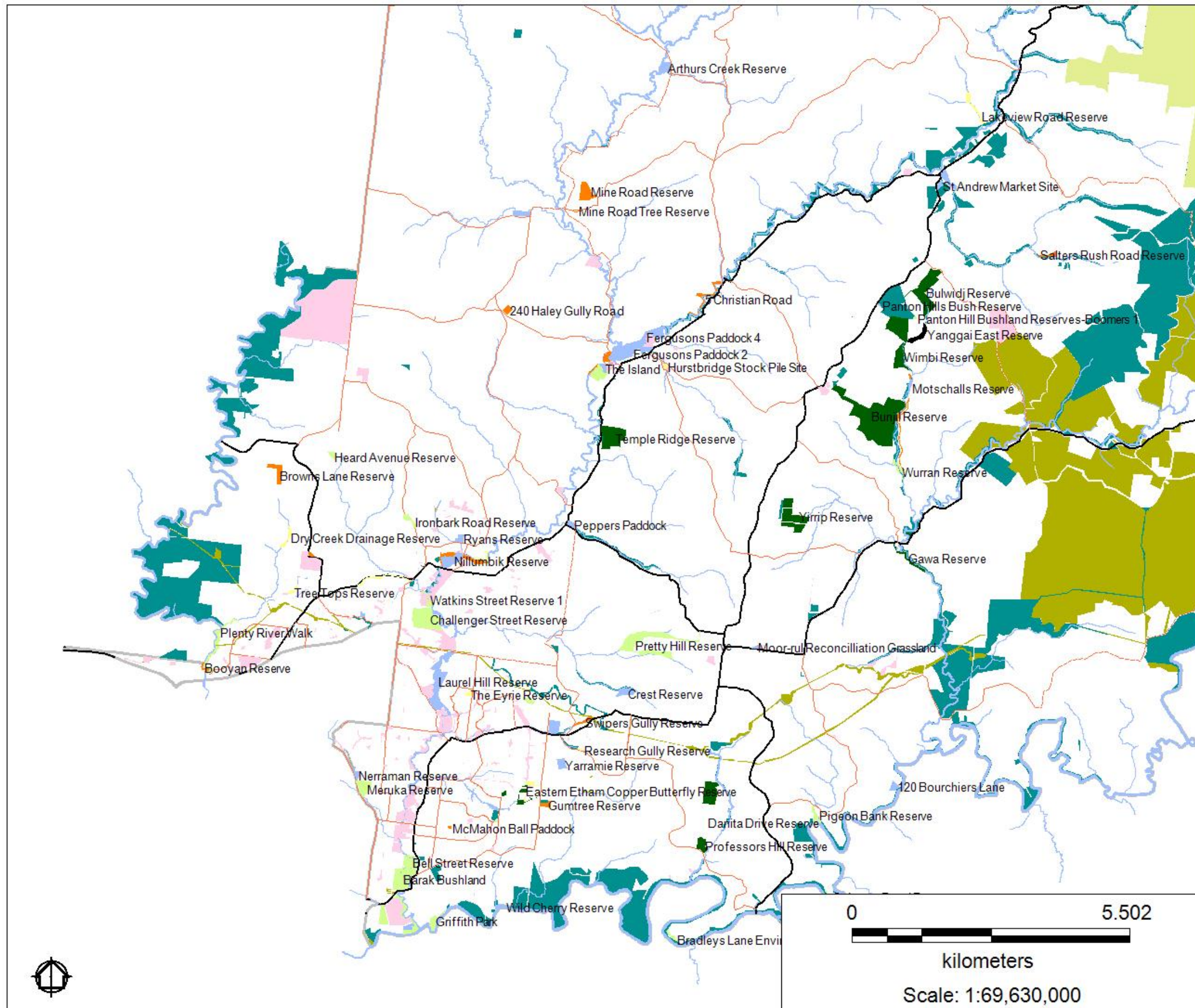
	Flora Species		Absent	0
Fauna	Contains Nationally Endangered Species	X2	Present	1
			Absent	0
Fauna	Contains Victorian Rare or Threatened Fauna Species	X2	Present	1
			Absent	0
<b>Natural Features</b>				
Wetland or Waterway	The presence of wetlands or waterways provides variety and dimensions to the habitat arrangement	X1	Present	1
			Absent	0
<b>Shape &amp; Size</b>				
Reserve Size	Larger reserves are more likely to support viable and resilient communities	X 1	Greater than 10ha	5
			5-10ha	4
			2-5ha	3
			1-2ha	2
			0-1ha	1
Reserve Shape	Larger more rounded/square shaped reserves are more likely to have less edge effects and provide better habitat quality as compared to long and thin shaped reserves	X 1	Circular, square	6
			Oval, rectangular	5
			Irregular with few indentations	4
			Irregular with many indentations	3
			Long and thin with large proportion greater than 50m wide	2
			Long and thin with large proportion less than 50m wide	1
<b>Community Values Criteria</b>				
<b>Criteria</b>	<b>Rationale</b>	<b>Weighting</b>	<b>Level</b>	<b>Score</b>
<b>Community Use</b>				
Active Community Group	Presence of an active Friends Group at a site would increase the community value and priority	X 3	Present	1
			Absent	0
Recreational Use		X 1	High	3
			Medium	2
			Low	1
			None	0
<b>Heritage Significance</b>				
Known European Historical / Cultural Values		X 1	Present	1
			Absent	0
Known Indigenous Historical / Cultural Values		X 1	Present	1
			Absent	0



Appendix D  
Map of Council's Bushland & Wetland Reserves with Level of Service

Legend

- Council Open Space Reserve
  - National Park
  - Crown Land or Parks Victoria Reserve
  - Melbourne Water Land
  - Arterial Road
  - Secondary Road
  - Tertiary Road
  - Creek or River
  - Tributary
  - Shire Boundary
- Council Reserves Level of Service
- Conserve & Connect
  - Conserve & Enhance
  - Conserve & Rehabilitate
  - Monitor & Maintain
  - Monitor
  - N/A



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## Appendix E - Reserves by Level of Service

Reserve Name	Asset Id	Conservation Prioritisation Score	Level of Service
The Eyrie Reserve	91892	9	Monitor
Diosma Road Reserve	92020	11	Monitor
Research Gully Reserve	92154	13	Monitor
Research SEC Easement	91882	13	Monitor
Dianella Court Reserve	114208	13	Monitor
Tree Tops Reserve	92109	16	Monitor
Dry Creek Drainage Reserve	92161	16	Monitor
Windy Mile Tree Reserve	92058	17	Monitor
Hurstbridge Stock Pile Site	91908	19	Monitor
Danita Drive Reserve	91920	20	Monitor
Lakeview Road Reserve	91942	20	Monitor
McMahon Ball Paddock	91941	21	Monitor & Maintain
Gipson Street Reserve	92009	21	Monitor & Maintain
Swipers Gully Reserve	91948	21	Monitor & Maintain
Booyan Reserve	91965	22	Monitor & Maintain
5 Christian Road	91909	24	Monitor & Maintain
Gumtree Reserve	100492	24	Monitor & Maintain
Yan Yean Road Environment Reserve	92117	24	Monitor & Maintain
240 Haley Gully Road	91935	25	Monitor & Maintain
Browns Lane Reserve	114225	27	Monitor & Maintain
Meander Knowles Reserve	92042	27	Monitor & Maintain
Mine Road Reserve	91953	27	Monitor & Maintain
Mine Road Tree Reserve	91952	27	Monitor & Maintain
Long Gully Road Reserve	92201	28	Monitor & Maintain
Salters Rush Road Reserve	92147	28	Monitor & Maintain
Fergusons Paddock 3	91914	29	Monitor & Maintain
Motschalls Reserve	92196	30	Conserve & Rehabilitate
Peppers Paddock	91931	30	Conserve & Rehabilitate
Ryans Reserve	91966	30	Conserve & Rehabilitate
Crest Reserve	91918	31	Conserve & Rehabilitate
Murrays Wetland	92134	31	Conserve & Rehabilitate
Nerraman reserve	91900	31	Conserve & Rehabilitate
Nillumbik Park	92056	31	Conserve & Rehabilitate
St Andrew Market Site	91906	31	Conserve & Rehabilitate
Fergusons Paddock 1	91911	32	Conserve & Rehabilitate
Quarry Reserve	100489	32	Conserve & Rehabilitate



120 Bouchiers Lane	91905	33	Conserve & Rehabilitate
David Hockney Environmental Reserve	92142	33	Conserve & Rehabilitate
Nillumbik Reserve (Riparian Area)	92008	33	Conserve & Rehabilitate
Moor-rul Reconciliation Grasslands	91924	33	Conserve & Rehabilitate
Yarramie Reserve	91963	34	Conserve & Rehabilitate
Arthurs Creek Reserve	91939	35	Conserve & Rehabilitate
Research Park	91949	35	Conserve & Rehabilitate
Fergusons Paddock 4	91910	36	Conserve & Rehabilitate
Jack Bassett Reserve	92121	36	Conserve & Rehabilitate
Panton Hills Bush Reserve	92197	36	Conserve & Rehabilitate
Fergusons Paddock 2 (Riparian Area)	91913	37	Conserve & Rehabilitate
Laurel Hill Reserve	91975	37	Conserve & Rehabilitate
St Andrew Market Site	92170	37	Conserve & Rehabilitate
The Island	100488	37	Conserve & Rehabilitate
Woodridge Linear Reserve <sup>ECB</sup>	91888	37	Conserve & Rehabilitate
Wild Cherry Reserve	91895	38	Conserve & Rehabilitate
Ben Friley Reserve (Riparian Area)	91929	39	Conserve & Enhance
Griffith Park	92150	39	Conserve & Enhance
Lenister Farm <sup>EGW</sup>	92166	39	Conserve & Enhance
Wingrove Park <sup>EGW</sup>	92169	39	Conserve & Enhance
Barak Bushland <sup>EGW</sup>	92082	40	Conserve & Enhance
Panton Hill Bushland Reserves-Boomers 1	92194	40	Conserve & Enhance
Watkins Street Reserve 1	91977	40	Conserve & Enhance
Plenty River Walk	92148	40	Conserve & Enhance
Wurran Reserve <sup>PHBRS</sup>	92202	41	Conserve & Enhance
Bradleys Lane Environment Reserve	92141	41	Conserve & Enhance
Lenister Farm Wetlands	92167	41	Conserve & Enhance
Osborne Road Reserve	91954	41	Conserve & Enhance
Pigeon Bank Reserve	91956	41	Conserve & Enhance
Heard Avenue Reserve	91973	42	Conserve & Enhance
Lenister Farm	92163	42	Conserve & Enhance
Challenger Street Reserve	91976	43	Conserve & Enhance
Eltham Lower Park <sup>EGW</sup>	92165	43	Conserve & Enhance
Hohnes Hill Reserve <sup>ECB/EGW</sup>	92168	43	Conserve & Enhance
Ironbark Road Reserve	114224	43	Conserve & Enhance
Kalbar Environmental Reserve	91960	43	Conserve & Enhance
Yanggai East Reserve <sup>PHBRS</sup>	92199	43	Conserve & Enhance
Bell Street Reserve (Riparian Area) <sup>EGW</sup>	213130	43	Conserve & Enhance
Meruka Reserve	91898	44	Conserve & Enhance
Pitt Street Environmental Reserve <sup>ECB</sup>	92090	44	Conserve & Enhance

Pretty Hill Reserve	91927	44	Conserve & Enhance
Yarra Valley Water ECB Reserve <sup>ECB</sup>	100486	45	Conserve & Connect
Gawa Reserve <sup>PHBRS</sup>	92204	46	Conserve & Connect
Eastern ECB Reserve <sup>ECB</sup>	91881	47	Conserve & Connect
Western ECB Reserve <sup>ECB</sup>	92024	48	Conserve & Connect
Temple Ridge Reserve	91930	49	Conserve & Connect
Wimbi Reserve <sup>PHBRS</sup>	92200	49	Conserve & Connect
The Chase Reserve	91907	50	Conserve & Connect
Yanggai Reserve <sup>PHBRS</sup>	92198	52	Conserve & Connect
Professors Hill Reserve	91921	53	Conserve & Connect
Yirrip Reserve <sup>PHBRS</sup>	92203	55	Conserve & Connect
Bunjil Reserve <sup>PHBRS</sup>	92193	57	Conserve & Connect
Bulwidj Reserve <sup>PHBRS</sup>	92195	59	Conserve & Connect

### Reserve Groupings

<sup>ECB</sup> Eltham Copper Butterfly Reserves

<sup>PHBRS</sup> Panton Hill Bushland Reserves System

<sup>EGW</sup> Eltham Gateway



## Appendix F - Friends Groups in Nillumbik

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- Friends of the Panton Hill Bushland Reserve System
- Friends of Gawa Reserve
- Meander Knowles - Friends
- Friends of Watery Gully
- Friends of Karingal Yalloc
- Friends of McMahon Ball Paddock
- Friends of Barak Bushland
- Friends of Eltham Copper Butterfly
- Friends of Yarramie Reserve
- Friends of the Diamond Creek, Eltham Lower Park
- Friends of Woodridge Linear Reserve
- Friends of Moor-rul Reconciliation Grasslands
- Friends of Diamond Creek - Hurstbridge
- Friends of Darrabi Gardens
- Friends of Swipers Gully
- Montmorency Field Naturalists
- Friends and Relations of Queenstown Cemetery
- Panton Hill Bushland Reserves System User Group
- Friends of Bell Street Reserve <sup>NEW</sup>
- Friends of Challenger Street Wetland <sup>NEW</sup>
- Friends of Plenty River <sup>NEW</sup>