



NATURAL AREAS

GENERIC PLAN OF MANAGEMENT

Enhancing natural areas to increase biodiversity connections, providing social, economic, environmental and health benefits to the community

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Relevant City of Ryde Policies

City of Ryde Flora and Fauna Lists

SELECTED REFERENCES

Appendix A – Land Information- Community and Crown Lands

Appendix B- Map series of all land parcels, presented by sub-category

Appendix C – Natural Areas Online Survey Results Report



Sydney Boronia - *Boronia ledifolia* - Quebec Reserve

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DOCUMENT CONTROL

ISSUE NAME	ISSUE DATE	PURPOSE
Draft for Council Review	May 2020	Internal stakeholders made comment
Council Approves to Forward to Minister for Review	September 2020	Forward draft PoM in accordance with Crown Land Management Act 2016 requirements
Ministerial Review	October 2020	Draft forwarded to Minister
Ministerial Consent	December 2020	Approval to Publicly exhibit draft PoM
Public Exhibition	Feb-March 2021	Public exhibition of PoM
Report to Council for Adoption	May 2021	Seek adoption by Council
Adopted	11 May 2021	Adopted by Council

1 INTRODUCTION

1.1 What is a Plan of Management?

A Plan of Management is required to be prepared for public land which is owned by a Council and classified as community land under the *Local Government Act 1993*. It sets out management objectives and performance targets for Community Land as well as providing direction for management and use; direction and actions.

The *Crown Land Management Act 2016* assigns certain functions to council managers. As a Crown land manager Council is authorised to classify and manage its dedicated or reserved Crown land as if it were public land as described above within the meaning of the *Local Government Act 1993*.

Both the *Crown Land Management Act 2016* and the *Local Government Act 1993* include provisions regarding the preparation of plans of management for land under Council's management, how a plan of management is to be prepared (including community engagement activities) and what must be in the plan

Plans of Management for community and Crown land may take either of three forms:

- a generic plan which covers a number of sites where the attributes and values of the land are similar, such as for a particular category of community land.
- a significant area plan which covers a particular site where management issues and values may be more complex and require a site-specific focus.
- a geographic plan which covers a particular area such as a river or creek foreshore, bushland corridor, or similar.

Plans of Management are important documents prepared in consultation with the community, and act as an agreement between a Council and the Community as to how a place is to be managed and its values protected. Current uses and activities are identified and future uses and activities, including leases and licences, are approved by a Plan of Management. A plan contains a range of actions to guide the management of the area over the life of the document – usually a 10-15-year period.

This Plan of Management is a generic plan which covers numerous sites categorised as Natural Areas. Appendix A contains a full list of Natural Area locations covered in this generic plan, including those that are Crown Land. Appendix B contains Maps illustrating Natural Area locations that are included in this plan.

1.2 Background to this Plan of Management

Community land that is categorised as Natural Area in the City of Ryde is currently managed according to the 'Generic Plan of Management: Sportsgrounds, Parks, Natural Areas, General Community Use' which was adopted by Council in 2001.

Since that time, numerous Plans of Management for geographic open space systems which include natural areas (such as Brush Farm Park and Lambert Park Plans of Management, and Shrimptons Creek Plan of Management) have been prepared.

More recently, through the introduction of the *Crown Land Management Act 2016* in mid-2018, Councils are now required to manage Crown land under the *Local Government Act 1993*. City of Ryde has therefore taken the opportunity to update its Plans of Management for community and Crown land.

When adopted by Council this Generic Natural Areas Plan of Management will replace several current Plans of Management, because the land covered in those Plans will be included in this Plan. Plans of Management to be replaced by this Plan relating to management of land categorised as Natural Areas are:

- Generic Plan of Management: Sportsgrounds, Parks, Natural Areas, General Community Use' 2001
- Brush Farm Park and Lambert Park Plan of Management 2009
- Morrison Bay Park Plan of Management 2016 – superseded by the Parramatta River Parklands Plan of Management
- Shrimptons Creek Parkland Plan of Management 2012. – partly superseded by the ELS Hall Park Plan of Management

1.3 Scope of this Plan of Management

This Generic Plan of Management applies to parks and reserves in the City of Ryde which contain community land categorised as Natural Areas, as listed in Appendix A- Land Information- Community and Crown Lands. Other Natural Areas may be included in this plan in the future.

This Plan of Management identifies clear objectives and establishes directions for planning, management and maintenance of public open space. Further, it provides a basis for assigning priorities in works programming and budgeting within Council's current and future financial capacity. Council can only undertake activities, uses and developments on community land which are provided for in this Plan of Management.

Council may prepare a Reserve Action Plan for certain locations categorised as Natural Areas in order to provide further more detailed management directions and guidance. However, such a Reserve Action Plan will need to be consistent with the objectives, direction and actions within this Plan. Further public consultation would be undertaken to develop Reserve Action Plans for specific parks.

This Generic Plan of Management will guide the management of Natural Areas in the City of Ryde for ten years from the date of adoption.

1.4 Objectives of this Plan of Management

This Plan of Management has been prepared to:

- Provide an update to the previous Generic Plan of Management for: Sportsgrounds, Parks, Natural Areas, General Community Use (2001) in relation to Natural Areas.
- Meet Council's obligations regarding public land management under the requirements of the *Local Government Act 1993* and the *Crown Land Management Act 2016*
- Provide a basis for guiding Council's ongoing management of Natural Area locations within the City of Ryde LGA in accordance with the requirements of relevant legislation.
- Meet the objectives of the Our Vision for Ryde: 2028 Community Strategic Plan as well as Council's other relevant plans and policies e.g. City of Ryde Biodiversity Plan 2016.

- Provide a strategic framework for Council to guide sustainable development, use, management and maintenance of Natural Area locations in City of Ryde LGA
- Reflect the values and expectations of the community, park users and stakeholders in the future use and development of Natural Area locations in City of Ryde LGA,
- Facilitate appropriate use of Natural Areas through granting of appropriate leases, licences, permits and other estates.

1.5 Process of Preparing this Plan of Management

1.5.1 Tasks and outputs

The process of preparing this Plan of Management involved the following tasks and outputs:

Figure 1 Process of preparing this Plan of Management

Step	Planning Process	Task	Output
1	Inception meeting with Council staff	Review background information	Land Inventory, maps, reference documents
2	Online survey	Community engagement	Understanding of community issues, values, and satisfaction
3		Site visits and inspections	Understanding of on ground management issues
4	Initial categorisation of Crown Land provided to Minister for approval Bushland and Environment Advisory Committee review of Draft Action Table Draft Plan of Management provided to Minister for Lands and Forestry for approval regarding provisions for Crown Land prior to public exhibition	Prepare Draft Plan of Management	Draft Natural Areas Generic Plan of Management Report to Council for approval to exhibit

Step	Planning Process	Task	Output
5	<p>Public notification of Draft PoM on Council’s website, at libraries, customer service areas, notices placed in Natural Areas, advertisements in Ryde City View.</p> <p>Notification to user groups and Bushland and Environment Advisory Committee</p> <p>Draft PoM available on website, libraries and customer service areas</p> <p>Written submissions received online at Have Your say Ryde, by email and mail</p> <p>Public hearing into proposed categorisation, multiple categorisations and recategorisation of community and Crown land, or if the boundary of a categorisation within a Natural Area changes</p>	<p>Public exhibition of Draft Plan of Management in accordance with <i>Local Government Act 1993, Crown Land Management Act 2016</i>, City of Ryde Communication Strategy – minimum 28 days with a further 14 days for submissions.</p> <p>Public Hearing (if required)</p>	<p>Public Submissions</p> <p>Public Hearing Report</p>
6		Consider public submissions	
7	Review and advice from Native Title Manager	Prepare final Plan of Management	Final Natural Areas Generic Plan of Management
8	<p>Resolution by Council</p> <p>Adoption by the Minister required only if significant changes made to draft PoM regarding Crown Lands</p>	Adoption of Final Plan of Management	Report to Council to adopt Final Natural Areas Generic Plan of Management
9		Implementation	

1.5.2 Community and stakeholder engagement

Community engagement is an important part of the process of preparing a Plan of Management. It is essential to ensure that Plans of Management meet the needs of the local community for their natural areas, and to communicate Council’s aims for management of natural areas in the City of Ryde to the community.

Community engagement undertaken for this Plan of Management went beyond the minimum requirements for engagement for a Plan of Management under the *Local Government Act 1993* and the *Crown Land Management Act 2016*. Council has also provided the opportunity to comment in accordance with Sections 24JB (6) and 24KA (7) of the *Native Title Act 1993*.

This Plan of Management was prepared using:

- relevant extensive community input to the 2028 Community Strategic Plan in 2017-18;
- results of an online Have Your Say survey with targeted questions and on-site meetings at a number of locations regarding use of and attitudes towards natural areas in Ryde conducted in October and November 2019. Over 50 submissions were received (refer to Appendix C);
- submissions to the public exhibition and public hearing (if required) will be held once the Draft Plan of Management is approved for exhibition.

1.5.3 Native Title Manager review and advice

As a requirement of the *Crown Land Management Act 2016* advice from Council's Native Title Manager was provided at the time of preparation of the Draft Plan of Management and finalisation of the Plan of Management. City of Ryde has engaged Lands Advisory Service (LandsAS) as their Native Title Manager. LandsAS has provided the Native Title advice for this Plan of Management.

This advice addressed the effect that adopting the Plan of Management would have on native title over the land included in this Plan. Advice from the Native Title Manager helps to ensure that Council has complied with the requirements of the *Native Title Act 1993*.

1.6 Benefits and roles of Natural Areas in City of Ryde

Natural Areas within the City of Ryde both support a range of vegetation communities and associated habitats as well providing green space areas for recreational use and enjoyment. They contain the last remaining patches of remnant bushland and despite being somewhat fragmented provide important wildlife corridors on a local and regional scale. The benefits of natural areas in City of Ryde are outlined below.

1.6.1 Environmental benefits

Natural Areas allow the opportunity to:

- provide habitat to prevent or limit flora and fauna species extinction;
- conserve and protect a variety of native vegetation communities and local fauna in their habitat;
- protect and support flora and fauna listed as threatened or endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* or under the NSW *Biodiversity Conservation Act 2016*;
- promote and encourage species diversity and health of natural ecosystems to support life. Also provide support in terms of social, economic, environmental and health terms by supplying fresh water, food and fuel sources;
- provide important corridor connectivity between areas of bushland / open space to assist fauna movement

and strengthen critical green corridor networks and links locally and regionally;

- provide last remaining critical natural spaces free from urban encroachment and development;
- assist in improving local air quality and health of region.

1.6.2 Personal and Individual benefits

Natural areas:

- in urban environments provide an opportunity for people to connect with nature either through viewing them, recreating in them or undertaking regeneration / maintenance works in them;
- are valued for their aesthetic, recreational, educational and scientific values;
- encourage people to recreate through walking or cycling rather than by car, not only improving air quality, but encouraging people to undertake physical activity to improve physical and mental wellbeing;
- provide a venue both for solitary enjoyment or group activities.

1.6.3 Social and community benefits

Natural areas in urban environments can:

- provide the opportunity for people to connect with each other through recreation and through volunteering via regeneration works;
- strengthen social bonds for volunteers undertaking regeneration and conservation works;
- provide alternative venues for individuals, couples, families and social groups to urban parks and sportsgrounds for social and leisure activities; and
- promote an understanding of the connectivity of the natural world.

1.6.4 Economic benefits

Protection and enhancement of natural areas:

- may attract tourist and visitors to the area, who may then spend in the local commercial district;
- reduces broader urban heat island effect of adjoining developed areas;
- supports the native plant growing industry and associated landscape supply businesses through undertaking bush regeneration works;
- contributes to savings in associated health costs by having natural areas in proximity for use and enjoyment;
- increases nearby property values due to improved aesthetics and availability of an alternative for leisure / recreation; and
- improves work productivity through improved mental and physical wellbeing.

1.7 Legislation and Policy Framework

1.7.1 Introduction

This section provides context and describes the wider NSW, Commonwealth and International legislative and policy framework which applies to the planning, development and management of Natural Areas in City of Ryde LGA.

Full and current versions of the legislation referred to below can be accessed or viewed on-line at www.austlii.edu.au and www.legislation.nsw.gov.au.

1.7.2 International conventions and treaties

The following documents signed by Australia are relevant to the management of Natural Areas in City of Ryde.

Table 1 - International conventions and treaties that apply to Natural Areas in the City Of Ryde LGA

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
2015 Sustainable Development Goals	https://sustainabledevelopment.un.org/?menu=1300 A set of seventeen sustainable development goals developed through the United Nations of which the following are relevant to this plan: #13 – Sustainable development: Take urgent action to combat climate change and its impacts #15 – Life on land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
2007 The Protection of Migratory Birds	http://www.austlii.edu.au/au/other/dfat/treaties/2007/24.html Agreement provide for co-operation between the Governments of Australia and South Korea to protect waterbirds that migrate between these countries.
1994 United Nations Framework Convention on Climate Change	https://www.un.org/en/sections/issues-depth/climate-change/ The ultimate aim of the Convention is to prevent “dangerous” human interference with the climate system. Followed by the Kyoto Protocol 1998 (which legally binds developed countries to emission reduction targets) and the Paris Agreement 2016 (with the central aim of strengthening the global response to the threat of climate change by keeping temperature rise below 2 degrees C this century).
1993 Convention on Biological Diversity (CBD)	https://www.cbd.int/intro/ The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding. There is a set of 20 global targets (known as the Aichi Targets) under the Strategic Plan for Biodiversity 2011-2020. They are grouped under five strategic goals: <ol style="list-style-type: none"> A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society. B. Reduce the direct pressures on biodiversity and promote sustainable use. C. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity. D. Enhance the benefits to all from biodiversity and ecosystem services. E. Enhance implementation through participatory planning, knowledge management and capacity building.

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
<p>1992</p> <p>Rio Summit (United Nations conference on Environment and Development)</p>	<p>https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf</p> <ul style="list-style-type: none"> ➤ Rio Declaration on Environment and Development <ul style="list-style-type: none"> ▪ highlighted the importance of Ecologically Sustainable Development (ESD) ➤ Agenda 21 <ul style="list-style-type: none"> ▪ the global blueprint for sustainability ▪ Chapter 28 of Agenda 21 identifies local authorities as the sphere of governance closest to the people, and calls upon all local authorities to consult with their communities to develop and implement a local plan for sustainability-a ‘Local Agenda 21’ ➤ Convention on Biological Diversity <ul style="list-style-type: none"> ▪ a legally binding agreement ratified by Australia in 1993. As a signatory nation, Australia is bound to develop and implement strategies that will ensure the conservation and sustainable use of its biological resources. ➤ Forest Principles ➤ Framework Convention on Climate Change (a legally binding agreement)
<p>1988</p> <p>China-Australia Migratory Bird Agreement (CAMBA) and Bonn Convention</p>	<p>http://www.austlii.edu.au/au/other/dfat/treaties/1988/22.html</p> <p>Agreement that provides for co-operation between the Governments of Australia and China to protect waterbirds that migrate between these countries. (Source: City of Ryde 2016).</p>
<p>1981</p> <p>Japan-Australia Migratory Bird Agreement (JAMBA)</p>	<p>http://www.austlii.edu.au/au/other/dfat/treaties/1981/6.html</p> <p>Agreement that provides for co-operation between the Governments of Australia and Japan to protect waterbirds that migrate between these countries. (Source: City of Ryde 2016).</p>
<p>1979</p> <p>Convention on Migratory Species (CMS)</p>	<p>https://www.cms.int/en/legalinstrument/cms</p> <p>As an environmental treaty of the United Nations, CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats. CMS brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.</p>
<p>1972</p> <p>UNESCO World Heritage Convention</p>	<p>https://whc.unesco.org/en/convention/</p> <p>The most significant feature of the 1972 World Heritage Convention is that it links together in a single document the concepts of nature conservation and the preservation of cultural properties. The Convention recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two.</p>
<p>1971</p> <p>The Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Ramsar, Iran,</p>	<p>https://www.ramsar.org/ https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Wetlands/delivering-the-ramsar-convention-in-nsw-100563.pdf</p> <p>The convention (known as Ramsar) aims to halt and, where possible, reverse the worldwide loss of wetlands and to conserve those that remain through the adoption of wise use principles. Australia signed in 1974, and agreed to:</p> <ul style="list-style-type: none"> ➤ designate at least one site that meets Ramsar criteria to the Convention’s List of Wetlands of International Importance (Ramsar List) ➤ maintain the ecological character of listed Ramsar sites through conservation and wise use ➤ promote the wise use of all wetlands within their borders through national land-use planning, conservation and management ➤ promote training in wetland research, management and wise use, and ➤ consult with other Contracting Parties about implementing the Convention.

1.7.3 Commonwealth legislation

The following table provides a list of the most relevant Commonwealth legislation and policy that applies to Natural Areas in the City of Ryde.

Table 2 - Commonwealth Legislation and Policy that apply to Natural Areas in the City Of Ryde LGA

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Environment Protection and Biodiversity Conservation Act, 1999	<p>https://www.legislation.gov.au/Details/C2019C00275</p> <p>The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places defined in the Act as matters of national environmental significance. The Act also promotes the conservation of biodiversity and ecologically sustainable development through conservation and ecologically sustainable use of natural resources. The Act incorporates referral mechanisms and environmental impact assessment processes for projects of national significance. Triggers for referral to the Commonwealth include significant impacts to listed communities and species. Implications for Ryde include:</p> <ul style="list-style-type: none"> ➤ Endangered Ecological Communities (EECs) and Critically Endangered Ecological Communities (CEECs) such as Sydney Turpentine Ironbark Forest, Estuarine Saltmarsh and Blue Gum High Forest ➤ endangered species ➤ JAMBA / CAMBA / ROKAMBA species.
Disability Discrimination Act, 1992	<p>https://www.legislation.gov.au/Series/C2004A04426</p> <p>The Disability Discrimination Act 1992 provides protection for everyone in Australia against discrimination based on defined disability. The DDA makes it against the law to discriminate against someone if they have a disability in areas of life including access to premises used by the public, such as sportsgrounds.</p>
Native Title Act, 1993	<p>https://www.legislation.gov.au/Details/C2019C00054</p> <p>Native title is the traditional ownership of land and waters that have always belonged to Aboriginal people according to their traditions, laws and customs. The Commonwealth Native Title Act 1993 recognises the interest that indigenous Australians may still hold in some areas of Crown land. The Act sets out how native title rights are to be recognised and protected, making provisions for Aboriginal and Torres Strait Islanders establishing the existence of native title, lodging native title claims, determining and validating the extinguishment of native title, and dealing with land and waters where native title may not have been extinguished. On Crown land native title rights and interests must be addressed unless native title has been extinguished, surrendered or determined by a court to no longer exist. Dealings in land or water that affect (impair or extinguish) native title are referred to as 'future acts' and these acts must comply with the Native Title Act 1993. The Native Title Act 1993 specifies procedures that must be followed before future acts can be validly done. For example, a grant of freehold title, lease or licence or the construction of a public work over Crown land may be a future act.</p>
Work Health and Safety Act, 2011	<p>https://www.legislation.gov.au/Details/C2017C00305</p> <p>The WHS Act and WHS Regulations provide a framework to secure the health and safety of workers and workplaces by protecting workers and other persons against harm to their health, safety and welfare through the elimination of risks arising from work, in accordance with the principle that workers and other persons should be given the highest level of protection against harm to their health, safety and welfare from hazards and risks arising from work as is reasonably practicable.</p>

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
<p>Australia’s Biodiversity Conservation Strategy 2010-2030</p> <p>Draft National Biodiversity Conservation Strategy 2010-2020</p>	<p>https://www.environment.gov.au/biodiversity/conservation/strategy</p> <p>Australia’s Biodiversity Conservation Strategy 2010-2030 was released in 2010. The document was then reviewed in 2015 and a draft was released (Draft National Biodiversity Conservation Strategy 2010-2020). A revised strategy, Australia’s Strategy for Nature 2019-2030, was released in 2019 and replaces these documents (see above for details).</p>
<p>Australia’s Strategy for the National Reserve System 2009-2030</p>	<p>https://www.environment.gov.au/land/nrs/publications/strategy-national-reserve-system</p> <p>The National Reserve System is Australia’s network of protected areas, conserving examples of natural landscapes and native plants and animals. Most local councils manage a network of reserves and open spaces for community purposes. Many of these places have high conservation value, with valuable bushland, rivers, creeks and wetlands providing habitat for threatened plants and animals. Often these areas need only additional protection measures to be added to the National Reserve System.</p>
<p>Australia’s Strategy for Nature 2019-2030</p>	<p>https://www.australiasnaturehub.gov.au/national-strategy</p> <p>This strategy replaces the “National Biodiversity Conservation Strategy”. It is an overarching framework for all national, state and territory and local strategies, legislation, policies and actions that target nature. It incorporates adaptation, resilience and natural resource management in our cities, rural and natural environments, on land and at sea. The strategy defines three goals:</p> <ul style="list-style-type: none"> ➤ connect all Australians with nature; ➤ care for nature in all its diversity; and, ➤ share and build knowledge. <p>The goals are underpinned by twelve objectives:</p> <ul style="list-style-type: none"> ➤ encourage Australians to get out into nature; ➤ empower Australians to be active stewards of nature; ➤ increase Australians’ understanding of the value of nature; ➤ respect and maintain traditional ecological knowledge and stewardship of nature; ➤ improve conservation management of Australia’s landscapes, waterways, wetlands and seascapes; ➤ maximise the number of species secure in nature; ➤ reduce threats and risks to nature and build resilience; ➤ use and develop natural resources in an ecologically sustainable way; ➤ enrich cities and towns with nature; ➤ increase knowledge about nature to make better decisions; ➤ share and use information effectively; and, ➤ measure collective efforts to demonstrate our progress. <p>Each objective has a number of progress measures, which are used to track and report on the success of the Strategy.</p>

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Australian Pest Animal Strategy 2017 to 2027	<p>https://www.agriculture.gov.au/pests-diseases-weeds/pest-animals-and-weeds/review-aus-pest-animal-weed-strategy/aus-pest-animal-strategy</p> <p>The Australian Pest Animal Strategy provides a national framework for addressing pest animal issues whilst maintaining the profitability and sustainability of Australia's primary industries and reducing the impact of pest animals on the environment. Responsibilities for local governments include:</p> <ul style="list-style-type: none"> ➤ exercise statutory duties to encourage responsible pest animal management ➤ manage pest animal problems on local government land in a responsible way, in co-operation with other landowners ➤ assist with the coordination of community pest animal management programs ➤ support local initiatives and directions where they are representative of the APAS direction and regional and local priorities ➤ assist with data collection and information exchange ➤ develop and adopt 'Good Neighbour' policies, where appropriate, to help reduce the spread and impacts of high risk pest animal species ➤ support and build public awareness about pest animal issues. <p>The goals and priorities in the strategy are shaped around these three key areas:</p> <ul style="list-style-type: none"> ➤ prevent the establishment of new pest animal species ➤ minimise the impact of established pest animals ➤ improve leadership and coordination for the management of pest animals.
Australian Weeds Strategy 2017 to 2027	<p>https://www.agriculture.gov.au/pests-diseases-weeds/pest-animals-and-weeds/review-aus-pest-animal-weed-strategy/aus-weeds-strategy</p> <p>The Australian Weeds Strategy provides a national framework for addressing weed issues whilst maintaining the profitability and sustainability of Australia's primary industries and the reducing the impact of weeds on the environment. Responsibilities for local governments include:</p> <ul style="list-style-type: none"> ➤ exercise statutory duties to encourage responsible weed management ➤ manage weed problems on local government land in a responsible way, in co-operation with other landowners ➤ assist with the coordination of community weed management programs ➤ represent community interests in weed management ➤ support the activities of local groups undertaking weed management ➤ assist with data collection and information exchange ➤ develop and adopt 'good neighbour' policies, where appropriate, to help reduce the spread and impacts of high risk weed species ➤ support and build public awareness about weed issues. <p>The goals and priorities in the strategy are shaped around these three key areas:</p> <ul style="list-style-type: none"> ➤ Prevention, detection and early intervention ➤ Minimise the impact of established weeds ➤ Enhance Australia's capacity and commitment to weed management.
Commonwealth Wetlands Policy, 2020	<p>https://www.environment.gov.au/wetlands</p> <p>Provides the framework for managing Ramsar listed wetlands and other wetlands sites.</p>

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Intergovernmental Agreement on the Environment, 1990	<p>https://www.environment.gov.au/about-us/esd/publications/intergovernmental-agreement</p> <p>Heads of Government of the Commonwealth, States and Territories of Australia, and representatives of Local Government in Australia agreed to develop and conclude an Intergovernmental Agreement on the Environment to provide a mechanism by which to facilitate:</p> <ul style="list-style-type: none"> ➤ a cooperative national approach to the environment; ➤ a better definition of the roles of the respective governments; ➤ a reduction in the number of disputes between the Commonwealth and the States and Territories on environment issues; ➤ greater certainty of Government and business decision making; and ➤ better environment protection; <p>The Parties to this Agreement recognise the following amongst other aspects:</p> <ul style="list-style-type: none"> ➤ the important role of the government in relation to the environment; ➤ that environmental concerns and impacts respect neither physical nor political boundaries; ➤ that the concept of ecologically sustainable development provides potential for the integration of environmental and economic considerations in decision making; ➤ that it is vital to develop and continue land use programs and co-operative arrangements to achieve sustainable land use and to conserve and improve Australia’s biota, and soil and water resources.
National Forest Policy Statement, 1992	<p>https://www.agriculture.gov.au/forestry/policies/forest-policy-statement</p> <p>As signatories to the NFPS, the Australian, state and territory governments are committed to the sustainable management of all Australian forests, whether the forest is on public or private land, or reserved or available for production. Two of the principal objectives of this Statement are:</p> <ul style="list-style-type: none"> ➤ the maintenance of an extensive and permanent native forest estate in Australia and ➤ the protection of nature conservation values in forests.
National Landcare Program, 2017- 2023	<p>https://www.agriculture.gov.au/ag-farm-food/natural-resources/landcare/national-landcare-program</p> <p>Includes a range of measures to support natural resource management, sustainable agriculture and to protect Australia’s biodiversity.</p>
National Water Quality Management Strategy (NWQMS), 2017	<p>https://www.waterquality.gov.au/about</p> <p>The purpose of the NWQMS is to protect the nation’s water resources by maintaining and improving water quality, while supporting dependent aquatic and terrestrial ecosystems, agricultural and urban communities, and industry. The strategy is delivered through policies, processes and guidelines.</p>
Threatened Species Strategy, 2015	<p>https://www.environment.gov.au/biodiversity/threatened/publications/threatened-species-strategy</p> <p>Establishes a plan for a combined approach using science, action and partnership to assist with reversal of species decline and to support species recovery. Key objectives are to:</p> <ul style="list-style-type: none"> ➤ Tackle feral cats ➤ Provide safe havens for species most at risk ➤ Improve habitat ➤ Provide emergency intervention to avert extinctions.
Australian Standards	
	<p>https://www.standards.org.au/standards-catalogue/sa-snz</p> <p>Australian standards apply to aspects of natural areas management, including:</p> <ul style="list-style-type: none"> ➤ standards of built facilities such as walking tracks and trails, ➤ access for people with disabilities, ➤ environmental management systems of Council.

1.7.4 NSW legislation and Policies

Table 3 - NSW Legislation and Policies that apply to Natural Areas in the City of Ryde

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
NSW Legislation	
Local Government Act 1993	<p>https://www.legislation.nsw.gov.au/#/view/act/1993/30/full</p> <p>The Local Government Act 1993 (the LG Act) provides the legal framework for the system of local government for New South Wales and sets out the responsibilities and powers of Councils. The LG Act requires all public land vested in a council (except a road or land to which the Crown Lands Act 1989 applies) to be classified as either 'community' or 'operational'. This classification reflects the retention of land for ongoing public use and other land which may not be required and can be sold or leased. Community land must not be sold and restrictions exist on leasing or licensing of this land.</p> <p>The use and management of community land must also be regulated by a Plan of Management prepared by and adopted Council under the LG Act, relevant law including applicable environmental planning instruments and the LG Act.</p> <p>The LG Act requires that a Plan of Management is prepared to identify the category of the land, the relevant objectives and performance targets that apply to that category and identify the proposed use of the land and buildings and any future uses of the land. The core objectives for the management of each of the categories of community land relevant to this Plan of Management are prescribed in Section 36 of the LG Act.</p> <p>The Act incorporates Ecologically Sustainable Development (ESD) considerations (including biodiversity conservation) as a key aspect of Council operations. The Act require the preparation of Plans of Management (POMs) for all Council owned land, and provides for the classification of land into, amongst other things, natural areas and various sub-categories.</p> <p>Additionally, this Act has a range of other provisions that allow for appropriate management of operational land and infrastructure, provide educational services, set rates and charges, issue orders and have a range of enforcement powers.</p>
Local Government (General) Regulation 2005	<p>https://www.legislation.nsw.gov.au/#/view/regulation/2005/487/full</p> <p>Provides guidelines and criteria to assist in the categorisation of community land, the preparation and adoption of plans of management and other management matters such as the issuing of leases, licences and short term/ causal permits on community land.</p>

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
<p>Crown Land Management Act 2016 and Regulation 2018</p>	<p>https://www.legislation.nsw.gov.au/#/view/act/2016/58</p> <p>The objects and the principles of Crown land management in the Crown Land Management Act 2016 (CLM Act) ensure that Crown land is managed for the benefit of the people of NSW. This Plan of Management has been prepared according to the requirements of the CLM Act for Council managed Crown reserves which are categorised under the Local Government Act 1993.</p> <p>The objectives of the Crown Lands Division regarding land management directly relate to the objects and principles for Crown land management in the Crown Land Management Act 2016. The objects of the Act (Section 1.3) are to:</p> <ul style="list-style-type: none"> ➤ provide for the ownership, use and management of the Crown land of New South Wales ➤ provide clarity concerning the law applicable to Crown land ➤ require environmental, social, cultural heritage and economic considerations to be taken into account in decision-making about Crown land ➤ provide for the consistent, efficient, fair and transparent management of Crown land for the benefit of the people of New South Wales ➤ facilitate the use of Crown land by the Aboriginal people of New South Wales because of the spiritual, social, cultural and economic importance of land to Aboriginal people ➤ where appropriate, to enable the co-management of dedicated or reserved Crown land. <p>The principles of Crown land management (Section 1.4) are:</p> <ul style="list-style-type: none"> ➤ that environmental protection principles be observed in relation to the management and administration of Crown land, and ➤ that the natural resources of Crown land (including water, soil, flora, fauna and scenic quality) be conserved wherever possible, and ➤ that public use and enjoyment of appropriate Crown land be encouraged, and ➤ that, where appropriate, multiple use of Crown land be encouraged, and ➤ that, where appropriate, Crown land should be used and managed in such a way that both the land and its resources are sustained in perpetuity, and ➤ that Crown land be occupied, used, sold, leased, licensed or otherwise dealt with in the best interests of the State consistent with the above principles. <p>The CLM Act assigns certain functions to council managers. As a Crown land manager Council is authorised to classify and manage its dedicated or reserved Crown land as if it were public land within the meaning of the LG Act.</p>
<p>Anti-Discrimination Act 1997</p>	<p>https://www.legislation.nsw.gov.au/#/view/act/1977/48</p> <p>This Act promotes equality of opportunity for all people. The Act makes it unlawful to discriminate against people on the basis of race, including colour, nationality, descent and ethnic, ethno-religious or national origin, sex, including pregnancy and breastfeeding, marital or domestic status, disability, homosexuality, age, transgender status, and carer responsibilities.</p> <p>The Act covers discrimination in areas including provision of goods and services, and employment.</p>

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Biodiversity Conservation Act 2016	<p>https://www.legislation.nsw.gov.au/~view/act/2016/63</p> <p>The Biodiversity Conservation Act 2016 aims to ensure a balanced approach to land management and biodiversity conservation across the state, and protect threatened species and threatened ecological communities, through the application of a risk-based approach to regulating interactions and impacts of human activity on native plants, animals and communities. The new legislation only applies to the terrestrial environment. This new legislation repeals (and replaces):</p> <ul style="list-style-type: none"> ➤ the former Threatened Species Conservation Act 1995, ➤ the Nature Conservation Trust Act 2001 ➤ and parts of the National Parks and Wildlife Act 1974 <p>The Native Vegetation Act 2003 was also repealed in 2017, through amendments to the Local Land Services Act 2013.</p> <p>The Act sets out a process for listing threatened plants and animals (now aligned with relevant International Union for Conservation of Nature standards), and establishes the “Saving our Species” biodiversity conservation programme for threatened species and threatened ecological communities. Building on the former Threatened Species Conservation Act 1995 this new legislation continues to provide for the identification and listing of threatened species (Schedule 1), threatened ecological communities (Schedule 2), key threatening processes (Schedule 4), protected animals (Schedule 5) and protected plants (Schedule 6). It establishes new measures for the conservation of areas considered to be “of outstanding biodiversity value”, according to established criteria (replacing the critical habitat provisions of the former Threatened Species Conservation Act 1995).</p> <p>The Act also establishes a new regulatory framework and method for assessing, managing and offsetting the biodiversity impacts of proposed developments – under an expanded Biodiversity Offsets Scheme. It provides for a private land conservation framework with provision for three tiers of voluntary agreements on private lands – Biodiversity Stewardship Agreements (in-perpetuity agreements for the creation of biodiversity credits), conservation agreements and Wildlife Refuge agreements.</p>
Biodiversity Conservation Regulation 2017	<p>https://www.legislation.nsw.gov.au/#/view/regulation/2017/432</p> <p>Outlines the framework for addressing impacts on biodiversity from development and clearing. It establishes a framework to avoid, minimise and offset impacts on biodiversity from development through the Biodiversity Offsets Scheme.</p>
Biodiversity Offsets Scheme 2017	<p>https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/biodiversity-offsets-scheme</p> <p>The Biodiversity Conservation Act 2016 establishes a framework to avoid, minimise and offset impacts on biodiversity from development and clearing through the Biodiversity Offsets Scheme. It also establishes biodiversity stewardship agreements, which are voluntary in-perpetuity agreements entered into by landholders, to secure offset sites.</p>
Biosecurity Act 2015	<p>https://www.legislation.gov.au/Details/C2020C00127</p> <p>The aim of the NSW Biosecurity Act 2015 is to protect the economy, environment and community from the negative impact of pests, diseases and weeds. It provides a clear framework aimed at a community-wide shared responsibility for biosecurity, including priority weeds.</p>
Companion Animals Act 1998	<p>https://www.legislation.nsw.gov.au/#/view/act/1998/87</p> <p>Provides for the declaration of Wildlife Protection Areas, requires environmental initiatives by councils to promote responsible animal ownership, provides for owners’ to have effective control of dogs and cats in public places.</p> <p>https://www.ryde.nsw.gov.au/Environment-and-Waste/Bushland-and-Wildlife/Wildlife-Protection-Areas</p> <p>The following sites are Wildlife Protection Areas listed under this Act:</p> <ul style="list-style-type: none"> ➤ Field of Mars (under category 1 – no cats or dogs allowed at all times); ➤ Terrys Creek Corridor and Kitty’s Creek Corridor (under category 2- No cats allowed at all times, dogs permitted on leash along established tracks).

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Coastal Management Act 2016	<p>https://www.legislation.nsw.gov.au/#/view/act/2016/20</p> <p>The Act establishes a strategic framework and objectives for managing coastal issues in NSW. The Act promotes strategic and integrated management, use and development of the coast for the social, cultural and economic wellbeing of the people of NSW.</p> <p>The focus of the Act is on ecologically sustainable development that:</p> <ul style="list-style-type: none"> ➤ protects and enhances sensitive coastal environments, habitats and natural processes ➤ strategically manages risks from coastal hazards ➤ maintains and enhances public access to scenic areas, beaches and foreshores ➤ supports the objectives for marine environments under the Marine Estate Management Act 2014 ➤ protects and enhances the unique character, cultural and built heritage of coastal areas, including Aboriginal cultural heritage.
Disability Inclusion Act 2014	<p>https://legislation.nsw.gov.au/#/view/act/2014/41/full</p> <p>This Act relates to the accessibility of mainstream services and facilities, the promotion of community inclusion, and the provision of funding, support and services for people with a disability.</p>
Environmental Planning and Assessment Act, 1979	<p>https://www.legislation.nsw.gov.au/#/view/act/1979/203</p> <p>In NSW, the planning process is governed principally by the Environmental Planning and Assessment Act (EP&A Act) 1979 and the Environmental Planning and Assessment Regulation 2000 (Regulations). The EPA&A Act and Regulations are supported by and give effect to several environmental planning instruments including State environmental planning policies (SEPPs) and state and local strategic planning policies.</p> <p>The EP&A Act works in concert with other NSW and Commonwealth legislation to guide the management of Council assets as well as the delivery of open space, social infrastructure and the protection of natural places. The legislative and policy context are relevant considerations in the development and in the implementation of this Plan of Management.</p> <p>Implications for Ryde include:</p> <ul style="list-style-type: none"> ➤ Drives the planning and development processes in Ryde. ➤ The Act provides for the preparation of a number of environmental planning instruments (including SEPPs and LEPs). ➤ SEPP 19 – Bushland in Urban Areas provides a statutory framework for protecting urban bushland and biodiversity within the LGA.
Fire Brigades Act 1989	<p>https://www.legislation.nsw.gov.au/#/view/act/1989/192</p> <p>Addresses fire and bushfire safety issues, risk reduction and management (including local council responsibility for the construction and maintenance of fire trails on public lands they manage).</p>
Fisheries Management Act 1994	<p>https://www.legislation.nsw.gov.au/#/view/act/1994/38</p> <p>This Act aims to preserve fish stocks, habitats and species and to maintain and promote ecologically sustainable development whilst ensuring the commercial viability of fisheries. It allows for listing of threatened species, habitat, communities, and processes in a similar manner to the TSC Act. Foreshore vegetation – mangroves and saltmarsh areas – must be protected. Mangroves, saltmarsh and key fish habitat areas that occur in the LGA are protected under this Act.</p>

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Heritage Act 1977	<p>https://www.legislation.nsw.gov.au/#/view/act/1977/136</p> <p>The Act makes provisions to conserve the State's environmental heritage and provides for the identification and registration of items of State heritage significance. The State Heritage Register is a list of places and objects of particular importance to the people of NSW. The register lists over 1,650 items, in both private and public ownership. Listing on the State Heritage Register means the item:</p> <ul style="list-style-type: none"> ➤ is of particular importance to the people of NSW and enriches understanding of our history and identity; ➤ is legally protected as a heritage item under the NSW Heritage Act 1977 ➤ requires approval from the Heritage Council of NSW for major changes ➤ is eligible for financial incentives from the NSW and Commonwealth governments. <p>The Brush Farm House complex is listed on the State Heritage Register.</p>
Local Land Services Act 2013	<p>https://www.legislation.nsw.gov.au/#/view/act/2013/51/full</p> <p>The Act Provides a framework to ensure the proper management of natural resources in the social, economic and environmental interests of the State.</p> <p>Ryde is part of the Greater Sydney Local Land Services (GSLLS). The Greater Sydney LLS State Strategic Plan 2016-2026 sets the vision and goals for Local Land Services for the next ten years and outlines the strategies through which these goals will be achieved.</p>
National Parks and Wildlife Act 1974	<p>https://www.legislation.nsw.gov.au/#/view/act/1974/80</p> <p>Amended in 2018- contains provisions to protect places, objects and features of significance to Aboriginal people as well as to protect and conserve habitats, ecosystems and wildlife, landforms/landscapes and natural features of significance.</p>
Protection of the Environment Operations Act 1997	<p>https://www.legislation.nsw.gov.au/#/view/act/1997/156</p> <p>The POEO Act enables the Government to set out explicit protection of the environment policies (PEPs) to set environmental standards, goals, protocols and guidelines. The POEO Act provides a single licensing arrangement relating pollution and waste management.</p> <p>Schedule 1 of the POEO Act specifies the various scheduled activities which are licenced and regulated by the EPA. In most cases, local councils are the regulatory authorities for non-scheduled activities, except activities undertaken by a public authority which the EPA will regulate or where a public authority has been declared the appropriate regulatory authority. Clean-up notices, prevention notices and prohibition notices are provided for under the legislation.</p> <p>(Source: City of Ryde 2016)</p>
Rural Fires Act 1997	<p>https://www.legislation.nsw.gov.au/#/view/act/1997/65</p> <p>Established the NSW Rural Fire Service. Controls the fire management practices (e.g. Control burning) and development controls in relation to bush fire protection.</p> <p>Requires Council to prepare a bush fire risk management plan. Requires council to ensure that DA's on bushfire prone land meet specific requirements for bush fire protection.</p>
Water Management Act 2000	<p>https://www.legislation.nsw.gov.au/#/view/act/2000/92</p> <p>Provides for the sustainable and integrated management of water sources, including guidelines to protect and enhance the quality of water in the rivers. This Act controls the extraction of water, how water can be used, the construction of works such as dams and weirs, and the carrying out of activities on or near water sources in NSW. Any works within 40m from the top of bank of a waterway is a controlled activity that requires integrated development approval. Council are exempt from requiring integrated approval. The Parramatta River and its tributaries, including the Lane Cove River, are identified as a watercourse under this Act. Council must comply with guidelines to protect and enhance the quality of water in the rivers.</p>

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Controlled Activities on Waterfront Land- Guidelines for Riparian Corridors on Waterfront Land, 2018	Controlled activities carried out in, on or under waterfront land are regulated by the Water Management Act 2000. The Natural Resources Access Regulator administers the WM Act and is required to assess the impact of any proposed controlled activity to ensure that no more than minimal harm will be done to waterfront land as a consequence of carrying out the controlled activity. Waterfront land includes the bed and bank of any river, lake or estuary and all land within 40 metres of the highest bank of the river, lake or estuary.
State Environmental Planning Policy No.19 – Bushland in Urban Areas 2008	<p>https://www.legislation.nsw.gov.au/#/view/EPI/1986/014</p> <p>The general aim of SEPP No. 19 – Bushland in Urban Areas is to protect and preserve bushland within identified urban areas of Metropolitan Sydney in recognition of:</p> <ul style="list-style-type: none"> ➤ its value to the community as part of the natural heritage, ➤ its aesthetic value, and ➤ its value as a recreational, educational and scientific resource. <p>The SEPP applies to bushland within the LGA that is zoned or reserved for public open space purposes and requires development consent to be obtained before the bushland is disturbed. Before consent is granted the consent authority must have regard to the impact of the proposed works on the values of the bushland.</p> <p>Should Council consider it necessary or desirable to establish a framework for the protection of bushland areas within the LGA then it may prepare a plan of management in respect of bushland which sets out specific measures:</p> <ul style="list-style-type: none"> ➤ to implement the specific aims of the SEPP, ➤ to enable recreational use of the bushland, ➤ to reduce hazard from bushfire, ➤ to prevent degradation of bushland, including degradation through alteration of drainage patterns, rubbish dumping, infestation with weeds and exotic plants or the intrusion of vehicles, and ➤ to restore and regenerate degraded areas of bushland.
State Environmental Planning Policy (Infrastructure) 2007	<p>https://www.legislation.nsw.gov.au/#/view/EPI/2007/641</p> <p>The SEPP (Infrastructure) 2007 provides a consistent planning regime for the provision of infrastructure and services across NSW, including those on public land. The SEPP supports greater flexibility in the location of infrastructure and service facilities, by allowing specified works to be undertaken on community and Crown land without consent (Clauses 65 and 66). These works include: roads, pedestrian pathways, cycleways, single storey car parks, ticketing facilities, viewing platforms and pedestrian bridges, recreation areas and recreation facilities (outdoor), lighting. Consultation with relevant public authorities is required during the assessment process.</p>
State Environmental Planning Policy (Vegetation in Non-Rural Area) 2017	<p>https://legislation.nsw.gov.au/#/view/EPI/2017/454</p> <p>This SEPP regulates clearing of native vegetation in urban local government areas, as well as urban environmental zones across the state, where clearing does not otherwise require development consent under the EP&A Act. Under section 4, City of Ryde is listed as an LGA to which the SEPP applies.</p> <p>The aims of this Policy are:</p> <ol style="list-style-type: none"> a) to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and b) to preserve the amenity of non-rural areas of the State through the preservation.
State Environmental Planning Policy (Coastal Management) 2018	<p>https://www.legislation.nsw.gov.au/#/view/EPI/2018/106</p> <p>This SEPP consolidates and updates a number of previous SEPPs that related to protection of the coastal zone. It gives effect to the objectives of the Coastal Management Act 2016 from a land use planning perspective, by specifying how development proposals are to be assessed if they fall within the coastal zone. It defines the four coastal management areas in the Act through detailed mapping and specifies assessment criteria that are tailored for each coastal management area. Councils and other consent authorities must apply these criteria when assessing proposals for development that fall within one or more of the mapped areas.</p>

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Cumberland Plain Recovery Plan 2011	<p>https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Recovery-plans/cumberland-plain-recovery-plan-100501.pdf</p> <p>This recovery plan was prepared to provide for the long-term survival and protection of 7 threatened species, 4 endangered populations and 9 threatened ecological communities listed on the NSW Threatened Species Conservation Act 1995 that are found only on the Cumberland Plain. Some of which occur in the Ryde LGA.</p>
Draft NSW Biodiversity Strategy 2010-2015	<p>https://www.environment.nsw.gov.au/resources/biodiversity/strategy/10821DraftBioStrat.pdf</p> <p>Aims to co-ordinate and guide investment and effort in biodiversity conservation in New South Wales. The strategy identifies Local Government as a key contributor and partner for biodiversity conservation in NSW. It also proposes a 100-year vision of minimising the effects of climate change on biodiversity so that ecological change does not equate to loss of diversity.</p>

Local Government Act 1993

The NSW *Local Government Act 1993* provides the legislative framework for Council's day to day operations. The Act identifies a Council's responsibility to actively manage land and to involve the community in developing a strategy for its management.

Classification

Natural areas located on land owned by City of Ryde and Crown land are subject to the *Local Government Act 1993*. Council owned and Crown land which is classified as 'community' land under the Act must be managed and used according to the provisions of the *Local Government Act 1993* and the *Local Government (General) Regulation 2005*.

Community land is defined as land which must be kept for the general use of the community. Council has no power to sell, exchange or otherwise dispose of community land, except for the purpose of enabling that land to become, or be added to, a Crown Reserve or land reserved or dedicated under the *National Parks and Wildlife Act 1974*.

Plans of Management for community land.

The Act requires all community land to be covered by a Plan of Management that must identify:

- the category of the land.
- core objectives for management of the land.
- the purposes for which the land, and any such buildings or improvements, will be permitted to be used.
- the purposes for which any further development of the land will be permitted, whether under lease or licence or otherwise.
- express authorisation for any leases, licences or other estates.
- performance targets for management of the land.
- the means for assessing achievement of management objectives and performance targets.

The nature and use of community land may not change without an adopted Plan of Management.

The community is involved in the preparation of a Plan of Management for community land in the following ways (at a minimum):

- Council must exhibit the draft Plan of Management for a minimum of 28 days and allow a further 14 days for the making of submissions.
- Any substantial amendments to a draft Plan must be publicly exhibited in the same way, following which Council can adopt the draft Plan without further amendment.
- Making a submission to a public hearing regarding categorisation or recategorisation of community land.

Categorisation of community land

Community land and Crown land must be categorised in accordance with the *Local Government Act 1993* as either Park, Sportsground, Area of Cultural Significance, Natural Area, or General Community Use. A category assigned to community and Crown land, using the guidelines for categorisation in the *Local Government (General) Regulation 2005*, reflects Council's intentions for future management and use of the land.

Community and Crown land included in this Plan of Management is categorised as Natural Area, consistent with the guidelines for categorisation in the *Local Government (General) Regulation 2005*.



Tawny Frogmouth - *Podargus strigoides* - Barton Park

Table 4 - Guidelines for categorisation as Natural Area

Category	Guidelines for categorisation
Natural area	<p>Land should be categorised as a natural area under section 36(4) of the Act if the land, whether or not in an undisturbed state, possesses a significant geological feature, geomorphological feature, landform, representative system or other natural feature or attribute that would be sufficient to further categorise the land as bushland, wetland, escarpment, watercourse or foreshore under section 36(5) of the Act.</p> <p>Note:</p> <ul style="list-style-type: none"> ➤ Section 36A of the Act provides that community land that has been declared a critical habitat under the Threatened Species Conservation Act 1995 or the Fisheries Management Act 1994 must be categorised as a natural area. ➤ Section 36B of the Act provides that community land all or part of which is directly affected by a recovery plan or threat abatement plan under the Threatened Species Conservation Act 1995 or the Fisheries Management Act 1994 must be categorised as a natural area. ➤ Section 36C of the Act provides that community land that is the site of a known natural, geological, geomorphological, scenic or other feature that is considered by the council to warrant protection or special management considerations, or that is the site of a wildlife corridor, must be categorised as a natural area. ➤ (Source: Local Government (General) Regulation 2005) <p>Land that is categorised as a natural area is to be further categorised as one or more of the following:</p> <ol style="list-style-type: none"> a) bushland, b) wetland, c) escarpment, d) watercourse, e) foreshore, f) a category prescribed by the regulations.
	<p>Sections 107 – 111 of the Local Government (General) Regulation 2005 contain detailed guidelines for the categorisation of Natural Area as either bushland, wetland, escarpment, watercourse or foreshore.</p>

Core objectives for community land

The *Local Government Act 1993* establishes core objectives for each of the five categories of community land, including for Natural Areas. Council must manage the community land, and ensure the community land is used, according to these core objectives which are set out in Section 3.3. Any additional management objectives for the land must comply with the core objectives established within the Act.

This Plan of Management covers numerous sites which are categorised as Natural Areas. The sites covered by this plan were included based on compliance with the guidelines for categorisation of a Natural Area as summarised in Table 4 above.

Many of the parks listed in the Natural Areas Generic Plan of Management contain multiple categorisations and are therefore also referenced and dealt with in the City of Ryde Generic Plan of Management for Parks & General Community Use and the Generic Plan of Management for Sportsgrounds.

Use agreements

Under the *Local Government Act 1993* a lease, licence, permit, easement or other estate (use agreement) may be granted over all or part of community land.

In accordance with Section 46A of the *Local Government Act 1993* a Plan of Management for community land is to specify and authorise any purpose for which a lease, licence, permit, easement or other estate may be granted over community land during the life of a Plan of Management.

Crown Land Management Act 2016

The objects and the principles of Crown land management in the *Crown Land Management Act 2016* (CLM Act) ensure that Crown land is managed for the benefit of the people of NSW. This Plan of Management has been prepared according to the requirements of the CLM Act for Council managed Crown reserves which are categorised under the *Local Government Act 1993*.

The objectives of the Crown Lands Division regarding land management directly relate to the objects and principles for Crown land management in the *Crown Land Management Act 2016*. The objects of the Act (Section 1.3) are to:

- provide for the ownership, use and management of the Crown land of New South Wales
- provide clarity concerning the law applicable to Crown land
- require environmental, social, cultural heritage and economic considerations to be taken into account in decision-making about Crown land
- provide for the consistent, efficient, fair and transparent management of Crown land for the benefit of the people of New South Wales
- facilitate the use of Crown land by the Aboriginal people of New South Wales because of the spiritual, social, cultural and economic importance of land to Aboriginal people
- where appropriate, to enable the co-management of dedicated or reserved Crown land.

The principles of Crown land management (Section 1.4) are:

- that environmental protection principles be observed in relation to the management and administration of Crown land, and
- that the natural resources of Crown land (including water, soil, flora, fauna and scenic quality) be conserved wherever possible, and
- that public use and enjoyment of appropriate Crown land be encouraged, and
- that, where appropriate, multiple use of Crown land be encouraged, and
- that, where appropriate, Crown land should be used and managed in such a way that both the land and its resources are sustained in perpetuity, and
- that Crown land be occupied, used, sold, leased, licensed or otherwise dealt with in the best interests of the State consistent with the above principles.

The CLM Act assigns certain functions to council Crown land managers. As a Crown land manager Council is

authorised to classify and manage its dedicated or reserved Crown land as if it were public land within the meaning of the LG Act.

Dedicated or reserved Crown land may be used only for the following purposes:

- the purposes for which it is dedicated or reserved
- any purpose incidental or ancillary to a purpose for which it is dedicated or reserved
- any purpose specified in a Plan of Management for the land, and
- any other purposes authorised by an Act.

Council may grant short term licences over dedicated or reserved Crown land for any prescribed purpose under Section 2.20 of the *CLM Act*. Generally, when managing dedicated or reserved Crown land, and for the purposes of this Plan of Management, Council:

- must manage the land as if it were community land under the *Local Government Act 1993*, and
- has for that purpose all the functions that a local council has under that Act in relation to community land (including in relation to the leasing and licensing of community land).

Council must also manage Crown land in accordance with Part 8 of the *CLM Act* in relation to native title. Council is required to obtain the advice of a native title manager that it complies with any applicable provisions of the native title legislation prior to:

- granting leases, licences, permits, forestry rights, easements or rights of way over Crown land
- approve (or submit for approval) a plan of management for Crown land that authorises or permits specific dealings.
- This requirement does not apply to 'excluded land', which includes:
 - land subject to a determination under the *Native Title Act 1993* (Cth) that native title rights and interests have been extinguished or do not exist
 - land where the native title rights and interests have been compulsorily acquired, and
 - land for which a 'native title certificate' is in effect.

A native title certificate can be issued by the Minister where there is adequate evidence to show that native title rights and interest for the land have been extinguished or do not exist. The issue of a native title certificate does not affect rights under the *Native Title Act 1993* (Cth).

As this Plan of Management covers parks which contain Crown land, it is a requirement under the *CLM Act* that the draft Plan of Management be forwarded to the Minister for his/her approval to place the Plan of public exhibition.

1.7.5 Sydney and regional planning framework

Table 5 - Sydney and regional planning framework

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Greater Sydney Commission- Greater Sydney Green Grid 2018	https://www.greater.sydney/metropolis-of-three-cities/sustainability/city-its-landscape/green-grid-links-parks-open-spaces The Green Grid links, parks, open spaces, bushland and walking and cycling paths (objective #32 of A Metropolis of Three Cities)
Greater Sydney Commission- Our Greater Sydney 2056: North District Plan 2018	https://www.greater.sydney/north-district-plan Ryde is located in the north district of the Greater Sydney Region Plan. The vision is to improve the District’s lifestyle and environmental assets. To be achieved by, amongst other directions, protecting and enhancing the District’s unique natural assets including waterways, coastlines and bushland.
Greater Sydney Region Plan: A Metropolis of Three Cities – Connecting People 2018	https://www.greater.sydney/metropolis-of-three-cities Identifies directions for establishing three cities in the metropolis of Sydney including valuing green spaces and landscape defined by several objectives: #25 the coast and waterways are protected and healthier #27 biodiversity is protected, urban bushland and remnant vegetation is enhanced #30 Urban tree canopy cover is increased #32 the Green Grid links, parks, open spaces, bushland and walking and cycling paths.
Sydney Harbour Foreshores and Waterways Area DCP 2005	https://www.planning.nsw.gov.au/-/media/Files/DPE/Plans-and-policies/sydney-harbour-foreshores-and-waterways-area-development-control-plan-2005.pdf?la=en Applies to the Foreshores and Waterways Area as identified in the Harbour REP. The DCP includes design guidelines for development, assessment criteria for marinas (including guidelines for undertaking visual impact assessments), and criteria for natural resource protection.
Sydney Regional Environmental Plan (REP)(Sydney Harbour Catchment) 2005	https://www.legislation.nsw.gov.au/#/view/EPI/2005/590 Provides a Planning framework for better environmental outcomes for Sydney Harbour and its tributaries.



Blotched Hyacinth-Orchid, *Diprodium punctatum* - Field of Mars Reserve

1.8 City of Ryde Planning Context

This Plan of Management is developed to ensure that subject community lands are managed consistent with objectives and management goals outlined in the following City of Ryde strategies, plans and Policies,

Table 6 - City of Ryde Planning Context

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
<p>Ryde Biodiversity Plan, 2016 (EcoLogical Australia)</p>	<p>https://www.ryde.nsw.gov.au/files/assets/public/publications/parks-open-space/ryde-biodiversity-plan.pdf</p> <p>Provides a framework to assist management, enhancement and protection of natural areas and biodiversity in Ryde for up to a 10 year period. The Plan describes the Vegetation Communities found with Ryde, based on OEH mapping of 2013 (desktop and data analysis). For each vegetation community a total area within the LGA is provided and a list of reserves where the community is located. The legislative status (according to the TSC Act and the EPBC Act) is also provided. Rare and Threatened Flora and Fauna are discussed and species lists provided.</p> <p>Wildlife corridors are discussed with the main corridor identified as along the Lane Cove River, generally encompassing the Lane Cove National Park. Five regional corridors (encompassing Reserves within the Natural Area Generic PoM) are identified as are seven local corridors. The connectivity of bushland is described as discontinuous and interrupted by roads and developed areas. Habitat enhancement of streetscapes and expanding existing bushland areas are identified as actions to support improved connectivity between local and regional corridors.</p> <p>Threats to biodiversity are identified as:</p> <ul style="list-style-type: none"> ➤ Edge effects on linear reserves including weeds, rubbish dumping and disturbance ➤ Runoff and nutrients ➤ Lack of fire ➤ Weed invasion ➤ Dumping ➤ Recreational impacts ➤ Pets and introduced fauna ➤ Development and in reserve infrastructure. <p>A conservation significance assessment of the bushland areas in Ryde was also undertaken, in order to determine areas of important biodiversity value. Conservation significance was ranked as high, medium and low – a map illustrating location and extent is provided.</p> <p>Potential threats were also mapped using a high, medium and low scale. The assessed threats are high level considerations (land use zoning, drainage and contour data (as a surrogate for rising sea level from climate) rather than those listed above.</p> <p>A biodiversity conservation priority was determined using a matrix to rank conservation significance and threats for each bushland area. The distribution of the five conservation priority areas are mapped and listed by reserve.</p> <p>Actions are provided by five key themes and associated targets within each theme. The key themes are:</p> <ul style="list-style-type: none"> ➤ Protecting and Managing Native Vegetation ➤ Restoring waterways and surrounding environments ➤ Connectivity and inking the landscape ➤ Promote biodiversity and community interaction ➤ Protecting and managing biodiversity in the urban landscape

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Our Vision for Ryde 2028 – Community Strategic Plan 2018	<p>The Strategic Plan is a guiding document for the City of Ryde over the ten year period of 2018 – 2028, outlining a strategic approach to achieve the Vision of the City of Ryde as “The place to be for lifestyle and opportunity @ your doorstep”. The Strategic Plan is structured around seven broad themes – the most relevant to this Plan of Management being “Our natural and sustainable city”. The Strategic Plan notes that:</p> <p style="text-align: center;">“The City of Ryde’s open spaces and natural areas provide breathing spaces. People can easily access protected catchments and waterways.”</p> <p>A sub theme of Protecting Natural Areas includes the goal of “Reducing our impact on our natural systems and strengthening the health of our natural corridors”. This will be achieved by:</p> <ul style="list-style-type: none"> ➤ “Continuing investment in programs that protect and enhance City of Ryde’s natural areas including our Bushlands, waterways and ecosystems. ➤ Collaborating with volunteers, businesses and the community to care for and enhance our natural areas. ➤ Reducing our environmental footprint and protecting our natural and built environments.”
Bush Care Sites Brochure (undated)	<p>https://www.ryde.nsw.gov.au/files/assets/public/environment/become-a-bushcare-volunteer.pdf</p> <p>Promotional brochure targeted at future volunteers. In 2020, there were 19 active Bushcare groups volunteering across the city.</p>
Bushfire Prone Lands Map 2018	<p>The City of Ryde Bush Fire Prone Land Map identifies areas that may be at risk in the event of a bushfire.</p>
Development Control Plan 2014	<p>https://www.ryde.nsw.gov.au/Business-and-Development/Planning-Controls/Development-Control-Plan</p> <p>The DCP defines the requirements to be met by development in the LGA. Clauses that relate to biodiversity include:</p> <ul style="list-style-type: none"> o Part 9.5 of the DCP 2014 Tree Preservation
Dumping Hot Spots map (June 2019)	<p>GIS map of recorded rubbish dumping sites with Ryde LGA, with parks shaded for reference. Wide spread and common problem in urban areas adjoining natural spaces.</p>
Flora and Fauna Surveys, 2018 (Applied Ecology)	<p>https://www.ryde.nsw.gov.au/files/sharedassets/public/environment/native-vegetation/2017-07-flora-and-fauna-studies-2018-final-report.pdf</p> <p>Historical data collection and monitoring of Flora and Fauna across the city. Latest survey of bushland reserves within the LGA. Prior surveys undertaken in 2006-2008, and 2016-2018. Survey effort for both Flora (using general survey and also using the same quadrats as in 2008) and fauna (various methods depending on target fauna). The report provides results for each of the 42 reserves and includes:</p> <ul style="list-style-type: none"> ➤ Vegetation summary by mapped Vegetation Unit (including EEC), area of each unit with accompanying map. ➤ Flora summary with native and exotic species counts and table of species lists- with 2008-2018 comparison. ➤ Fauna species count, with 2008 – 2018 comparison. <p>Contains general recommendations on the following topic areas:</p> <ul style="list-style-type: none"> ➤ Continue survey efforts ➤ Update Council mapping based on results in report ➤ Land management via PoMs ➤ Fire Management ➤ Managing for specific species / groups including birds, amphibians, reptiles, arboreal mammals, wallabies, bandicoots and microbats.
Flood Prone Areas Maps	<p>City of Ryde has prepared Floodplain Risk Management Plans for the Eastwood and Terrys Creek Catchment, Macquarie Park Catchment, Parramatta River Ryde Sub catchments and the Buffalo and Kittys Creek catchments. The resulting reports from the studies provide solutions to existing flood problems in developed areas and strategies for ensuring that new development is compatible with the flood hazard and does not create additional flooding problems in existing developed areas.</p>

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Gannan and McCauley Parks Master Plan Report 2019	https://www.ryde.nsw.gov.au/files/sharedassets/public/recreation/parks/gannan-mccauley-parks-masterplan-report.pdf Includes proposals for natural areas and linkages.
Integrated Open Space Plan, 2012. (One Eighty and Cloustone)	https://www.ryde.nsw.gov.au/files/assets/public/publications/parks-open-space/integrated-open-space-plan-2012.pdf An analysis of current and future provision of open space within the LGA, based on project population and recreation needs. One of the five key themes is “Founded on a Healthy Natural Environment” with objectives relating to: <ul style="list-style-type: none"> ➤ Maximizing bushland, creek and river connections ➤ Conserving flora communities and fauna habitats ➤ Providing natural connections ➤ Promoting awareness of natural values Open space and recreation oriented actions are proposed based on the topics of: <ul style="list-style-type: none"> ➤ Topography and Hydrology. ➤ Bushland Management ➤ Natural Corridors, Rivers and Creeks ➤ The need for a Biodiversity Plan ➤ Sustainability ➤ Climate Change Adaptability
Local Environment Plan 2014	https://www.legislation.nsw.gov.au/#/view/EPI/2014/608/maps The LEP determines permissible development in the LGA. Clauses that relate to biodiversity include: <ul style="list-style-type: none"> ➤ Clause 3.3 LEP defines an environmentally sensitive area for exempt or complying development’ ➤ Clause 5.9 LEP Preservation of trees or vegetation
Local Planning Study- Environment and Open Space 2010	https://www.ryde.nsw.gov.au/files/assets/public/publications/lps/local-planning-study-05-environment-and-open-space.pdf The study was prepared to inform the LEP and included a section on the environment and open space and identified then current issues and recommendations.
Meadowbank and Memorial Parks Master Plan Report 2019	https://www.ryde.nsw.gov.au/files/assets/public/publications/parks-open-space/meadowbank-memorial-park-masterplan-report-adopted-by-council-261119-with-amendment-low-resolution.pdf Includes proposals for natural areas
Programs that encourage biodiversity protection and community involvement	<ul style="list-style-type: none"> ➤ Ryde Environmental Education Network (REEN) ➤ Bushcare Volunteer Program ➤ Bushcare Community Partnership Program (corporate Volunteers) ➤ Community education including sustainability workshops ➤ Home Waste and Sustainability Advisory Service ➤ Guided Walks Program (Active in Ryde) ➤ The Habitat Community Nursery and Garden ➤ River to River Corridors Program 2010-2012 ➤ Our Living River Project - as a partner in the Parramatta River Catchment Group and Masterplan ➤ Spring Garden Competition
Ryde River Walk Master Plan Report 2007	https://www.ryde.nsw.gov.au/Council/Plans-and-Publications/Parks-and-Open-Space Defines a river walk that passes amongst other landscapes and bushland areas

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Street Tree Master Plan 2013	<p>https://www.ryde.nsw.gov.au/files/assets/public/publications/street-tree-masterplan.pdf</p> <p>The City of Ryde Street Tree Master Plan (STM) informs and directs all street tree planting and aids the City of Ryde and the community in managing and increasing the extent of the Urban Forest. It specifically includes objectives and considerations for connections to habitat corridors.</p>
Urban Forest Technical Manual 2016	<p>https://www.ryde.nsw.gov.au/files/assets/public/publications/tree-management-technical-manual.pdf</p>
Water Sensitive Urban Design Guidelines 2015	<p>Water Sensitive Urban Design (WSUD) aims to manage the effects of urban development on the urban water cycle by considering the management of potable water, wastewater and stormwater elements in an integrated manner to reduce impacts from poor design consideration. The objectives of WSUD aim to conserve water, maximise retention and improve stormwater quality and minimise wastewater.</p> <p>The aim of the Guidelines is to provide relevant parties with the necessary detail and information to design a WSUD solution that meets the objectives of the City of Ryde's DCP 2014 – Part 8.2 Stormwater and Floodplain Management.</p>
Plans of Management	
Brush Farm Park and Lambert Park PoM 2009	<p>https://www.ryde.nsw.gov.au/files/assets/public/publications/generic-plan-of-management/brush-farm-park-and-lambert-park-plan-of-management.pdf</p> <p>Specific Area PoM which will be superseded by the Generic Plans of Management for Natural Areas, Parks General Community Use and Sportsgrounds. Contains typical background information on natural and recreational values, and legislative context. Objectives, Strategies and Actions detailed by LG ACT Categories.</p>
ELS Hall Park, Greenwood Park and Booth Reserve Master Plan Report 2019	<p>https://www.ryde.nsw.gov.au/files/sharedassets/public/recreation/parks/els-hall-greenwood-parks-booth-reserve-master-plan-report.pdf</p> <p>Includes proposals for the section of Shrimptons Creek (natural areas) through ELS Hall Park. This PoM will be superseded following the adoption of the ELS Hall Park Plan of Management and the Generic Plans of Management for Parks, General Community Use, Sportsgrounds and Natural Areas</p>
Field of Mars Reserve Plan of Management 2009	<p>https://www.ryde.nsw.gov.au/files/assets/public/publications/generic-plan-of-management/field-of-mars-plan-of-management.pdf</p> <p>Specific Area PoM. Contains typical background information on natural and recreational values, and legislative context. Objectives, Strategies and Actions detailed by LG ACT Categories. An updated PoM for Field of Mars Reserve will be prepared in 2020.</p>
Generic Plan of Management for Sportsground, Parks, Natural Areas, General Community Use 2001	<p>https://www.ryde.nsw.gov.au/files/assets/public/publications/generic-plan-of-management/generic-plan-of-management.pdf</p> <p>The Natural Areas chapter contains LGA Core objectives for each sub category, management statement and objectives. Policies are listed by General, Leases Licences and Other estates, Community land Easements. Management Objectives and related Sections and performance measures are provided. This Generic PoM will be superseded once the suite of new Specific and Generic PoMs, which will cover all parks contained in the Generic Plan of Management for Sportsground, Parks, Natural Areas General Community Use 2001, are adopted.</p>
Putney Park PoM 2011	<p>https://www.ryde.nsw.gov.au/files/assets/public/publications/generic-plan-of-management/putney-park-plan-of-management.pdf</p> <p>Specific Area PoM. Contains typical background information on natural and recreational values, and legislative context. Objectives, Strategies and Actions detailed by LG ACT Categories. An updated Putney Park PoM will be developed in 2021</p>

Planning framework	Link / Relevance to Natural Areas in the City of Ryde
Shrimptons Creek Parklands PoM 2012	<p>https://www.ryde.nsw.gov.au/files/assets/public/publications/generic-plan-of-management/shrimptons-creek-parklands-master-plan-and-plan-of-management.pdf</p> <p>Geographic Area PoM which will be superseded by the ELS Hall Park Plan of Management and the Generic Plans of Management for Natural Areas, Parks General Community Use and Sportsgrounds. Contains typical background information on natural and recreational values, and legislative context. Objectives, Strategies and Actions detailed by LG ACT Categories.</p>

1.9 How to read this Plan of Management

Chapter 1 introduces the Generic Plan of Management for Natural Areas and contains information about the planning and management context within which the Plan of Management was developed.

Chapters 2 and 3 contain a broad description of Natural Areas incorporated in this Plan of Management, as well as a Basis for Management that describes what the Ryde community values about Natural Values, provides a Vision Statement, details the legislative core objectives and City of Ryde broad objectives for Natural Areas.

Chapter 4 details the management directions of this Plan of Management utilising a format of management issue, management objectives/targets relating to this issue, actions to achieve these objectives/targets, performance measures and priorities.

Chapter 5 considers the implementation of this Plan of Management and contains information on Future Use and Developments, describes permissible Leases and Licences as well as Implementation, Funding, Monitoring and Reporting, and Review.

A number of Appendices contain detailed supporting information including a list and ownership of the land parcels included in this Plan of Management and maps of each parcel showing the extent of the Natural Areas category within each parcel.



Hairpin Banksia - *Banksia spinulosa* - Pembroke Park

2 SITE CHARACTERISTICS AND DESCRIPTION

Aboriginal people lived for thousands of years in the area now known as the City of Ryde. When the first Europeans settled at Sydney Cove in 1788 the traditional owners of this area were the Wallumedegal. This name was told to Captain Arthur Phillip, first governor of the convict colony of New South Wales, by Woollarawarre Bennelong from the Wangal clan.

It is likely that the name Wallumedegal or Wallumattagal was derived from wallumai (the snapper fish), combined with matta (a word used to describe a place, usually a water place- as with Parramatta and Cabramatta).

Wallumedegal territory followed the north bank of the Parramatta River from Turrumburra (Lane Cove River) in the east to Burrumatta at the head of the river to the west. The northern boundary would logically be the Lane Cove River and the northern neighbours therefore the Cameragal or spear clan. Further east, opposite the Cameragal, were the Cadigal, a harbour-dwelling clan, which occupied the present Eastern Suburbs and City of Sydney, from Inner South Head to Darling Harbour.

Topography and Geology

The topography of the City of Ryde ranges from steep sandstone ridges to valleys with a topographical range of approximately 100 metres. A high and clearly defined ridge line extends east/west from Top Ryde towards Eastwood and Brush Farm Park and represents a transition from the Hornsby Plateau geological feature to the Cumberland Plain. The undulating landscape combined with the high ridgelines and deeply eroded river gorges offer opportunities for sweeping views, many of them in Council's open spaces across the City. The associated sandstone outcrops support a diverse variety of plant communities, some threatened and associated rich flora and fauna habitat (City of Ryde, 2012).

Rivers, Creeks and Stormwater

The City is bounded by the two major rivers, Parramatta River and Lane Cove River, forming the receiving waters for a network of large and small creeks that flow throughout the City – some of which now form biodiversity / wildlife as well as recreational corridors. Conversely, many of original creeks and drainage lines have been diverted, piped or built over as part of urban development. Five creeks retain significant lengths of natural profile- Archer's Creek, Buffalo Creek, Porters Creek, Shrimptons Creek and Terry's Creek.

Due to the urban nature of these creek catchments, water quality varies greatly and is typical of highly modified and developed urban areas, and is often poor in periods of rain when stormwater discharges into the creeks from adjoining roads and developments.

Council is continually working to improve water quality in stormwater systems through undertaking monitoring of major waterways, investing in a variety of stormwater treatment systems such as Gross Pollutant Traps, constructed wetlands, raingardens and bio-retention basins. Council also implements a range of educational programs involving local schools and residents promoting a greater understanding of these natural resources to encourage sustainable, on site management to alleviate infrastructure issues and improve waterways. A number of the Water Sensitive Urban Design (WSUD) treatments are also located in the City's open space. (City of Ryde 2012).

Vegetation Communities

The City of Ryde lies within the Cumberland sub-region of the Sydney basin Bioregion. The Ryde Biodiversity Plan details 22 distinct vegetation communities as occurring within the City of Ryde, as listed in Table 7 below. Figure 2 illustrated the location and extent of the 22 vegetation communities in City of Ryde, as mapped by the office of Environment and Heritage in 2013.

The information presented in the below table is based on vegetation mapping that had not been ground truthed as part of the Ryde Biodiversity Plan. However, the presence of 12 of the 22 vegetation communities was ground truthed within 42 selected Reserves during 2016 – 2018 as part of a flora and fauna survey undertaken by Applied Ecology. This updated information has been incorporated where relevant.

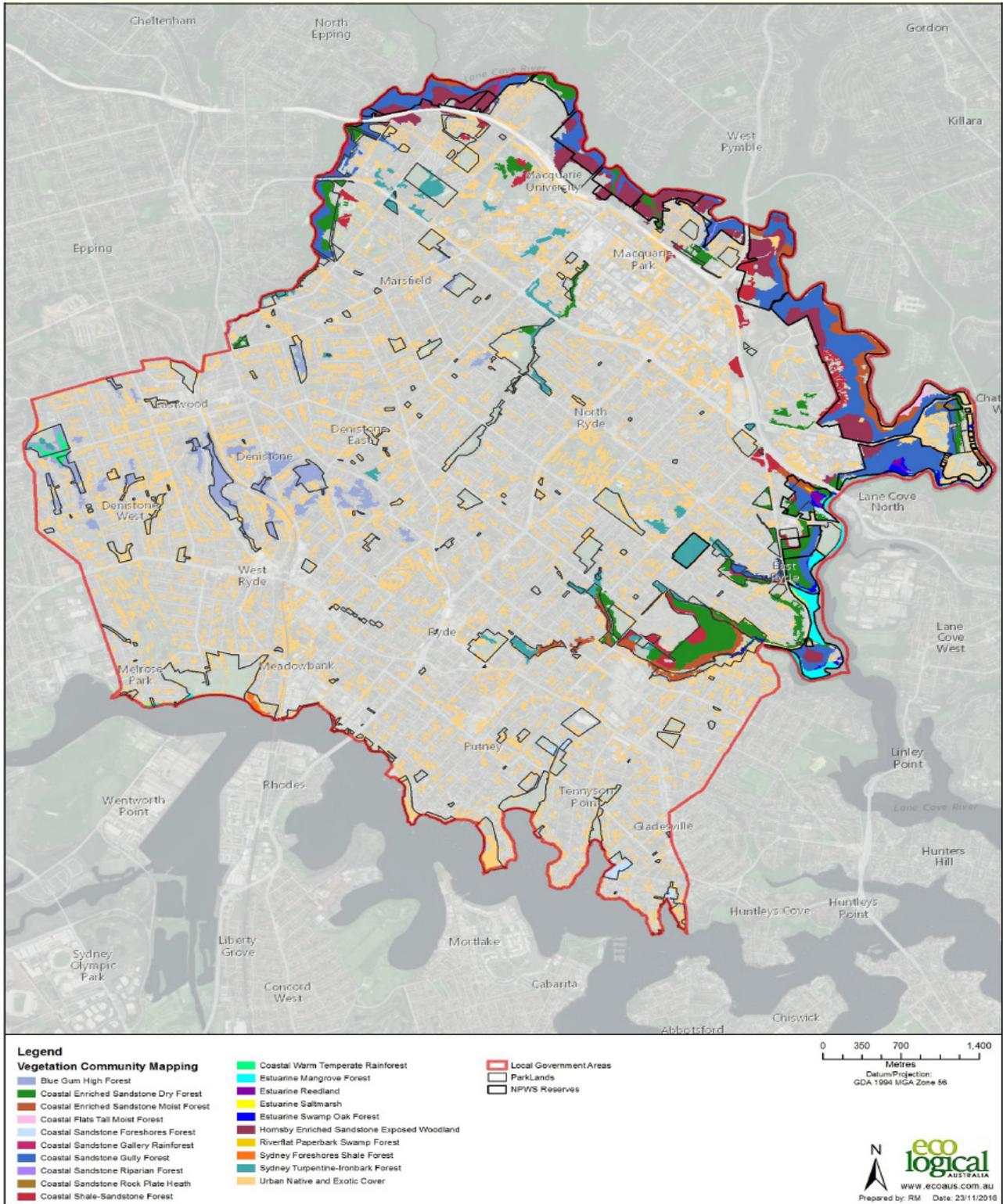
Table 7 - Vegetation Communities of City of Ryde

Sydney metro CMA Vegetation Mapping 2013	NSW Biodiversity Conservation Act 2016 Status	Commonwealth Environment Protection and Biodiversity Conservation Act 1999 Status	Area in City of Ryde (as at 2013)	City of Ryde Reserves within Natural Areas Generic Plan of Management where Vegetation Community is present
Blue Gum High Forest	Critically Endangered Ecological Community	Critically Endangered	53	Bell Park, Braemar Park, Brush Farm Park, Darvall Park , Denistone Park, Forrester Park, Jim Walsh Park, Lambert Park, Lynn Park, Miriam Park, Outlook Park, Portius Park, Symon's Reserve and Yarramar Reserve.
Coastal Enriched Sandstone Dry Forest			80	Barton Reserve, Boobajool Reserve, Brereton Park, Forsyth Park, Kobada Park, Lucknow Park, Martin Reserve, North Ryde Park, Nundah Reserve, Pembroke Park, Pidding Park, Portius Park, Pryor Park, Rafferty Reserve, Somerset Park, Tasman Park, Wilga Park and Yurrah Reserve.
Coastal Enriched Sandstone Moist Forest			36	Barton Reserve, Burrows Park, Kittys Creek Reserve, Laurel Park, Pembroke Park and Portius Park.
Coastal Flats Tall Moist Forest			2	Nil
Coastal Sandstone Foreshores Forest			6	Bremner Park, Mallee Reserve and Tyagarah Park
Coastal Sandstone Gallery Rainforest			14	Fielder Park, Forrester Park, Forsyth Park, Kittys Creek Reserve, Lucknow Park, Pembroke Park and Portius Park.
Coastal Sandstone Gully Forest			127	Fielder Park, Forsyth Park, Ivanhoe Reserve, Kittys Creek Reserve, Kobada Park, Lucknow Park, Magdala Park, Pembroke Park, Portius Park, Quebec Reserve and Somerset Park.
Coastal Sandstone Riparian Forest			1	Nil
Coastal Sandstone Rock Plate Heath			1	Nil
Coastal Shale-Sandstone Forest			32	Boobajool Reserve, Myall Reserve, Tasman Park and Waterloo Park.
Coastal Warm Temperate Rainforest			3	Brush Farm Park and Lambert Park.
Estuarine Mangrove Forest			18	Magdala Park.
Estuarine Reedland			2	Nil

Sydney metro CMA Vegetation Mapping 2013	NSW Biodiversity Conservation Act 2016 Status	Commonwealth Environment Protection and Biodiversity Conservation Act 1999 Status	Area in City of Ryde (as at 2013)	City of Ryde Reserves within Natural Areas Generic Plan of Management where Vegetation Community is present
Estuarine Saltmarsh	Endangered Ecological Community (listed in the Act as Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions)		1	Nil
Estuarine Swamp Oak Forest	Endangered Ecological Community (listed in the Act as Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions)		7	Nil
Hornsby Enriched Sandstone Exposed Woodland			66	Christie Park, Fielder Park, Somerset Park and Waterloo Park.
Plantations			1	Nil
Riverflat Paperbark Swamp Forest	Endangered Ecological Community (listed in the Act as Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions)		<1	Nil
Sydney Foreshores Shale Forest			1	Nil
Sydney Turpentine-Ironbark Forest	Critically Endangered Ecological Community	Critically Endangered	38	Aitchandar Park, Barton Reserve, Brush Farm Park, Bundara Reserve, Burrows Park, Forrester Park, Forsyth Park, Greenwood Park, Marsfield Park, Minga Reserve, Portius Park, Pryor Park, and Stewart Park.
Urban Native and Exotic Cover			473	

Source: Adapted from City of Ryde 2016 and City of Ryde 2018

Figure 2 – Vegetation Community Mapping, 2013



Source: City of Ryde, Biodiversity Plan 2016

Flora

The Ryde Biodiversity Plan reviewed results of previous vegetation surveys undertaken within City of Ryde and noted that 570 flora species had been recorded. An analysis of current available data undertaken during preparation of the Ryde Biodiversity Plan concluded that thirteen threatened plant species were listed as conservation significant under the *Biodiversity Conservation Act 2016* or the *Environment Protection and Biodiversity Conservation Act 1999*. Of these thirteen species, seven were known to occur on lands managed by City of Ryde. Three species are known to occur on natural areas contained within this Plan of Management –

- *Darwinia biflora* - listed as Vulnerable under NSW and Commonwealth legislation,
- *Prostanthera marifolia* - listed as Critically Endangered under NSW and Commonwealth legislation, and
- *Wilsonia backhousei* - listed as Vulnerable under NSW legislation. Note however that the NSW Environment, Energy and Science threatened species data base indicates in 2020 that *Prostanthera marifolia* is only known from three locations within Northern Beaches Council Local Government Area.

Fauna

As with flora, the Ryde Biodiversity Plan reviewed results of previous surveys undertaken within City of Ryde. Like many urbanised Local Government Areas in Sydney populations of large terrestrial mammals and large reptiles have declined significantly or species have become locally extinct. Arboreal mammals (Ring-tailed Possum and Brush-tailed Possum) are still regarded as relatively common (Insight Ecology, 2010). The variety of bird species has also declined over time, particularly those perching species requiring mid canopy cover.

The Ryde Biodiversity Plan includes an analysis of known threatened fauna species within City of Ryde over time, showing a gradual decline from sixteen species recorded between 1980 and 1990 and only thirteen species recorded since 1990 (as of 2016). Of all threatened species (listed under the *Biodiversity Conservation Act 2016* or the *Environment Protection and Biodiversity Conservation Act 1999*) that were recorded in City of Ryde between 1980 and 2016 seven were from lands managed by City of Ryde. Four threatened species are known to occur in natural areas addressed in this Plan of Management.

Fauna surveys of 42 small natural area reserves undertaken by Applied Ecology between 2016 and 2018 (City of Ryde, 2018) identified a further three threatened species – all of which occur in natural areas contained within this Plan of Management.

A total of seven threatened species have been recorded in natural areas contained within this Plan of Management –

- Little Bent-winged bat (*Miniopterus australis*)- listed as Vulnerable under NSW legislation.
- Large Bent-winged Bat (*Miniopterus orianae oceanensis*) – listed as Vulnerable under NSW legislation. Note this species has recently been renamed from the Eastern Bent-wing Bat *Miniopterus schreibersii oceanensis* as it was named when the Ryde Biodiversity Plan and Applied Ecology reports were prepared.
- Large-footed Myotis (*Myotis macropus*)- listed as Vulnerable under NSW legislation
- Powerful Owl (*Ninox strenua*) - listed as Vulnerable under NSW legislation.
- Yellow-bellied Glider (*Petaurus australis*) – listed as Vulnerable under NSW legislation.

- Grey-headed Flying Fox (*Pteropus poliocephalus*)- listed as Vulnerable under NSW and Commonwealth legislation.
- Yellow-bellied Sheath-tailed Bat (*Saccolaimus flaviventris*)- listed as Vulnerable under NSW legislation.

Natural Area Networks / Wildlife Corridors

The most functional wildlife corridor within the City of Ryde occurs along the Lane Cove River, where vegetation comprising Lane Cove National Park forms a corridor connecting to the riparian habitats of the Parramatta River. However, within the majority of City of Ryde, the connectivity of bushland areas is discontinuous and interrupted by roads and developed areas. Consequently, only highly mobile fauna and widely-dispersing native flora species are capable of utilising such corridors. Figure 3 illustrates local and regional biodiversity connectivity within City of Ryde (City of Ryde 2016).

Biodiversity Threats

The Ryde Biodiversity Plan notes that, typical of many urban Local Government Areas in Sydney, the most direct threat to biodiversity within City of Ryde is loss of native vegetation communities and habitat through clearing for urban development and related infrastructure. Within this broader context, specific threats to biodiversity include:

Edge Effects – the high boundary to area ratio of many small linear reserves results in edge effects (such as weed invasion, disturbance and artificial lighting), penetrating through much of the reserve and impacting on natural values. These impacts are mitigated in larger reserves with a low boundary to area ratio resulting in a “core” area buffered or protected from the impact of edge effects.

Runoff and Nutrients – the large area of impermeable surfaces in an urban environment results in increased runoff of nutrient and pollutant rich stormwater into natural drainage lines and stormwater channels. Where such drainage lines and creeks occur in remnant bushland areas the increased nutrient levels favour the establishment and growth of weed species. Upstream developments and poor construction site management also cause increased stormwater, nutrient and sediment runoff.

Changed Fire regimes – lack of fire in dry sclerophyll vegetation communities found on the ridge lines urban bushland areas in City of Ryde results in a changed species composition and a general decline in species diversity over time since the last fire. Conversely, bushland areas that burn frequently can exhibit a loss of native species richness, particularly for those species that regenerate from a seed bank in the soil or from seeds in woody fruit.

Weed Invasion – The presence and abundance of weed species threaten the biodiversity of City of Ryde natural areas. City of Ryde has legal obligations to control noxious weeds within lands managed by Council.

Impacts from Human Use – unmanaged informal recreational use of natural areas (such as unauthorised walking or bicycle track construction) can lead to clearing of native vegetation, soil erosion and provide opportunity for establishment of weed species. Dumping of rubbish, garden and lawn clippings and artificial lighting also impacts biodiversity values.

Pets and Introduced Fauna – Predation by dogs and cats as well as foxes is a significant cause of the decline of native mammals and reptiles in urban bushland areas. The presence of dogs in urban areas, even when on leash, can result in changed behaviours of native fauna.

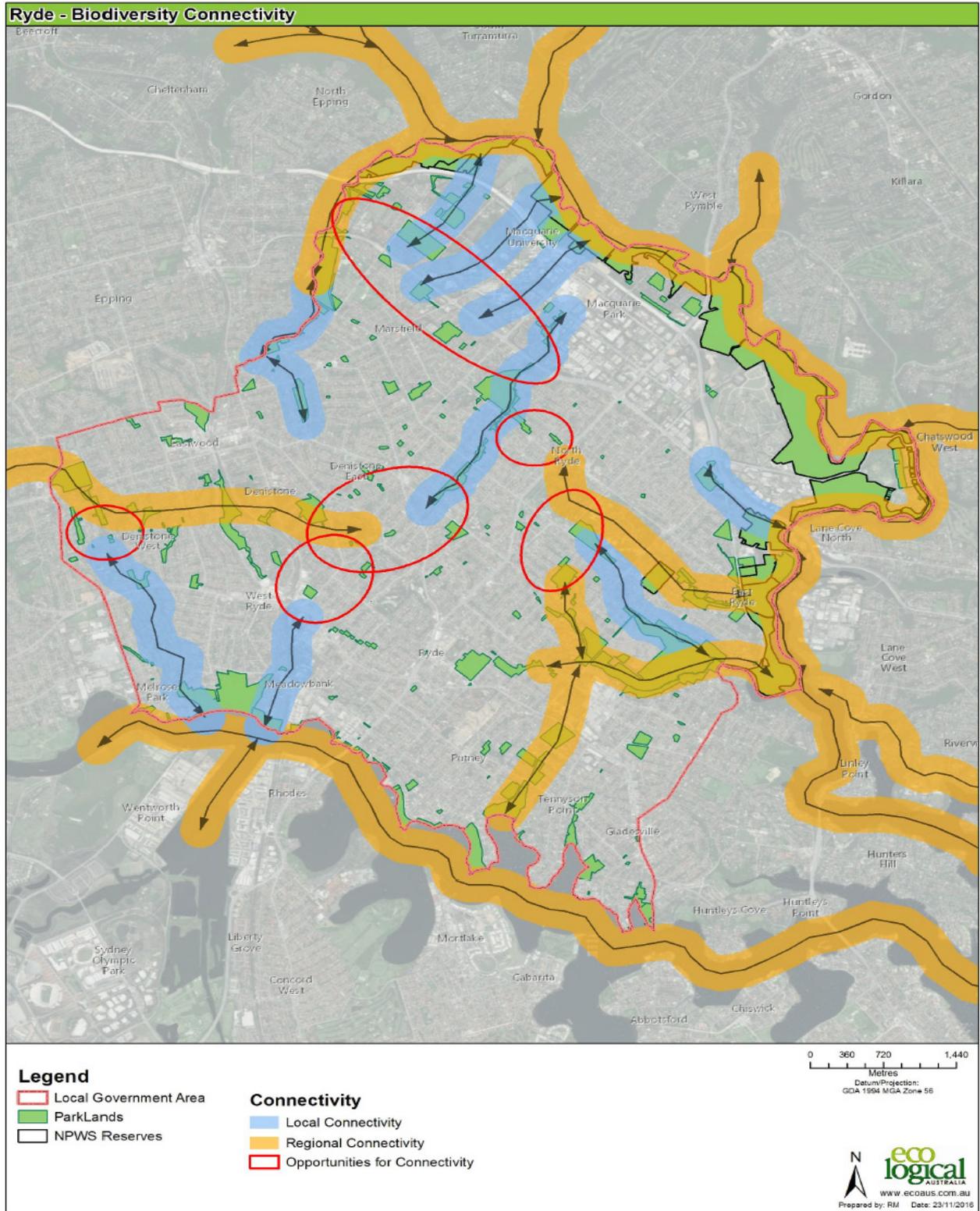
Infrastructure – the construction and maintenance of infrastructure within natural areas can result in

clearing of native vegetation and disturbance. Infrastructure can include stormwater and other underground services, powerlines, adjoining recreational facilities and managed open space, and roads. Maintenance and ongoing use of such facilities and infrastructure causes ongoing disturbance and impact to natural areas.



Yellow Tailed Black Cockatoo - *Calyptorhynchus funereus* - Terrys Creek

Figure 3: Biodiversity Connectivity within City of Ryde (Source: City of Ryde, 2016).



Source City of Ryde Biodiversity Plan 2016,

2.1 Land to which this Plan of Management applies

City of Ryde covers an area of 4,056 hectares, incorporating a diverse network of open space. Council manages and maintains approximately 210 reserves with a total area of approximately 355 hectares of open space. The parks and reserves listed in Appendix A- Land Information- Community and Crown Lands are either wholly or partly categorised as Natural Areas.

This Natural Areas Generic Plan of Management applies to community and Crown Land in City of Ryde that is categorised as Natural Area under the *Local Government Act 1993*. It does not include lands that are incorporated in a significant area. As some parks contain multiple categorisations other than Natural Areas, these parks will also appear in other generic or geographic Plans of Management.

Appendix A include lists the land parcels categorised as Natural Areas including details of Lot/DP number, address, ownership, classification, categorisation, zoning and any applicable leases or licences. Appendix B contains maps of each park or reserve indicating the physical extent of the Natural Area and any other categorisation.

Some parks or reserves may contain more than one community land category (such as Park, Sportsground, General Community Use and Natural Area) and consequently will be included in more than one generic Plan of Management.

This Generic Plan of Management for Natural Areas supersedes and extinguishes those parks included in the previous Generic Plan of Management for Sportsground, Parks, Natural Areas, General Community Use adopted in 2001. Additionally, the Plans of Management for Brush Farm Park and Lambert Park, Morrison Bay Park and Shrimptons Creek will be superseded as far as they apply to land categorised as Natural Area.

2.2 Description of Natural Areas land in this Plan

2.2.1 Land Ownership and Management

City of Ryde owns and/or manages the vast majority of Natural Areas land included in this Plan of Management through the provisions of the *Local Government Act 1993* or the *Crown Land Management Act 2016*. Some are partly or wholly Crown Land owned by the State of NSW for which City of Ryde is the appointed Crown Land Manager. There are also areas of land owned by various State Government agencies which the City of Ryde have agreements with for their care control and management.

Appendix A and B contain full ownership details of lands categorised as Natural Areas within City of Ryde and a map series indicating the physical extent of Natural Areas.

Regardless of ownership, Council will manage all Natural Areas listed in Appendix A in accordance with the provisions of this Plan of Management in order to provide a consistent management approach.

2.2.2 Classification

The majority of land described in this Plan of Management is community land, owned and managed by Council. Some Natural Areas described in this Plan of Management also include Crown land parcels which are or are intended to be classified as community land in accord with the *Crown Land Management Act 2016*.

2.2.3 Categorisation and reserve purpose

Land owned and/or managed by Council and described in this Plan of Management will be categorised as Natural Areas consistent with the *Local Government (General Regulation) 2005*. The details for categorisation across the various land parcels are detailed in Appendix A with maps included in Appendix B.

In relation to Crown land parcels, it is intended that community and Crown land making up Natural Areas within the LGA will be categorised as Natural Areas in this Plan of Management on the basis that the *Crown Land Management Act 2016* enables Council to assign different or multiple categorisations to Crown land under the *Local Government Act 1993*, if appropriate.

The reserve purpose of Crown Land in this Plan of Management, as designated by Crown Lands is Public Recreation. However, the Core Objectives for Natural Areas as defined in the *Local Government Act 1993* provides the basis for management.

2.2.4 Zoning

The *Environmental Planning and Assessment Act, 1979* establishes the statutory planning framework for environmental and land use planning of all land in NSW. One of the main instruments for implementing the Act are Local Environmental Plans- statutory planning tools that set controls over development in the area to which they apply. They contain zoning controls as well as controls for heritage conservation areas and protected areas, amongst other matters.

The vast majority of Natural Area lands in this Plan of Management are zoned under the Ryde Local Environment Plan 2014 as E2 Environmental Conservation or RE1 Public Recreation. Small portions of some Natural Areas are also zoned as R2 Low Density Residential, SP2 Infrastructure and B4 Mixed Use – generally to reflect existing land uses within Natural Areas.

Zonings are typically reviewed with each update of the LEP to ensure they reflect the desired future land use.

Zoning information for all of the parcels included in this Plan of Management is also included in Appendix A.

2.2.5 Uses of Natural Areas

Natural Areas in City of Ryde typically contain areas of predominantly remnant vegetation, with 22 different vegetation communities mapped within the Ryde LGA. The Ryde Biodiversity Plan 2016 provides a comprehensive description of the vegetation communities in Ryde LGA, their conservation status and area within City of Ryde. Rare and Threatened Flora and Fauna are discussed and species lists provided.

Natural Areas also contain riparian and foreshore, including estuarine saltmarsh communities.

While the most significant value of Natural Areas is their role in biodiversity conservation. Many areas can also provide shared opportunities for recreational use and contain a range of formal and informal walking tracks and paths in areas where land area can sustain conservation value for a species protection.

Natural Area reserves also may contain stormwater, electricity and telecommunications infrastructure.



Coastal Sandstone Gallery Rainforest, Portius Park

3 BASIS FOR MANAGEMENT

3.1 Community values and desired outcomes for Natural Areas

3.1.1 Introduction

City of Ryde takes a values-based approach to the planning, use and management of its Natural Areas. Values may be described as what is important or special about a place. This Plan of Management aims to protect and enhance the values of the Natural Areas land in City of Ryde.

Engagement with the community is an important part of the process of preparing a plan of management. Consultation that has occurred with projects directly relevant to this plan of management is outlined below.

3.1.2 Community engagement outcomes

City of Ryde Community Strategic Plan, 2018

During development of the Community Strategic Plan City of Ryde undertook an extensive consultation program with the community, obtaining input from almost 3,000 people through a range of consultative mechanism. Outcomes relevant to this Plan of Management include:

“Our community rated the City of Ryde’s natural environment, green open spaces and parks as the thing that they love the most about the area.

Residents love the City of Ryde’s green spaces and parks and the range of services and recreational facilities that are available to them. Protecting bushland and open space and expanding green spaces, tree coverage, parks and their facilities are key priorities.

People want Council to demonstrate environmental and sustainability leadership and protect the natural environment from the pressures of development. They want to see new measures to improve the cleanliness and health of streams and rivers.”

Plan of Management for City of Ryde Natural Areas Survey, 2019

During development of this Plan of Management Council a Natural Areas online survey was undertaken. The purpose of the survey was to understand what the Ryde community value about Natural Areas, why people visit Natural Areas, and what their level of satisfaction is with current management practices and priorities for future management.

The survey extended from 13 August to 29 September 2019 and was available on the City of Ryde Have Your Say website. Three Community Drop-In Sessions were held in early September to promote the survey – these were held at Portius Park, Darvall Park and Santa Rosa Park. Posters to promote the survey were also placed near entrances to a number of Natural Areas.

Fifty eight responses were received. Council’s Survey Results Report is provided in Appendix C.

(Note in the analysis below that respondents were able to select multiple options hence totals do not necessarily add to 100%.)

Respondent analysis

Ninety four percent (94%) of respondents were residents of City of Ryde and sixty one percent (61%) were female. Fifty six percent (56%) of respondents were over the age of 50.

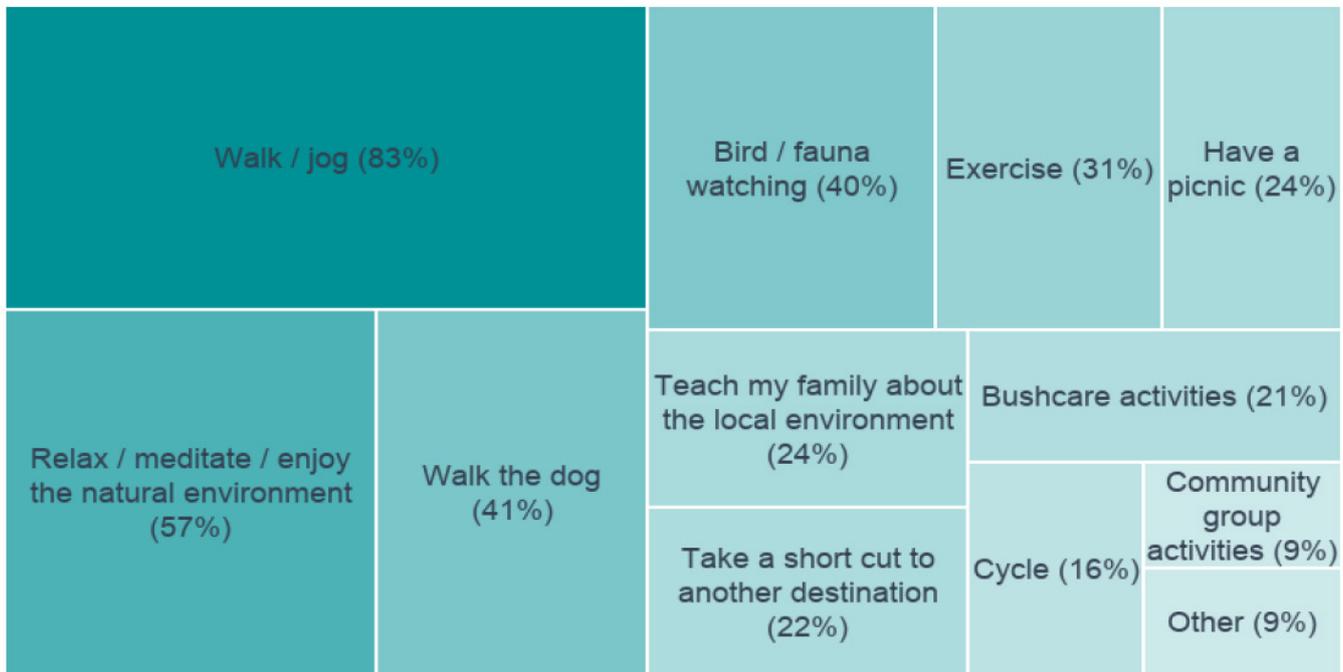
Eighty one percent (81%) of respondents were users of natural areas, sixty seven percent (67%) were users of parks adjacent to natural areas while forty seven percent (47%) of respondents reside next to a natural area.

Table 8 – Results of Natural Areas Community Consultation

Topic	Main responses
Values of Natural Areas	<ul style="list-style-type: none"> ➤ Habitat Value – 56% ➤ Space to explore / connect with the natural environment – 37% ➤ Opportunities for passive recreation – 33% ➤ Escape from suburbia and the city- 31% ➤ Fresh air, creek lines and natural outcrops – 22% ➤ Opportunities to see flora and fauna – 22% ➤ Relaxing environment – 22%
Key Threats to Natural Areas	<ul style="list-style-type: none"> ➤ Development encroachment – 69% ➤ Weed invasion – 59% ➤ Stormwater runoff, water quality and pollution – 50% ➤ Illegal dumping and littering – 24% ➤ Climate change – 22%
Future Management and Maintenance Priorities	<ul style="list-style-type: none"> ➤ Regeneration of bushland area – 54% ➤ No nett loss/of bushland areas and corridors – 50% ➤ Control of weeds and pests – 48% ➤ Protection of native wildlife and their habitats – 46% ➤ Protection of threatened species / ecological communities – 26% ➤ Improvement of water quality – 24%
Frequency of Visit to a Natural Area	<ul style="list-style-type: none"> ➤ Visit a Natural Area at least 3 times per week – 57% ➤ Visit a Natural Area at least once a week – 19%
Duration of Visit to a Natural Area	<ul style="list-style-type: none"> ➤ Duration of visit 16 – 30 minutes – 22% ➤ Duration of visit 31 to 60 minutes – 38% ➤ Duration of visit 61 – 90 minutes – 22%
Time of Day of Visits to Natural Areas	<ul style="list-style-type: none"> ➤ Before 9 a.m. – 43% ➤ 9 a.m. to midday – 69% ➤ Midday to 5 p.m. – 62% ➤ After 5 p.m. – 36%

Note - respondents were able to select multiple options hence totals do not necessarily add to 100%.

Figure 4 – Activities undertaken in Natural Areas.

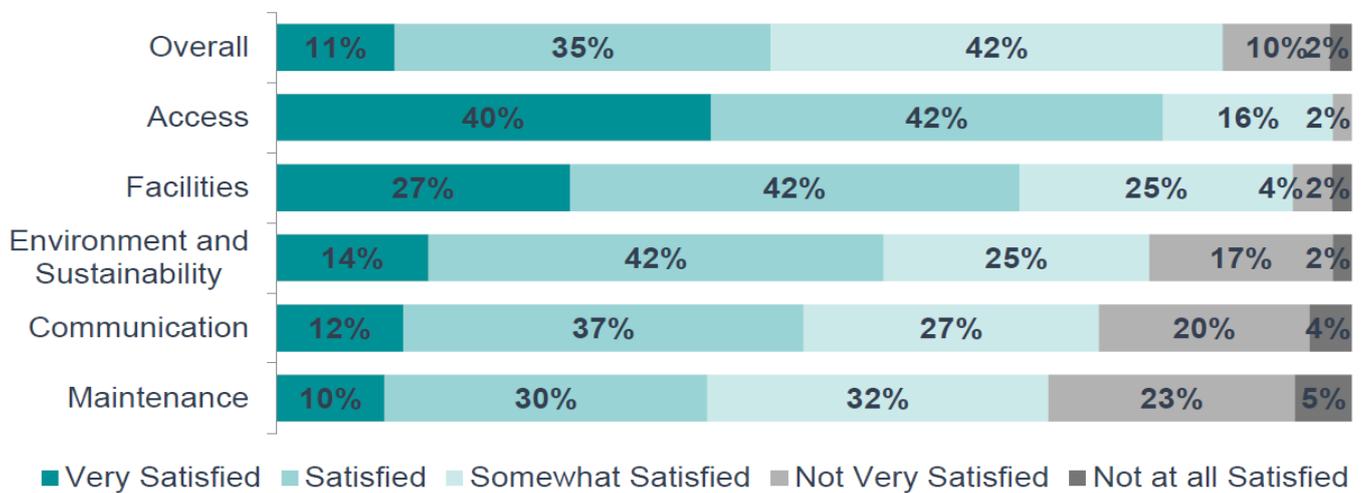


Satisfaction with Natural Areas Management

Overall, 46% of respondents were satisfied with the management of Natural Areas in the City of Ryde (when satisfied is defined as “very satisfied” or Satisfied”).

If the definition is broadened to include the “somewhat satisfied” category of response to this question, satisfaction with the management of Natural Areas increases to 88% of respondents.

Figure 5 – Satisfaction with Natural Area Management in City of Ryde



3.1.3 Values and roles of Natural Areas in City of Ryde

The various roles that the Natural Areas in City of Ryde play are related to the community’s values, as detailed in Table 9 below.

Table 9 – Values and roles of Natural Areas in City of Ryde.

Values of Natural Areas	Roles of Natural Areas
<p>Biodiversity</p> <p>Natural Areas in City of Ryde have conservation and environmental values and are highly valued by the community. There is an expressed strong desire to protect and increase Natural Areas.</p> <p>Protection of the natural environment is important to the community, environmental rehabilitation efforts by the council are appreciated in the community.</p> <p>Protection of native wildlife present within these area</p> <p>Restoration of degraded areas as impacted by urban encroachment, edge effects or developmental outcomes</p> <p>Expansion of critical links for fauna corridors and species migration</p> <p>Vegetation and canopy trees provide micro-climate benefits to the local area through providing a carbon sink, and mitigating wind velocity and the heat island effect created in urbanised areas.</p>	<p>Assist in protection of the environment and management of natural ecological systems including management against edge effects, urban development and encroachment and climate change impacts.</p> <p>Fundamental basis and core of green corridors.</p> <p>Support diversity and abundance of species within these zones for long term species survival</p> <p>Fauna habitat and connectivity and longevity</p> <p>Control of soil erosion</p> <p>Natural drainage lines / Urban stormwater drainage and water quality</p> <p>Carbon sinks</p>
<p>Recreation and healthy lifestyle</p> <p>Natural Areas are valued as they provide natural, undeveloped places for predominantly unstructured recreation.</p> <p>Provide local, readily accessible opportunities to connect with nature.</p> <p>Natural Areas provide opportunities for exercise and health promoting activities.</p> <p>Low key facilities such as walking tracks encourage recreational use and visits to Natural Areas.</p>	<p>Assist in meeting the recreational needs of residents living in the developed City of Ryde.</p> <p>A place of ‘escape’ from everyday life.</p> <p>Venue for informal recreational activities, such as relaxation, walking and nature appreciation.</p> <p>Local opportunities for unstructured nature-oriented recreation.</p>

Values of Natural Areas	Roles of Natural Areas
<p>Social and Cultural</p> <p>Provide the opportunity for people to connect with each other through recreation and through volunteering for regeneration works.</p> <p>Provide alternative venues to urban parks and sportsgrounds for individuals, couples, families and social groups for social and leisure activities.</p> <p>Provide enhanced opportunity for learning for future engagement and protection measures (such as localised habitat plantings).</p>	<p>Places for family, friends, and community groups to interact.</p> <p>Spaces for organised small-scale social gatherings</p> <p>Venue for outdoor community gatherings and events.</p> <p>Education for long term preservation, enhancement and protection.</p>
<p>Visual Appearance</p> <p>Natural Areas contribute to the green space of City of Ryde and provide a contrast to the built environment.</p> <p>Natural Areas provide a green space of appealing visual character and landscape.</p> <p>Corridors provide a ribbon of green through developed landscapes.</p>	<p>Attractive outlook from adjoining residential areas and developed suburbs.</p> <p>May offer lookout viewpoints to surrounding lands.</p>
<p>Access and Linkages</p> <p>The linear nature of some Natural Areas provide opportunity for pedestrian links between adjoining suburbs.</p> <p>The quantity and distribution of Natural Areas means they are in close proximity to most residential areas.</p> <p>Walking tracks provide an opportunity for access to and within Natural Areas.</p>	<p>Component of walking networks within City of Ryde where practically feasible (outside of environmentally sensitive habitat zones).</p> <p>Opportunity for residents to connect with nature.</p> <p>Local opportunities for nature based recreation.</p>
<p>Economic</p> <p>May attract visitors to City of Ryde.</p> <p>Increase nearby property values due to improved aesthetics and outlook.</p> <p>Enhanced work productivity from improved mental and health well being.</p>	<p>Expenditure in local economy by visitors.</p> <p>Impetus for Council grant and additional improvements funding</p>
<p>Education</p> <p>Asset for environmental, outdoor education.</p> <p>Opportunities for scientific research / study.</p>	<p>Provide a venue for provision of interpretive material to inform the community of the value and role of Natural Areas.</p> <p>Environmental education venues.</p>

3.2 Vision for Natural Areas in City of Ryde

Management of Natural Areas within City of Ryde will reflect the vision for City of Ryde as described in the 2028 Community Strategic Plan –

“The place to be for lifestyle and opportunity at your doorstep”

This is further supported by Council’s existing commitment within the Biodiversity Plan, 2016 to:

“Manage, enhance and protect Natural Areas and biodiversity in the City of Ryde.”

3.3 Objectives for Natural Areas in City of Ryde

3.3.1 Core Objectives for land categorised as Natural Areas

Section 36E of the *Local Government Act 1993*, details the core objectives for management of community and Crown Land categorised as Natural Area as:

- a) to conserve biodiversity and maintain ecosystem function in respect of the land, or the feature or habitat in respect of which the land is categorised as a natural area, and
- b) to maintain the land, or that feature or habitat, in its natural state and setting, and
- c) to provide for the restoration and regeneration of the land, and
- d) to provide for community use of and access to the land in such a manner as will minimise and mitigate any disturbance caused by human intrusion, and
- e) to assist in and facilitate the implementation of any provisions restricting the use and management of the land that are set out in a recovery plan or threat abatement plan prepared under the *Threatened Species Conservation Act 1995* or the *Fisheries Management Act 1994*.

Section 36 (5) of the *Local Government Act 1993*, requires that land that is categorised as a natural area is to be further categorised as one or more of the following--

- a) bushland,
- b) wetland,
- c) escarpment,
- d) watercourse,
- e) foreshore,
- f) a category prescribed by the regulations.

Each of the first five subcategories also has specific core objectives as listed in section 36 J – N respectively of the *Local Government Act 1993*. These core objectives are listed below.

Natural Area – Bushland

The core objectives for management of community land categorised as bushland are--

- a) to ensure the ongoing ecological viability of the land by protecting the ecological biodiversity and habitat values of the land, the flora and fauna (including invertebrates, fungi and micro-organisms) of the land and other ecological values of the land, and
- b) to protect the aesthetic, heritage, recreational, educational and scientific values of the land, and
- c) to promote the management of the land in a manner that protects and enhances the values and quality of the land and facilitates public enjoyment of the land, and to implement measures directed to minimising or mitigating any disturbance caused by human intrusion, and
- d) to restore degraded bushland, and
- e) to protect existing landforms such as natural drainage lines, watercourses and foreshores, and
- f) to retain bushland in parcels of a size and configuration that will enable the existing plant and animal communities to survive in the long term, and
- g) to protect bushland as a natural stabiliser of the soil surface.

Natural Area – Wetland

The core objectives for management of community land categorised as wetland are--

- a) to protect the biodiversity and ecological values of wetlands, with particular reference to their hydrological environment (including water quality and water flow), and to the flora, fauna and habitat values of the wetlands, and
- b) to restore and regenerate degraded wetlands, and
- c) to facilitate community education in relation to wetlands, and the community use of wetlands, without compromising the ecological values of wetlands.

Natural Area – Escarpment

The core objectives for management of community land categorised as an escarpment are--

- a) to protect any important geological, geomorphological or scenic features of the escarpment, and
- b) to facilitate safe community use and enjoyment of the escarpment.

Natural Area – Watercourse

The core objectives for management of community land categorised as a watercourse are--

- a) to manage watercourses so as to protect the biodiversity and ecological values of the instream environment, particularly in relation to water quality and water flows, and
- b) to manage watercourses so as to protect the riparian environment, particularly in relation to riparian vegetation and habitats and bank stability, and
- c) to restore degraded watercourses, and

-
- d) to promote community education, and community access to and use of the watercourse, without compromising the other core objectives of the category.

Natural Area – Foreshore

The core objectives for management of community land categorised as foreshore are--

- a) to maintain the foreshore as a transition area between the aquatic and the terrestrial environment, and to protect and enhance all functions associated with the foreshore's role as a transition area, and
- b) to facilitate the ecologically sustainable use of the foreshore, and to mitigate impact on the foreshore by community use.

3.3.2 Objectives of Natural Area Planning and Land Use Zones

This Plan of Management is consistent with the objectives of the land use zones in Ryde Local Environmental Plan 2014 that apply to the majority of Natural Areas in the City of Ryde.

The objectives for the E2 Environmental Conservation Zone are:

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.

Environmental protection works are permitted without consent and environmental facilities are permitted with consent. The LEP lists a range of prohibited land uses and in addition notes that any other developments not listed as permitted with consent or permitted without consent are also prohibited.

The objectives for RE1 Public Recreation Zone are to

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

Environmental protection works are permitted without consent. A range of land uses are permitted with consent including (among others) community facilities, environmental facilities, kiosks, recreation areas and recreation facilities (outdoor). Any development not listed as permitted with consent or permitted without consent is prohibited.

3.3.3 Council objectives for Natural Areas in City of Ryde

City of Ryde objectives for Natural Areas are based on the outcomes of the community engagement program for preparing the Community Strategic Plan 2028. The Our Natural and Sustainable City theme includes the following desired outcome statement-

“The City of Ryde’s open spaces and natural areas provide breathing spaces. People can easily access protected catchments and waterways. The built environment retains local character and heritage while providing contemporary energy and resources savings and sensible waste solutions.”

The Strategic Plan states “our priority over the next ten years will be to protect and increase natural areas and parklands and address climate related challenges such as extreme weather patterns, bushfire and flooding.”

A sub theme titled “Protecting Natural Areas” includes the goal of

“Reducing our impact on our natural systems and strengthening the health of our natural corridors”. This will be achieved by “Continuing investment in programs that protect and enhance City of Ryde’s natural areas including our Bushlands, waterways and ecosystems; and collaborating with volunteers, businesses and the community to care for and enhance our natural areas.”

3.4 Aims and objectives for Natural Areas in City of Ryde

3.4.1 Aims

Natural Areas within City of Ryde will be managed for the enhancement and protection of biodiversity and ecosystem function and health whilst providing for community use in a manner that minimises impacts on biodiversity and ecosystem values.

3.4.2 Desired outcomes

Table 10 - Desired Outcomes and Management Directions

Management Direction	Desired outcome
Access Recreational Use and Facilities	<p>Access and recreational facilities to support public recreation in designated areas are located such that there is no conflict with biodiversity conservation and protection objectives for flora and fauna.</p> <p>Vehicular access into Natural Areas is controlled and impacts are minimised.</p> <p>Impacts from adjoining open space is managed and minimised.</p>
Biodiversity / Environmental Sustainability	<p>Natural systems, vegetation communities, biodiversity and habitats are protected, maintained and enhanced.</p> <p>Connectivity between Natural Areas within City of Ryde, and to natural areas that adjoin City of Ryde, is maintained, expanded and enhanced.</p> <p>Bushland areas are retained to promote long term survival of flora and fauna species and communities.</p> <p>Regeneration efforts are targeted and supported to achieve long term conservation outcomes utilising best practise techniques for habitat restoration.</p> <p>Fire management achieves protection of life and property and fire regimes are beneficial to age, structure and species diversity of native vegetation communities.</p>
Management and Maintenance	<p>Effective and efficient management of natural areas as aligned to vegetation and communities known to the area.</p> <p>Future planning for management of specific natural areas.</p>
Community Engagement and Involvement	<p>The City of Ryde community is aware of the values, importance and conservation imperative of Natural Areas.</p> <p>Bushcare program supports biodiversity management outcomes.</p> <p>Transparent management of Natural Areas.</p>
Leases and Licences	<p>Appropriate use of agreements in natural areas considering environmental sensitivities of species and landscape, legislative protection responsibilities by Council and necessary requirements</p>



Water Dragon - *Intellagama lesueurii* - Forrester Park

4 MANAGEMENT ISSUES AND ACTION PLANS

4.1 Introduction

This section outlines the actions required to effectively and efficiently manage Natural Areas to implement the objectives set out above.

The Ryde Biodiversity Plan, 2016 provides detailed direction in maintaining local ecosystem health including local vegetation communities, associated flora and fauna species and their genetic diversity.

The Ryde Biodiversity Plan contains a range of detailed objectives, targets and actions to frame future management, enhancement and protection of natural areas and biodiversity in City of Ryde. This Plan of Management expressly authorises the implementation of management actions within the Ryde Biodiversity Plan, 2016 as far as they extend to Natural Areas.

Relevant actions within the Ryde Biodiversity Plan have not been replicated below – rather, the actions below are intended to support and complement those within the Ryde Biodiversity Plan 2016.

4.2 Action Plan tables

The following Action Tables present a variety of management actions that will guide the management of Natural Areas over a ten year period from the adoption of this Plan of Management.

Management Actions are presented using the five key management directions discussed earlier in this Plan of Management, as listed below:

- Access, Recreational Use and Facilities
- Biodiversity / Environmental Sustainability
- Management and Maintenance
- Community Engagement and Involvement
- Leases and Licences

Within each of these broad management directions actions are then grouped by management issue, associated Objectives / target, relevant management action and performance measures.

Heading	Explanation
Management Issue	Broad management issue to be addressed
Objectives / targets	Objectives and targets of the Plan of Management in regard to the land (as per Clause 36 (3b) of the <i>Local Government Act, 1993</i>) in order to achieve the vision / direction and objectives for Natural Areas in City of Ryde. Objectives are consistent with the core objectives for Natural Areas within the <i>Local Government Act, 1993</i> .
Action	Practical actions and tasks proposed to achieve the Plan’s objectives and performance targets (as per Clause 36 (3c) of the <i>Local Government Act, 1993</i>).

<p>Performance measure</p>	<p>Statement of how Council will assess its performance in delivering against the Plan’s objectives and performance targets (as per Clause 36 (3d) of the <i>Local Government Act, 1993</i>).</p>
<p>Priority</p>	<p>The priority assigned to each Action:</p> <p>High (H)- Essential to achievement of management objectives, or where there is potential for the public to be exposed to an unacceptable level of risk, or there is potential for a serious threat to Reserve values or the environment and warranting funding consideration until achieved. Typically implemented within 2-5 years from adoption of the Plan.</p> <p>Medium (M)- These actions are desirable to enhance achievement of management objectives, or to address issues that meet a significant community need, or to improve Reserve management outcomes and ideally should be implemented within the life of this Plan. Typically implemented within 4 – 7 years from adoption of the Plan.</p> <p>Low (L)- These actions are useful for the overall management of an area or address issues that have longer-term impacts (such as meeting less urgent community needs or improving inefficient services) and should be undertaken if resources permit. Implemented within 7 – 10 years from adoption of the Plan.</p> <p>Ongoing (O)- the action in question will apply or continue throughout the management of an area and/or the life of this Plan.</p> <p>Note however, that the priority assigned to actions should not mitigate against earlier implementation should the opportunity arise (for example, through specific funding grants / streams or as other opportunities arise.)</p>



Pembroke Park

4.3 Access, Recreational Use and Facilities

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
Walking Tracks	The location, design, standard of construction, and maintenance of walking tracks in and adjacent to Natural Areas will minimise direct or indirect impacts.	Undertake an audit of the existing walking tracks in Natural Areas. And determine existing use levels and associated impacts. Incorporate audit findings on Council’s Geographic Information System (GIS) and compile statistics on community use levels.	Audit progressively completed and uploaded to GIS.	H
		Use the audit and community use results to identify walking tracks for retention or closure in order to provide a network of authorised, safe and sustainably managed waking tracks.	Network and number of authorised tracks identified within Natural Areas.	H
		Permanently close and rehabilitate any unauthorised / informal or newly formed tracks to ensure the possibility of further damage and fragmentation of the area is reduced and areas can rehabilitate.	Unauthorised tracks are identified, closed and active rehabilitation is developed.	O
		All formal tracks within Natural Areas will be maintained through a programmed system of monitoring/inspections and maintenance, supported by responsive maintenance works as required. All maintenance, preventative and other works will be documented – and track alignment, design and treatments will endeavour to minimise the likelihood of the creation of unauthorised/alternative tracks.	Authorised waking tracks are identified in SLA’s and operational maintenance programs for regular inspections and maintenance for safe and sustainable use. Annual number of community complaints reduces over time.	O
		Provide walking track maps for popular recreational bushland areas to encourage and ensure access is defined at established entry points.	Number of high priority recreational corridors that have maps developed.	M

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		<p>Promote bush walking as an opportunity for the local community to experience the natural environment as part of a healthy lifestyle</p> <p>Continue providing the guided walks program for the local community that introduce residents to key bushland reserves.</p>	Number of delivered educational events involving natural area connection and recreation.	O
Vehicle Access	Control vehicular access into Natural Areas.	Horse riding on walking tracks within Natural Areas will not be permitted.	Incidence of horse riding on walking tracks within Natural Areas.	O
		Identify tracks required for authorised vehicle access – such as for essential services infrastructure inspection and maintenance. Incorporate authorised access tracks in Council's GIS.	Authorised vehicle access tracks identified and included in GIS.	H
		<p>Permanently close and rehabilitate any unauthorised / informal or newly formed tracks to ensure the possibility of further damage and fragmentation of the area is reduced and areas can rehabilitate.</p> <p>Implement appropriate delineation measures to limit / prevent vehicular access, particularly in identified environmentally sensitive areas.</p>	Unauthorised tracks are identified, closed and active rehabilitation is developed.	M
		Establish access agreements with other agencies utilising tracks within Natural Areas to understand frequency of use, required access standards, management of gates and locks and co-operatively managed maintenance activities to minimise environmental impacts.	Third Party access is consistent with the provisions of access agreements.	L
		In principle, do not support the temporary or permanent use of Natural Areas to provide vehicular access to private lands or assets.	Incidence of vehicles accessing private lands or assets via Natural Areas reduces annually.	O
Other Recreational Facilities	Recreational facilities and structures (such as signage and shelter structures) complement Natural Area values and biodiversity conservation objectives and support public recreation.	Recreation facilities within Natural Areas will provide opportunities for public enjoyment and appreciation of Natural Areas and will not facilitate high impact, intrusive activities – for example, activities negatively impacting or scarring an area site, activities that modify the natural landscape and activities that destabilise or significantly increase potential for erosion impacts.	Impacts on Natural Areas from recreation facilities are minimised.	O

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		All proposed recreational facilities works or major maintenance projects will be assessed to determine impact on conservation values of Natural Areas, will be designed to minimise impacts on natural areas and be subject to appropriate environmental planning and approval procedures.		O
		Recreational facility proposals must address the following matters: <ul style="list-style-type: none"> ➤ ecological sustainability of the site and reversibility; ➤ Impacts on habitat and habitat value / suitability for species use; ➤ the protection of identified values; ➤ does not contribute to fragmentation of natural areas; ➤ demonstrate a clear connection with the area's natural setting; ➤ public accessibility and equity (where applicable); ➤ proposed construction materials and techniques; ➤ aesthetic impacts, both to and from the Reserve; ➤ site amenity and public and staff safety; ➤ pollution impacts and risks; ➤ impact amelioration and remediation measures; and ➤ compliance with Planning for Bushfire Protection standard through design. 	Number of facility and major maintenance proposals assessed prior to construction.	O
		Design and construct facilities that incorporate sustainable design and function and compliance with DDA, BCA, and applicable Australian Standards.	Ancillary structures consider and incorporate sustainable design, DDA, BCA and applicable Australian Standards.	O
		Active sporting or recreational facilities will not be located in natural areas.	No sporting facilities located in natural areas	O

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
	Impacts from adjacent sporting or park open space areas will be managed and minimised.	Management practices for adjacent sporting or park open space areas will be modified to ameliorate existing or potential impacts to natural areas – for example irrigation practices and fertiliser run off, incremental incursion into natural areas by grounds maintenance crews and dumping of grass clippings.	Ecological integrity / condition of natural area margin adjacent to sporting or park open space areas.	O
		<p>The provision of lighting at adjacent sporting areas will be designed, constructed and used by sporting clubs / users to reduce light pollution of adjoining natural areas and fauna habitat.</p> <p>Existing sports lighting will be reviewed to identify potential minor adjustments / improvements that can be implemented prior to renewal or replacement of the asset.</p> <p>Proposals for new or replacement lighting will consider impacts on nocturnal and diurnal wildlife and be subject to the assessment process described previously.</p>	<p>Measures to reduce lighting spill into natural areas from current facilities area assessed and minimisation measures implemented where identified.</p> <p>New or replacement lighting proposals subject to environmental assessment and approval.</p>	H

4.4 Biodiversity / Environmental Sustainability

The Ryde Biodiversity Plan, 2016 provides detailed direction in maintaining local ecosystem health including local vegetation communities, associated flora and fauna species and their genetic diversity.

The Biodiversity Plan contains a range of objectives, targets and actions to assist in the management, enhancement and protection of natural area and biodiversity in City of Ryde. This Plan of Management expressly authorises the implementation of management actions within the Ryde Biodiversity Plan, 2016 as far as they extend to Natural Areas.

Relevant actions within the Ryde Biodiversity Plan have not been replicated below – rather, the actions below are intended to supplement those within the Ryde Biodiversity Plan, 2016.

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
Conservation of Biodiversity	Ensure availability for connectivity for fauna and species protection long term is not compromised through development.	Look for opportunities to expand patch sizes, reduce edge effects, improve the quality of vegetation, protect existing bushland areas and the native animal populations they contain, and enhance connection to other bushland areas.	Number of areas providing supplementary planting that strengthen existing bushland and protection of fauna	H
Native Vegetation Management	To protect vegetation communities and native flora species.	Manage Natural Areas to protect and enhance the natural environment, habitats and biodiversity values as well as to contribute to aesthetic and scenic appeal.	No long-term reduction in, or further significant fragmentation of Natural Areas – based on survey and monitoring.	O
	To maintain and enhance natural systems, vegetation communities, biodiversity and habitats.			
	To retain bushland in parcels of a size and composition that will enable long term survival of existing flora and fauna species / communities.	Protect the existing areas of native vegetation and minimising bushland disturbances (to the extent as consistent with other actions identified in this Plan). Support opportunities that facilitate long term species protection through investigating expansion of appropriate natural areas to deliver corridor connection outcomes as identified in the Ryde Biodiversity Plan 2016.	Ecological condition of Natural Areas is maintained or enhanced – based on survey, monitoring and observation.	O

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		<p>Bush regeneration, revegetation and weed control will continue to be the major “active” management measures used to maintain and enhance native flora, vegetation community and habitat values of Natural Areas.</p> <p>Stormwater management, sediment-erosion control, fire management and neighbour education/awareness are supporting “active” management measures.</p>		O
		<p>Undertake targeted surveys to clarify the location and extent of known and suspected Threatened Ecological Communities, and threatened flora species within City of Ryde, including an assessment of condition and threats.</p>	<p>The extent, occurrence and condition of Threatened Ecological Communities and listed threatened species is maintained or enhanced – based on survey, monitoring and observation.</p>	H
		<p>Undertake special management measures as/where required to protect and conserve Threatened Ecological Communities other vegetation communities of conservation significance, and threatened or significant native flora species– including relevant measures set out in any applicable Approved Recovery Plans.</p>		H
		<p>Undertake or facilitate periodic flora survey and monitoring within Natural Areas, according to a systematic and structured programme to provide long-term and comparable data.</p>	<p>Increased knowledge of native vegetation communities, flora and habitats.</p>	L
		<p>Ensure a consistent approach to management and construction activities by Council within Natural Areas. Engage and educate staff on environmentally sensitive areas and mitigation measures aimed at minimising loss or negative impact on environmentally sensitive areas.</p>	<p>Number of capital and non-capital works projects in or adjoining natural areas that deliver positive environmental outcomes</p>	H

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
Fauna management	To protect native fauna species.	Protect / maintain habitat through protecting the existing areas of native vegetation and minimising bushland disturbances and fragmentation.	Diversity and abundance of native wildlife is maintained or enhanced– based on survey, monitoring and observation.	O
	To support an increase in the diversity, abundance and population resilience of native fauna.	Undertake special management measures, as/where required to protect and conserve threatened or significant native fauna species – including relevant measures set out in any applicable Approved Recovery Plans.	Native fauna species or populations listed as threatened, or of regional conservation significance, are maintained or enhanced – based on survey, monitoring and observation.	H
		Through site auditing and investigation, identify key threatening processes for priority sites and build a program through Reserve Action Plans to ensure protection of these e.g. hollows in areas of key habitat.	Retention of existing critical habitat	H
		Explore opportunities to enhance habitat for wildlife, by providing sufficient vegetation cover and improved connection along existing and future wildlife corridors. Include the retention of hollow bearing trees, nesting boxes or hollows and habitat augmentation.	Habitat enhancement measures identified and implemented annually.	O
		Undertake or facilitate targeted surveys of threatened or significant native fauna species, as/when required, to support their conservation management.	Increased knowledge of native wildlife within Natural Areas.	H
		Undertake or facilitate periodic fauna survey and monitoring within Natural Areas, according to a systematic and structured programme to provide long-term and comparable data.		L

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
Regeneration and restoration	<p>Protect, restore and regenerate bushland areas.</p> <p>Bushland regeneration efforts are based on a planned and monitored strategy to maximise conservation outcomes in the long term.</p>	<p>Continue the rolling programme of bush regeneration works within Natural Areas , with adequate on-going commitments to follow-up works at sites (both existing sites and future sites) to ensure effectiveness. Priorities for regeneration and restoration efforts will include:</p> <ul style="list-style-type: none"> ➤ priority weeds, and environmental weeds with a high potential for spread; ➤ vegetation communities of high conservation significance; ➤ habitats/populations of native flora and fauna species of high conservation significance; ➤ disturbed sites and existing weed infestations; ➤ areas vulnerable to weed invasion/spread (such as creeklines, roadsides and tracksides); and ➤ natural area boundaries. <p>Council shall address the need for joint management with adjoining landowners, include Regulatory, Educational and On-ground related actions and activities as well as take account of current Bushcare programs and activities.</p>	<p>Bush regeneration programme in place and regularly reviewed.</p>	<p>H</p>
		<p>Review Council’s bush regeneration program and associated contracts to reflect priorities determined in the Bushland Regeneration Strategy.</p>	<p>Reduction in the extent of degraded bushland – based on monitoring, observation and bush regeneration team reporting.</p>	<p>H</p>
		<p>Regeneration sites are regularly assessed to determine if aims, outcomes and regeneration techniques are appropriate, efficient and effective in delivering desired outcomes.</p>		<p>O</p>
		<p>Consider the habitat potential of weeds, especially for small birds, before undertaking any weed control / removal works.</p>	<p>Fauna habitat value of weed infestation is assessed prior to implementation of weed control measures.</p>	<p>O</p>

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
	Local provenance species used in regeneration projects.	A monitoring programme will be prepared and implemented targeting areas vulnerable to the introduction and spread of weeds – including watercourses, natural area boundaries and vehicle access trails and walking tracks.	Reduced incidence of new weed infestations / introductions at specific Natural Areas – based on monitoring, observation and bush regeneration team reporting.	M
		Revegetation and supplementary bush regeneration plantings will prioritise the use of local-provenance endemic species, preferably grown from seeds or vegetative material sourced locally from the equivalent vegetation community. .	Number of regeneration planting projects using local provenance endemic species.	O
	Increased community awareness of the value of weed control.	Continue to produce educational material to inform the community about invasive weeds.	Promotional material produced and distributed to community.	M
Boundary Management	Encroachments for private use of Natural Areas will not be permitted.	Identify and delineate Natural Area boundaries with adjoining private landholdings.	Land title, land register and maps are reviewed and up to date	L
		Maintain an inspection regime to police and subsequently remove encroachments into Natural Areas.	Encroachments / unauthorised access detected and removed.	O
		Notify each adjoining landowner where encroachments occur that City of Ryde is aware of the encroachment and will take action for removal of same.		O
		Continue community engagement / information on avoiding encroachments and reporting incidences of encroachment.	Encroachments included in Council community engagement mechanisms.	L
	Native vegetation in Natural Areas is not impacted by neighbours.	All requests for tree pruning or removal on public land to be assessed by Council’s Tree Management Officers and must be approved by and undertaken by Council.	Incidence of native vegetation damage at Natural Area / residential boundary.	O

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		When unauthorised actions occur to native trees, Council shall implement enforcement procedures, consistent with DCP 2014 Part 9.5 Tree Preservation.		O
	Promotion of the General Biosecurity Duty of neighbouring property owners to manage the impacts of priority weeds in natural areas.	City of Ryde Local Priority Weed Management Plan is implemented and program of private property inspections undertaken and community education undertaken.	Reduction in the impact of priority weeds on natural areas	O
Pest and domestic animal management	Control of pest animals (such as foxes, feral cats and rabbits) in Natural Areas.	Participate in co-ordinated regional pest animal control programmes, as well as undertaking Council initiated control programmes. Foxes, Feral Cats and Rabbits will be priority pest species for control efforts.	Long term reduction in pest species populations. Observations of numbers pest species recorded via complaints or Council programs / observations to be included in Feral Scan.	O
		Undertake periodic monitoring of pest animal populations to inform and target control efforts.		M
	Manage domestic animals and their impacts.	Domestic dogs to be on leash and under effective control in Natural Areas except for Category 1 Wildlife Protection Areas where they are prohibited. Dog owners to be encouraged to remove dog droppings.	Incidence of off-leash dogs in Natural Areas. Incidence of community complaints of uncontrolled dogs. Reduction in number of dogs in Natural Areas based on survey and observations.	M
		All other domestic animals/pets, including horses, will be prohibited from Natural Areas.	Recorded incidence of domestic animals in natural areas reduces annually.	H

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
	Manage European Honey bees and their impacts.	Manage competition from European honey bees, <i>Apis mellifera</i> by preventing establishment of feral honey bees in natural areas and not approving the placement of European honey bee hives on public land. Remove feral honey bee hives from tree hollows and nesting boxes where they compete with native wildlife for habitat.	Prevention of the establishment of European honey bee populations in natural areas.	O
	Establish and promote Wildlife Protection Areas.	Maintain existing Wildlife Protection Areas (Field of Mars Reserve, Terrys Creek Corridor and Kittys Creek Corridor). Future proposed WPAs will align with high conservation significant natural areas where a high incidence of off leash dogs or other domestic animals is observed.	Incidence of domestic animals in Wildlife protection Areas.	H
		Wildlife Protection Areas will be periodically promoted to local residents and appropriate regulatory signage installed at each site.		M
Fire Management	Minimise risks and impacts of bushfire on life, property and the environment.	Implement the actions within the Bush Fire Risk Management Plan, 2019 – 2024 (and subsequent updates) incorporating Hunters Hill Lane Cove Parramatta Ryde Local Government Areas.	BFRMP is the principal document guiding fire management in natural areas.	H
		City of Ryde will participate in reviews and updates of the Bush Fire Risk Management Plan, 2019 – 2024 (BFRMP) by the Bush Fire Management Committee.	BFRMP review incorporates needs of City of Ryde	O
		Undertake Asset Protection Zone (APZ) maintenance and hazard reduction as required to comply with minimising fuel loads especially in adjoining residential areas, as identified in the BFRMP	Annual lineal metres of APZ managed by Council in high risk areas.	H/O
		Annually monitor fuel loads in bushland areas identified in the BRMP and action accordingly. Fuel reduction will be achieved through approved hazard reduction burns and manual fuel removal. The removal of weeds, garden refuse and exotic plant material during bush regeneration works will complement fuel reduction efforts.	Number of fuel reduction activities per annum, as per relevant SLA.	H
		Increase community awareness for on-site property fuel load reduction strategies through educational programs to minimise risk to adjoining natural areas and support holistic fuel load minimisation activities.	Number of residential dwellings participating in resilience programs addressing fire mitigation.	O

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		During Total Fire Ban days consider the closure of Natural Areas reserves and cessation of management activities.	Number of fire ignitions in Natural Area reserves on TFB days.	M
		Investigate what knowledge exists on Aboriginal traditional fire management practices and where and how this knowledge / information may be best applied.	Consultation with cultural burn practitioners.	M
	Fire regimes are beneficial to maintaining age, structure and species diversity of native vegetation communities.	<p>Appropriate fire thresholds for native vegetation communities will be established in prescribed burn planning. Monitor all prescribed burn sites to :</p> <ul style="list-style-type: none"> ➤ Identify the fire history record for all bushland in the LGA and map prescribed burn extents. ➤ Establish photographic monitoring points for long term comparison of the site in a representative sample of natural areas. ➤ Undertake pre burn flora species list using quadrats or transects to determine species and densities. Post burn species lists to be done at statistically and ecologically valid intervals (e.g. 6 months and 1, 2, 3, 5, and 10 years post the fire event). 	Prescribed burns do not result in significant impacts to age, structure and species composition.	M
		Identify watercourse / riparian zone buffers and Threatened Species populations / habitats prior to undertaking prescribed burns and incorporate into burn planning.		H
Management of foreshores, riparian areas	Protect riparian vegetation and foreshore areas to enhance ecological function, reduce erosion and improve water quality.	Ensure works carried out along foreshores comply with environmental approvals and provisions to ensure sensitive areas are protected and adequately planned for.	Shore birds, foreshore vegetation and endangered saltmarsh are protected	H
Management of endangered estuarine saltmarsh communities	Protect estuarine saltmarsh and enhance ecological function, reduce erosion and improve water quality.	Prepare a Saltmarsh Management Plan which will identify all existing communities, provide recommendations for management and opportunities for expansion.	Estuarine Saltmarsh is protected and enhanced.	H

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		Protect existing endangered saltmarsh communities, identify opportunities to expand saltmarsh and undertake regeneration works to restore saltmarsh.		O
		Utilise protective measures such as delineation to minimise the risk of damage (vehicular or through human recreation) to ensure Council delivers legislative protection outcomes.		H
Stormwater Runoff and Water Quality	Reduction in gross pollutants, and sediment rich stormwater entering natural areas.	Planning of water quality improvement works will be undertaken at a sub-catchment scale, taking account of known high discharge sites and the biodiversity conservation priority of receiving areas.	Sub-catchment planning of works	O
		Gross Pollutant and sediment traps, or comparable mechanisms, are installed on stormwater lines discharging into natural areas. Such physical controls will be regularly maintained to retain maximum effectiveness.	Reduction in gross pollutants and sediment in receiving watercourses – based on monitoring and observation.	H
		Reduce opportunity for stormwater to enter waterways through encouragement of on-site retention and reuse (public and private lands) to minimise flow impacts in creeklines and reduce pollutant loads.	Number of projects or development applications actively incorporating WSUD into stormwater management plans.	O
		Discourage where feasible, new stormwater outlets draining into natural areas where alternate storage, reuse and diffuse source options are available.	Number of new development applications actively incorporating WSUD features into stormwater management plans	H/O
		Reduce new development encroachments and fragmentation of riparian zones through consideration in the development assessment process.	Number of new development applications actively reducing footprints within the riparian zones.	O
		Undertake regular street sweeping of gutters.	Reduction in sediment in receiving watercourse watercourses – based on monitoring and observation.	O

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		Ensure prompt removal of dumped rubbish at reserve boundaries and in proximity to watercourse.	Reduction in gross pollutants and sediment in receiving watercourses – based on monitoring and observation.	O
	Protect natural landforms from hazards and high flow events	Monitor existing landforms, natural drainage lines, riparian zones and watercourses to ensure protection and remediation in increasing high flow events leading to potential landslip or bank modification issues.	Major creeklines are monitored through council waterway programs and active restoration works provided to provide long term stability.	O
	Water Quality Monitoring	Continue to deliver Council’s Water Quality Monitoring Program within the five main creek systems in City of Ryde (Shrimptons, Archers, Terrys, Buffalo and Porters Creeks) in order to assess water quality change and riparian bank condition.	Ongoing evaluation of water quality data in the five main creek systems to inform future management programs.	O
		Use the findings of Water Quality Monitoring to identify long term trends in water quality in the five catchments and prepare remedial actions as necessary.		O
	Minimise water quality impacts from sporting ovals / sportsgrounds on downslope watercourses and bushland areas.	Review irrigation, drainage and fertiliser practices at Council managed ovals / sportsgrounds- for example irrigation practices and potential fertiliser run off due to over watering. Amend practices as necessary to reduce off site runoff into adjoining Natural Areas.	Irrigation, Drainage and Fertiliser practices reviewed annually, and site run off reduced.	L
		Ensure any new or renewed Leases and Licences for ovals / sportsgrounds incorporate information on approved management practices relating to irrigation, drainage and fertiliser use and a requirement to gain Council consent for any modification of such practices.		L
	A reduction in residential seepage / run off into downslope Natural Areas	Establish an education / promotional programme targeted at residents adjoining Natural Areas aimed at minimising diffuse pollutants such as increased seepage from over use of fertilisers on lawns / gardens and over watering and run off from pools, tennis courts and other hard surface.	Reduction in seepage and weed infestations in Natural Areas adjacent to residential areas.	L

4.5 Management and Maintenance

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
Categorisation review	Community and Crown Land accurately categorised according to provisions of the <i>Local Government Act 1993</i> .	<p>Undertake a comprehensive review of the categorisation of Natural Areas to ensure categorisation accurately reflects an area’s existing values and use.</p> <p>Amend categorisations as necessary and update relevant Generic Plans of Management.</p> <p>Ensure Ryde Local Environment Plan, 2014 and associated planning controls are updated to reflect categorisation amendments.</p>	<p>Compliance with LG Act categorisation requirements.</p> <p>City of Ryde planning controls updated as necessary.</p>	O
Reserve Action Plans	Prepare Reserve Action Plans for Natural Areas that provide specific direction on the implementation of the policies and management actions of this Generic Plan of Management.	A Reserve Action Plan is prepared for each Natural Area Reserve (or Natural Area within a Reserve). Individual Reserve Action Plans provide the specific management strategies to be applied to individual Natural Areas, while applying the aims, objectives and policies contained within this document.	Reserve Action Plans are progressively prepared for all Natural Areas.	H
		Each Reserve Action Plan will encompass a 5 year period with specific actions listed that are practical and feasible for implementation over this time period.	Reserve Action Plans reviewed and updated every 5 years.	O
		Incorporate actions/management measures in Reserve Action Plans into relevant Service Level Agreements (SLAs) to facilitate implementation.	Reserve Action Plans are incorporated into SLA’s.	O
		Reserve Action Plans will be publicly available documents.	Reserve Action Plans are available to the public.	O
Management and maintenance activities	To provide effective and efficient Natural Area management.	Undertake maintenance and improvements to Natural Areas in accordance with City of Ryde Service Level Agreements, Ryde Biodiversity Plan 2016 and Reserve Action Plans.	SLA KPIs are delivered and works program adhered to as reviewed annually.	O
		Expand Council’s Asset Management System to include natural Area assets such as walking tracks and recreational facilities, signs, and significant mature trees in proximity to areas of recreational use.	Asset Management System incorporates Natural Area assets.	H

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		Develop a risk assessment methodology for Natural Area assets, undertake regular risk assessment of assets and implement actions to mitigate identified critical risks.	Risk management applied to Natural Area assets.	H
Waste dumping	Reduce number of waste dumping incidents in Natural Areas.	Monitor the location and frequency of unauthorised activities such as rubbish dumping. A range of adaptive management measures will be implemented according to ongoing and / or escalating rubbish dumping, in order of increasing effort, as follows: <ul style="list-style-type: none"> ➤ Education programs to promote intrinsic values of Natural Areas and discourage rubbish dumping. ➤ Installation of prohibition signage at known dumping hot spots. ➤ Increased presence of Council Rangers in hot spot areas, during the day and early evening hours. ➤ Prosecution of offenders and publication / promotion of outcomes. 	Reduced number of dumping incidents over time, as recorded by Waste / Compliance Team.	H
		Continue to record dumping locations on Council's GIS.	Understanding of hot spots for dumping.	O
		Clean up litter and rubbish dumping promptly to discourage further incidents.	Community feedback and reduced annual number of complaints.	O
		Review opportunities to limit vehicle accessibility to sites with high incidence of dumping.	Reduced annual number of dumping incidents as reported to or actioned by Council.	M
		Continue community engagement / information on litter and dumping of waste and reporting incidences of waste dumping.	Waste dumping included in Council community engagement mechanisms.	L
Management of restricted and prohibited activities	Ensure that restricted and prohibited activities do not take place at Natural Areas	Install regulatory signage at Natural Areas and enforce.	Compliance Tracking Community feedback	O

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
Funding	Maximise funding for the management and maintenance of Natural Areas.	Ensure that within available Council budgets, Council’s delivery programs provide and maintain Natural Areas to improved standards over time and meet community expectation.	Delivery programs and associated budget prepared annually.	O
		Identify management programs and actions with potential for external grant funding from third parties.	Funds raised from grant applications per annum	O
		Apply for relevant State and Commonwealth grants for Natural Area management and maintenance as grant opportunities allow.		O
		Approach potential sponsors with opportunities to contribute to management of issues or specific areas.	Funds raised from sponsorship per annum.	O
		Funds derived from leases, licences or other use agreements which occur in, or impact, Natural Areas are allocated for management activities within Natural Areas.	Funds arising from leases, licences or other use agreements per annum.	O

4.6 Community Engagement and Involvement

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
Information Provision and Interpretation	Improve community awareness of Natural Area values, use and management.	Utilise the Ryde Environmental Education Network (REEN) as a mechanism to reach local schools and provide information on City of Ryde's Natural Area values, use and management.	Number of schools engaged in REEN.	M
		Establish a Natural Area Interpretive program (e.g. school events, guided bushwalks, issue specific events/walks on site) to enhance community understanding and appreciation of Natural Areas and the range of management issues, challenges and Council's management regime.	Interpretive Program implemented at selected Natural Areas.	H
		Maintain existing on-site interpretive signage to provide appropriate messages at high use Natural Areas.	Interpretive signage at selected Natural Areas is maintained.	H
		Prepare maps indicating the location of recreation facilities in each Natural Area, and other available recreation opportunities.	Maps prepared and available.	O
		Prepare a community information kit and distribute to residents adjoining Natural Areas. The kit will incorporate information relating to the value of Natural Areas and management approaches including but not limited to encroachments, residential seepage and run off, weeds, domestic animals and fire management.	Number of community information kits distributed. Community contacts arising from distribution of information kits.	M
Participation in Bushcare	Bushcare volunteers provide effective assistance with management of Natural Areas.	Actively promote Bushcare at public events and through identified Council media and information programs.	Increased participation in Bushcare	O
		Undertake regular reviews of the Bushcare Program to ensure sufficient planning, support, resources, training and supervision is provided in order to adequately undertake activities.	Bushcare program adequately resourced.	H
		Bushcare program activities will support biodiversity management priorities within Ryde Biodiversity Plan, the Local Priority Weed Management Plan and this Generic Plan of Management.	Bushcare work programs support biodiversity management priorities.	O

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		Provide training to volunteers to ensure skills, knowledge and individual capabilities are appropriate for the Bushcare work program. Ensure training also addresses Work, Health and Safety aspects of Bushcare program activities.	Volunteers receive training.	O
		Co-ordinate regular meetings of Bushcare convenors / group representatives to promote communication and co-ordination between the groups and Council and provide an opportunity for sharing of information and learnings.	Bushcare group convenors / representatives meet at least annually	M
		Conduct regular surveys of Bushcare volunteers or engagement activities to gauge satisfaction with participation in the program and receive suggestions for an enhanced volunteering experience. Use the results to enhance /improve the Bushcare program experience.	Survey leads to enhanced volunteering experience.	M
Advisory Committees	Transparency in the management of Natural Areas.	Consult and update the Bushland and Environment Advisory Committee (BEAC) on Natural Area management programs and priorities, and key initiatives.	Attendance at quarterly BEAC meetings as required, and follow up communication as necessary.	O
Adjoining privately owned land	Management of adjoining lands complements Council's Natural Area objectives	Where development occurs to / within bushland adjoining Council managed Natural Areas, investigate options for conditions of consent to ensure management practices do not compromise adjoining Council Natural Areas (such as weed management programs, reporting to council to demonstrate management or mitigation measures or clauses within Leases/ Licensing).	Adjoining land owners and managers are informed of sensitivity of bushland and adequately manage areas.	H
Planning and design of Natural Area facilities	Undertake planning and design improvements in consultation with residents and the broader community.	Engage with known users, the community and internal Council stakeholders during the planning, and design of new natural area facilities.	Community feedback on planned new facilities or improvements.	O

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
	Ecological function of natural areas is not diminished or reduced through built activities / facilities	When existing built assets reach life expectancy review the 'fit for purpose' position of the asset and any need to relocate the asset out of environmentally sensitive areas.	Built asset replacement considers potential relocation out of environmentally sensitive areas.	O
Learning opportunities / research	Encourage and promote the use of Natural Areas for education.	Encourage and accommodate the use of Natural Areas as an asset for environmental, outdoor and other educational uses – including community-based environmental education projects.	Increased educational use by user groups and educational institutions.	O
	Encourage scientific study of Natural Areas.	Support research activities in relation to Natural Areas and their management, with results of research available to Council.	Enhanced understanding of Natural Area management.	O
		Only educational uses and / or scientific research that do not significantly impact on Natural Areas will be permitted. Monitor areas used by educational / research activities to ensure impacts are acceptable.	Educational / research impacts acceptable to Council. .	O

4.7 Leases and Licences

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
Leases and Use Agreements	Ensure that use agreements meet legislative requirements, (including biodiversity protection), adhere to planning environmental protection controls, cater for community needs, and are consistent with Council's objectives.	Expressly authorise Council to enter into leases, licences, permits and other estates for use of Natural Areas by the community, individuals, schools and commercial organisations as well as individuals providing facilities and services for public use.	All licence and use agreements comply with legislation and Council policy	O
	Grant leases, licences and other estates in accordance with the <i>Local Government Act 1993</i> , <i>Crown Land Management Act 2016</i> and this Generic Plan of Management.			Assess and grant applications for leases, licences, permits and other estates in consideration of the core objectives for Community and Crown land classified as Natural Areas, the public interest, impacts to the land and adjoining land use and Council's planning and regulatory requirements.

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		<p>This plan expressly authorises the granting of – licences for periods of up to 3 years, temporary licences (up to 12 months duration), and once-off or set (short) duration activity or event permits, and other estates/approvals (excluding leases) – for educational, scientific, community, social, recreational or park management activities (such as fire management or seed collection).</p> <p>Licences and permits will not be granted for activities that:</p> <ul style="list-style-type: none"> ➤ may have a negative impact on natural areas, on endangered ecological communities or threatened species; or ➤ have potential to threaten a species ability to exist or expand within the area proposed for use; or ➤ are inconsistent with, or have unacceptable effects on an area’s values; or ➤ exclude or unduly disadvantage other users, or are likely to impair an area’s reasonable enjoyment by others; or ➤ place excessive demands on Park management. 		O
		<p>In addition, licences and permits will only be granted for activities that are consistent with the management intent, objectives and uses of the Natural Area within which the activity will operate/occur.</p>		O
		<p>Licences will only be issued for commercial activities where these are:</p> <ul style="list-style-type: none"> ➤ consistent with, or ancillary to, a Natural Area categorisation (and any additional reservation purpose); and ➤ do not involve the erection of any building or other substantial structure, or permanent advertising that detracts from the visual qualities of the area. 		O

Management Issue	Objectives / Targets	Actions	Performance Measure	Priority
		Licences and permits will not be granted for activities that are purely commodity or product marketing oriented.		O
	Ensure that leases and use agreements are monitored regularly for compliance with conditions.	Monitor terms and compliance of licences and use agreements.	Compliance with terms and conditions.	O
		Review terms and conditions of licence and use agreements and renew as necessary.	Reviews completed	O
Easements	Manage the impacts of easements on Natural Areas	Maintain existing and new easements to ensure impacts to Natural Areas are minimised or mitigated.	Access to easements is retained for utility operators.	O
		Develop effective and on-going communication protocols with utility providers operating easements through Natural Areas, regarding their management requirements / operations and measures to reduce impacts on Natural Area values – especially in relation to service access, track maintenance, unauthorised or undesirable access, soil erosion, vegetation clearing, visual impacts and visitor safety. Negotiate access, maintenance and remediation agreements, standards or protocols where possible.	Effective communication protocols in place between utility providers and Council. Reduced impacts arising from easement presence / management.	L

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5 IMPLEMENTATION AND REVIEW

5.1 Future Uses and Developments

1.1.1 Permissible uses and developments

Natural Area lands throughout the City of Ryde will continue to provide a resource that encourages, promotes and facilitates recreational, educational and social pursuits in the community whilst protecting and enhancing natural values. The use of Natural Area lands is supported by appropriate ancillary facilities, for example walking tracks, shared paths, seating and shelter, directional and interpretive signage where activities do not compromise the integrity of the natural ecosystems known or species within the area. This determination will be confirmed through provision of environmental assessment as due diligence to ensure activities or outcomes do not provide a negative or detrimental impact or conflict legislative permitted use or conservation objectives.

Permissible uses and development in Natural Areas in the City of Ryde will be consistent with:

- core objectives and principles for ensuring the protection of biodiversity, flora and fauna as identified in legislation such as the Biodiversity Conservation Act 2017 and Environment Protection and Biodiversity Conservation Act 1999
- the values, roles and objectives for the land set out in Section 3;
- the guidelines and core objectives for the Natural Area category in the *Local Government Act 1993*, and any other additional objectives Council proposes to place on the Natural Area category in this plan;
- activities do not jeopardise the integrity of the land or negative impact as per Council's Planning for Bushfire Risk Management Plan;
- uses listed in the *Local Government (General) Regulation 2005*;
- the requirements of the *Crown Land Management Act 2016*, and the *Native Title Act 1993* in the case of Crown land area;
- uses permitted on community and Crown land without consent under SEPP (Infrastructure) 2007;
- the objectives for and permissible uses listed under the relevant land zoning in the Ryde Local Environmental Plan 2014;
- any authorised lease, licence, permit or easement applying to specific Natural Areas;
- relevant Council policies (refer to Section 1).

Use of Crown land, and permits on Crown land, will be issued in accordance with the *Native Title Act 1993*.

Any current and planned development and activities should minimise any adverse impacts on both the values and significance of a specific Natural Area and any adverse impacts on neighbouring residents and land uses.

It is envisaged that as this Plan of Management is implemented, Natural Area land throughout Ryde will be managed in a sustainable way that does not inhibit positive biodiversity outcomes through fragmentation or degradation from human based or recreational activity. The resulting benefit will be to enhance the health and wellbeing of the community as well as positive outcomes for the biodiversity, environmental services and scenic values of these areas.

In addition to the above, on-going management and any proposed new works or development within Natural Areas will take into account:

- planning controls for the land;
- an area's reservation purpose (in the case of Crown Reserves);
- characteristics of the land affected, including natural and cultural heritage values and threats to these values;
- Council's land management obligations under relevant land/resources management legislation and strategies – such as the *Biodiversity Conservation Act 2016*, *Biosecurity Act 2015* and Greater Sydney Local Strategic Plan (Greater Sydney Local Land Services), and Hunters Hill, Lane Cove, Parramatta, Ryde Bush Fire Risk Management Plan;
- existing and future use patterns; and
- any landscape masterplan for the land.

Minor changes to Natural Area parks and reserves – such as bush regeneration, weed control, and revegetation/replanting programmes or replacing damaged track/trail infrastructure or signage – are authorised to be carried out as set out in the relevant service level agreement or as per Council approval for works.

The facilities, structures, degree of access/accessibility and resource/land management measures in Natural Areas may change over time, reflecting the needs of the community.

The following are activities or uses that would potentially be permissible within Natural Areas in the City of Ryde – dependent on the considerations listed above (and elsewhere in this Section 5.1) and the circumstances of individual Natural Areas. This list is not exhaustive, and is indicative only rather than being limiting or restrictive.



Leaf-green Tree Frog - *Litoria phyllochroa* - Kitty's Creek Reserve

Table 11 – Activities and uses permissible within Natural Areas

Activities and uses permissible within Natural Areas	
All-abilities access (selected areas, where feasible).	Organised outdoor leisure, recreation or community activities (such as Scouting or Guiding activities).
Bushland or natural area/resource management demonstration, extension or knowledge-sharing activities – such as field days, site visits or on-site teaching for bush regenerators, natural area managers, professional associations, etc.	Organised, nature-based, outdoor sports or competitive events (such as trail running events or orienteering competitions).
Bushland, wetland and foreshore restoration or regeneration.	Orienteering or rogaining (in designated areas only).
Bushwalking.	Photography and artistic pursuits.
Commercial filming and photography.	Picnicking – with facilities or informal/bush picnicking.
Community gatherings and events.	Private group leisure or social activities – such as birthday parties, weddings, celebrations, commemorations and dedications.
Cultural and historic heritage viewing/appreciation.	Provision, operation and maintenance of public utilities and/or infrastructure and access – including stormwater management.
Cycling (on approved routes or in approved areas only) – using road/conventional bicycles, mountain bikes or BMX etc.	Public presentations, workshops or lectures/classes, and meetings.
Educational or environmental awareness and appreciation uses or events.	Restoration/replanting of wildlife or habitat corridors.
Escorted/guided nature walks or nature-based activities and other leisure, recreation or tourism experiences.	Rock and rope activities – such as abseiling
Feral or pest animal control activities.	Rural Fire Service and Fire and Rescue NSW operations.
Fire hazard management and fire risk reduction activities.	School use – for educational, fitness or well-being activities.
Geocaching (in designated areas only).	Scientific or educational research, studies or investigation – including volunteer or “citizen scientist” programmes.
Habitat restoration and enhancement (including habitat manipulation)	Seed collection (with appropriate approvals) and soil seedbank translocation.
Jogging or fitness training along walking tracks and management accesses.	Tree planting, removal and maintenance.
Native species revegetation and replanting (including replanting of “surplus” grassed areas for bushland restoration or expansion/connection).	Visiting lookouts, attractions or features of interest and scenic viewing.
Nature appreciation, bird watching, wildlife viewing, etc.	Walking for leisure or fitness.
Nature-based independent casual or informal leisure and recreation uses.	Water play and swimming (or access to waterways).
On-leash dog-walking (in designated areas only, outside of Wildlife Protection Areas and other Natural Areas where dogs are prohibited).	Biosecurity weed control.

As Council considers necessary, and in accordance with the *Local Government Act 1993* and *Local Government (General) Regulation 2005* and other legislation, development permissible under this Plan of Management may include the following.

Table 12 – Development permissible under this Plan of Management

Development permissible under this Plan of Management	
Bushland, weed control, revegetation, tree planting and tree care, and habitat management and maintenance works.	Landscape establishment and maintenance works.
Bridges, causeways and decks.	Management, service and emergency vehicle access tracks.
Construction and maintenance of public utilities – including telecommunications infrastructure.	Observation platforms and lookouts.
Erosion control, stabilisation and remediation works.	Pontoon and small craft launching/retrieval facilities.
Establishment and maintenance of asset protection zones, accesses, and other fire hazard management and fire-fighting works or facilities (including the provision of on-site fire equipment).	Structures for the purposes of stormwater treatment and or retention (as prescribed in section 28 of the Regulations).
Facilities to support, or ancillary to, visitor access and use of the lands – such as seating, picnic tables, shelters, drinking water, rubbish bins, drainage/irrigation, landscape or amenity plantings.	Walking tracks, walkways/pathways, shared paths – of varying standards (including improvements such as boardwalks, steps/stairs, safety railings, etc.).
Identification, orientation, directional/wayfinding, information, interpretive/educational, warning, regulatory and other signage (or other visitor information media).	

Maintenance of the above, and other, works and developments within Natural Areas are authorised to be carried on a programmed, “as needed” or responsive, and opportunistic basis. This includes the maintenance, upgrading, closure, and realignment/remediation of existing tracks (as well as informal or “trample” tracks), the rehabilitation of closed/dis-used routes and the construction of new tracks or alignments.

5.1.2 Scale and intensity of permissible uses and developments

The scale and intensity of development and activities on community land or Crown land categorised as Natural Area is generally dependent on:

- the natural and cultural heritage values of the land, and any special protection measures or limitations mandated/warranted by these values (such as endangered ecological communities, endangered populations, threatened or listed Aboriginal cultural heritage sites);
- the nature of the approved uses and developments;
- the physical constraints of the land;
- the capability and “carrying capacity” of the land, and its suitability for the proposed development or use;
- relevant legislation, plans and policies;
- approved development applications and any conditions;
- an approved masterplan;
- the scale and anticipated use of the park or reserve;

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- potential impacts on, or conflicts with, existing users;
 - proximity of neighbours and noise-sensitive and parking-sensitive land uses; and
 - permissible times of use.

5.1.3 Approvals for permissible activities

General requirements

While a Plan of Management expressly authorises and enables certain functions such as the issuing of leases and licences in Natural Areas, any development in these areas would still require the relevant planning approvals to be undertaken. Capital projects undertaken by Council within Natural Areas would require community engagement to be undertaken as part of the delivery of the project.

Planning controls established in the *Environmental Planning and Assessment Act 1979* and *Ryde Local Environmental Plan 2014* set the framework for approving permissible activities in Natural Areas in City of Ryde.

In addition, Section 3.39 of the *Crown Land Management Act 2016* requires that Council approval of activities on dedicated or reserved Crown land under Part 1 of Chapter 7 of the *Local Government Act 1993* must comply with the plan of management for the land.

Sections 69 to 74 of the *Local Government Act 1993* deal with approvals required for activities on Crown land.

Public works

Where a public work is proposed to be constructed or established on Crown reserves created prior to 23 December 1996 and native title is not extinguished, it is a requirement of the *Native Title Act 1993* that the City of Ryde notify any registered native title claimants, registered native title bodies corporate and representative Aboriginal / Torres Strait Islander bodies and provide them with the opportunity to comment. At the time of adoption of the PoM there were no registered native title claimants or registered native title bodies corporate. The representative Aboriginal body for NSW is NTSCORP Limited.

The *Native Title Act 1993* defines a public work as:

- (a) Any of the following that is constructed or established by or on behalf of the Crown, or a local government body or other statutory authority of the Crown, in any of its capacities:
 - (i) A building, or any other structure (including a memorial), that is a fixture; or
 - (ii) A road, railway or bridge; or
 - (iia) Where the expression is used in or for the purposes of Division 2 or 2A of Part 2- a stock-route;
 or
 - (iii) A well, or bore, for obtaining water; or
 - (iv) Any major earthworks; or
- (b) A building that is constructed with the authority of the Crown, other than on a lease.

On Crown land where it is proposed to construct or establish a public work where native title is not extinguished, prior to approval Council will notify and give an opportunity to comment any representative Aboriginal/Torres Strait

Islander bodies, registered native title bodies, corporate and registered native title claimants in relation to the land or waters covered by the reservation or lease as required under the *Native Title Act 1993*.

Where a proposed update of a Park Masterplan or any other plan is the approving documentation for a public work on Crown land, that approval will not be given unless the requirements of the *Native Title Act 1993* have been addressed, including the notification and opportunity to comment noted above.

5.1.4 Prohibited uses and developments

Activities that may be prohibited or restricted within Natural Areas include, but are not limited to:

- bicycle riding (including BMX) off approved track or paths, or outside approved area / facilities;
- camping and overnight uses (unless subject to special application/approval);
- off-leash dogs;
- lighting of fires (unless subject to special application/approval)
- firearms
- horse-riding
- Remote control vehicles – including drones, boats, aeroplanes and cars;
- riding motorbikes, trailbikes or other vehicles off public roads;
- unauthorised vehicles;
- dumping of waste materials (including organic).

Prohibited or restricted activities may vary from site to site. The activities which are prohibited in Council's Natural Areas are listed on regulatory signs in these parks and reserves.

A person who fails to comply with the terms of the sign is guilty of an offence for which penalties apply under Section 6.3.2 of the *Local Government Act 1993*.

Prohibited uses also include any land uses that are not permitted with or without development consent in the *Ryde Local Environmental Plan 2014*.

Crown land may not be utilised for purposes inconsistent with the purposes for which it is dedicated or reserved (or any purpose incidental or ancillary to a purpose for which it is dedicated or reserved) unless it is authorised by an Act including for any prescribed purpose under Section 2.20 of the *Crown Land Management Act 2016*.

5.2 Leases, licenses, permits and other estates

5.2.1 What is a lease, licence and other estate?

The *NSW Local Government Act 1993* and the *Crown Land Management Act 2016* allow Councils to grant leases, licences and other estates over all or part of community land.

Section 3.22 of the *Crown Land Management Act 2016* requires, with some specific exceptions, that a Council manager of Crown lands “must manage the land as if it were community land under the *Local Government Act 1993*” and has “for that purpose all the functions that a local council has under that Act in relation to community land (including in relation to the leasing and licensing of community land)”. The *Crown Land Management Act 2016* provides that any existing lease, licence or permit issued under the previous *Crown Lands Act 1989* will continue for their agreed term. However from 1 July 2018 all new leases, licences and permits will be issued under the new Crown lands legislation.

A lease, license or permit is a contract between a land owner (or authorised manager) and another entity, granting that entity a right to occupy a particular area for a specific period of time.

Leases, licenses and permits formalise the use of community land by groups – such as environmental groups, educational or scientific organisations, community groups, schools, sporting clubs or user groups, or by commercial organisations and individuals providing facilities and/or services for public use.

A lease will be typically required where exclusive use or control of all or part of a Natural Area is desirable for effective management, to delivery maximum benefits for the natural areas values or community, for necessary security and safety measures, or where the relationship between a user/activity and a Natural Area justifies security of tenure. Leases may be granted for exclusive use to any group or organisation for any community purpose as determined by Council, on such terms as Council may provide.

Licenses allow multiple and non-exclusive use of an area. A licence may be required where intermittent or short term use or control of all or part of a Natural Area is proposed. Several licences for different users can apply to the same area at the same time, provided there is no conflict of interest.

The definition of “estate” under Section 21 of the NSW *Interpretation Act 1987* includes other rights over land such as easements, including “interest, charge, right, title, claim, demand, lien and encumbrance, whether at law or in equity.”

5.2.2 Authorised leases, licences, permits and other estates

Authorised areas for leases, licences, permits and other estates

A lease, licence, permit, other estate or easement (use agreement) may be granted over all or part of community land categorised as Natural Area.

Leased or licenced areas may be renewed or altered in the future to reflect changes in community needs.

Authorised uses and developments under lease, licence, permit or other estate

In general, Council will balance current community needs with the anticipated use of Natural Areas in the immediate future, and the anticipated future pressures on these areas, in granting leases, licenses and other estates.

This Plan of Management expressly authorises Council to enter into a lease, licence or estate in respect of Natural Areas for the purpose of appropriate recreational, educational, community, scientific or land management activities – subject to the constraints and considerations discussed below (also see Table 11.)

Granting of leases, licences, permits, other estates and easements for the use or occupation of land covered by this Plan of Management are expressly authorised under Section 46 of the *Local Government Act 1993* are permissible for uses consistent with:

-
- the provisions listed in the *Local Government Act 1993* (Section 46), its Regulation, and the *Crown Land Management Act 2016*;
 - there being a clear reason for granting a lease, and the lease is consistent with the intended use of the land;
 - the use being compatible with the core objectives for the Natural Area category as outlined in the *Local Government Act 1993*;
 - the zoning objectives listed in the *Ryde Local Environment Plan 2014*;
 - the capability of the land to support the proposed activities to be permitted by the lease or licence
 - the acceptability of anticipated environmental impacts of the proposed activities to be permitted by the lease or licence, or any impacts on the land's natural and scenic values, or the disturbance of neighbours;
 - the overarching objectives in this Plan of Management;
 - subject to the *Native Title Act 1993*, the Crown land reserve purpose and any secondary interest or short term licence described in Division 2.5 of the *Crown Land Management Act 2016*; and
 - there is a very strong link between the nature of the asset or area and the proposed tenant, e.g. a lease of a scout hall to Scouts Australia, or a licence to an educational organisation to use an outdoor learning area.

The use must not have a detrimental impact on the land, environment or the community.

The public's right to access the land must be preserved.

Sub-leases are only allowable for the same purpose as the original lease.

Section 47B of the *Local Government Act 1993* places additional limitations on leases and licences in respect of Natural Areas. In summary, this section requires that within Natural Areas approval must not be granted to authorise the erection or use of a building or structure except for the following buildings or structures:

- walkways;
- pathways;
- bridges;
- causeways;
- observation platforms;
- signs;
- information kiosks;
- refreshment kiosks (but not restaurants);
- work sheds or storage sheds required in connection with maintenance of the land; and
- toilets or rest rooms.

This Plan of Management expressly authorises Council to enter into a lease, licence or estate to authorise, at its discretion, a permit to enable a person to do, without the need for public notification, one or more of the following:

- to transport material and equipment required in relation to work that is to be carried out on land adjoining the community land, and
- to remove waste or other material that is consequential to such work.

Such access permits will only be authorised if no other alternative is feasible or practical (and not simply as a cost saving measure), and where such access does not require land/vegetation clearing and does not significantly impact the values of the Natural Area or compromise the community land's management objectives. Council may require a bond in respect of potential damage and restoration/remediation costs, and may also require proof of suitable insurances.

This Plan of Management expressly authorises the leasing, licencing or granting of other estate in accordance with section 46(1)(a) of the Act if essential for the provision of public utilities and works associated with or ancillary to public utilities.

A lease, license or other estate may be granted, in accordance with 46(1)(a) of the Act, for the purpose of providing pipes, conduits or other connections under the surface of the ground for the connection of premises adjoining the community land to a facility of the council or other public utility provider. Such authorisations will only be issued within Natural Areas if there is no feasible alternative to connecting to a facility on the community land, and the values of the Natural Area are not likely to be significantly impacted and the community land's management objectives are not unduly compromised. Council may require compensation where such works involve the creation of an easement and/or any restriction on the future usage or development potential of the community land.

This Plan of Management expressly authorises Council to grant "an estate" over community land categorised as Natural Area for the purpose of a public road, and car parking area, under the following conditions:

- where the provision of a road and/or car parking is consistent with the core objectives for the Natural Area category as outlined in the *Local Government Act 1993* and an area land use zoning in the *Ryde Local Environment Plan 2014*;
- where the road and/or car parking is necessary to facilitate enjoyment of the land or any facility on the land; and
- where the other means of providing access, other than by a public road have been considered and are not feasible or desirable.

This Plan of Management expressly authorises the leasing, licencing or granting of other estate to telecommunications carriers including, but not limited to, those defined by the *Telecommunications Act 1997*, where the terms of the grant are consistent with Council's obligations under the *Local Government Act 1993*.

In accordance with sections 46(c) and 47AA of the Act a lease, licence or other estate in respect of community land, including land categorised as Natural Area, may be granted in to permit a filming project to be carried out (including the erection and removal of temporary buildings or structures as locality suited and approved, necessary to enable a filming project to be carried – as consistent section 47B(6) and 47B(7) of the Act) where activities by the applicant demonstrate no negative impact to the natural area, reinstatement assurance is provided (by bond) and documentation is provided to council to outline extent of activities and footprints to assess environmental impact.

This Plan of Management expressly authorises the lease of residential properties on land acquired by Council for

future open space/park until demolition. This is conditional on occupation of such premises not being likely to generate unacceptable environmental impacts, or degrade the land's natural and scenic values, or unduly disturb neighbours;

In locations where an existing permanent structure (as at the date of adoption of this plan of management) encroaches upon community land categorised as Natural Area, Council may at its absolute discretion, may consider a lease or licence or other estate agreement with the adjoining property owner. Such leases, licences or other estate arrangements will only be authorised where such a structure does not adversely impact or present a hazard risk for an area's environmental values, compromise the community land's management objectives, constrain or complicate Council's management activities in the area, impact the functioning of the reserve limits or deters public access/use and enjoyment of the area, or presents a safety or fire risk.

Such leases, licences or other estate arrangements will not create an obligation for Council to protect such a structure from fire or other hazards. Council will recoup an appropriate annual fee for such arrangements towards the management of the area. Such leases, licences or other estate arrangements will be required to be advertised and may not be granted for more than 5 years. This authorisation does not extend to encroaching structures that post-date the adoption of this plan of management.

Existing and new easements are to be maintained without undue impact on the function of the Natural Area.

The development of any infrastructure associated with the issuing of any lease, license, permit or other estate would be subject to the relevant planning approvals being granted under the *Local Government Act 1993*, the *Environmental Planning and Assessment Act 1979* and/or the relevant State Environmental Planning Policy.

A lease, licence or permit over Crown land may impact native title rights and interests. Any lease, licence or permit issued on Crown land must be issued in accordance with the future act provisions of the *Native Title Act 1993* and in accordance with Part 8 of the *Crown Land Management Act 2016* unless native title is extinguished. For Crown land which is not excluded land, this will require written advice from Council's Native Title Manager that it complies with any applicable provisions of the native title legislation.

Use agreement periods

Section 46 (3) of the *Local Government Act 1993* specifies that Council must not grant a lease or licence for a period (including any period for which the lease or licence could be renewed by the exercise of an option) exceeding 21 years, or 30 years with the Minister's consent.

This Plan of Management expressly authorises existing leases and licence agreements until the end of their current term, including existing leases and licence agreements issued under the former *Crown Lands Act 1989* and that are still current.

Leased or licensed areas may be renewed or altered in the future to reflect changes in community needs or the management requirements of Natural Areas. This Plan of Management expressly authorises the negotiations for new lease or license renewals if so desired by Council and the incumbent lessee or licensee.

Short term leases, licences and permits allow the City of Ryde to programme different uses at different times.

Leases, licences and permits authorised to be granted in the Natural Area category in the short term (less than 1 year) and long term (more than 1 year) are listed in Table 13.



Darvall Park

Table 13 - Authorised short and long term leases, licences and permits

<p style="text-align: center;">Short term leases/licences/permits (less than 1 year)</p>	<p style="text-align: center;">Long term leases/licences (more than 1 year)</p>
<p>Educational or environmental awareness and appreciation uses or events</p> <p>Scientific research, data collection, experiment, field trial or study purposes</p> <p>School hiring for educational, fitness or well-being uses</p> <p>Bushland or natural area/resource management demonstration, extension or knowledge-sharing activities</p> <p>Seed or soil collection (licences issued under the <i>National Parks and Wildlife Act 1974</i> and the <i>Biodiversity Conservation Act 2016</i> may also be required)</p> <p>Rural Fire Service and Fire and Rescue NSW operations</p> <p>Organised nature-based outdoor sports or competitive events (such as orienteering, regaining or trail running)</p> <p>Organised outdoor leisure, recreation or community activities (such as Scouting or Guiding activities)</p> <p>Escorted/guided nature-based leisure, recreation or tourism uses</p> <p>Private group leisure or social activities – such as picnics, birthday parties, weddings, celebrations, commemorations and dedications</p> <p>Public presentations, workshops or lectures/classes, and meetings</p> <p>Community gatherings and events</p> <p>Cultural events and public performances</p> <p>Mobile food and refreshment vending</p> <p>Commercial filming and photography</p>	<p>Educational or environmental awareness activities – centred on built facilities/nodes (such as information or field studies centre) or specific locations/features</p> <p>Scientific research, data collection, experiment, field trial or study purposes</p> <p>Bushland or natural area/resource management demonstration, extension or knowledge-sharing activities</p> <p>Rural Fire Service and Fire and Rescue NSW operations</p> <p>Organised outdoor leisure, recreation or community activities (such as Scouting or Guiding activities)</p> <p>Escorted/guided nature-based leisure, recreation or tourism uses</p> <p>Organised nature-based or outdoor sports or recreational pursuits – centred on built facilities/nodes or specific locations/features</p> <p>Low intensity refreshment kiosks</p> <p>Public utilities and/or works associated with relevant legislation such as the <i>Telecommunications Act 1997</i></p>

Public notification

Section 47(1) of the Local Government Act 1993 requires that any proposed lease, licence or estate of community land for a period exceeding 5 years is advertised and community comment sought. Any comment received must be considered by Council. Under Sections 46 and 47 a lease should not proceed if Council has received an objection to the proposed lease, other than with the consent of the Minister administering the Local Government Act 1993.

5.2.3 Tendering for use agreements

Section 46A of the *Local Government Act 1993* requires Council to follow a tender process for leases, licences and other estates of community land over 5 years, unless the use agreement is to be granted to a non-profit organisation.

Any for leases, licences and other estates of community land for commercial uses, regardless of term, will only be entered into after a tender process in accordance with the *Local Government Act 1993*.

5.2.4 Applications for use of Natural Areas

Applications for use of Natural Areas will be required for:

- dog minders/walkers with consideration given to a restriction on the maximum number of dogs permitted (other than in Wildlife Protection Areas and other Natural Areas where dogs are otherwise prohibited); and
- private group leisure or social activities such as picnics, birthday parties, weddings, celebrations, commemorations and dedications.

Major events in Natural Areas will require the organiser to complete a Major Event Application and submit the necessary information so that Council can assess its suitability and environmental impact to the proposed location. Applicant may be required to demonstrate extent of activity and environmental risk based assessment prior to approval.

Hire events conducted by Council, individuals, community or sporting groups will be assessed and approved through the issuing of a permit. Use of Crown land and permits on Crown land will be issued in accordance with the *Native Title Act 1993*. Further information can be obtained from Council's Park Booking Officer.

5.2.5 Native Title considerations for use agreements

Prior to the approval, any use agreement on Crown land will require Native Title Manager advice under the *Crown Land Management Act 2016*.

5.3 Implementation

Upon adoption of this Plan of Management Council is obliged to carry out its recommendations in order of priority established in the action plans in Chapter 4 over the next 5 to 10 years.

The Natural Areas Land included in this Plan of Management will continue to be managed by City of Ryde as either owner of community land under the *Local Government Act 1993* or as Council Crown Land Manager under the *Crown Land Management Act, 2016*.

It should be recognised however that commencement and completion of the recommended actions in this Plan of Management depends on available Council resources, funding, and Council's priorities in its annual works program

(as discussed further in Section 5.4 below).

Implementation of this Plan of Management will involve engagement between Council and all relevant community and third party stakeholders to ensure the recommended actions continue to conserve biodiversity and meet the community's changing needs for Natural Areas. Community consultation and engagement will be developed in accord with the specific planning, works and actions for individual sites.

The community will also have an opportunity to participate in reviews and updates of this Plan of Management and subsequent versions when they are placed on public exhibition for comment.

5.4 Funding

This Plan of Management contains a substantial list of management actions. Some of these are management guidelines, providing policies or directions to guide future decision-making for the management of Natural Areas, whilst others are physical actions that will require the commitment of Council or other funds or resources – such as staff time – to implement.

It is expected that Council does not have the capacity to undertake all the more resource-intensive, management actions immediately. Accordingly, the management and development of Natural Areas as described in this Plan of Management will ultimately be reliant on, and largely determined by, the funding and resources available to Council.

As such the management actions must be assessed against the other priorities of Council, and budget allocations assigned as part of Council's wider Community Strategic Plan – Our Vision for Ryde 2028, and associated Four Year Delivery Plans and annual Operational Plan reflecting annual budget cycles and business planning for Council's various service units.

In view of these financial realities/constraints a priority has been assigned to each management action – as shown in the actions Tables – to reflect their relative importance and implementation timing in order to achieve the Plan's objectives (but also noting that actions which are of a more management guideline, policy or direction-setting character may not require the direct allocation of resources).

Recognising that funding and resources may come from many sources, including volunteer involvement and work in kind agreements, specific-purpose grant funding, developer contributions and voluntary planning agreements, identified Management Actions of different priority may proceed in differing orders or at different rates – and high priority actions need not necessarily precede lower-priority actions.

Implementation of some actions may also be contingent on or influenced by the results of other actions, changing management circumstances or opportunities to gain management efficiencies. In some cases, the resources to deliver a longer-term action may be available before a high priority action. This may be due to the amount of money required, or the project being funded from resources other than Council funds, or factors outside of Council's control.

Council may also choose to seek Grant funding from both Commonwealth and State Government grant programmes or pursue sponsorship opportunities appropriate and complementary to the core objectives for management of natural areas.

5.5 Monitoring

The objectives, actions and performance measures outlined in the Plan of Management provide a basis for qualitative monitoring of the performance of Council in managing Natural Areas and progress in implementing the Plan of Management. Evaluation of performance should be undertaken at the end of each financial year to align with

Council reporting requirements. Implementation of actions in this Plan of Management according to their assigned priorities will be monitored through the preparation of annual performance reports.

5.6 Reporting and Review

Progress and implementation of actions listed in this Plan of Management will be reported using Council’s Integrated Planning and Reporting Framework. Achievement of major actions and milestones will be reported in Council’s Annual Report.

Typically, a Plan of Management will remain relevant and have a time horizon of five to ten years. However, management strategies and actions can be reviewed and updated prior to the proposed ten year sunset period as required – accordingly consideration will be given to a formal review no longer than 5 years after adoption of this Plan of Management. Regardless, a major review and update of the Plan of Management will occur ten years from the date of adoption of the Plan.

The fact that a Plan of Management has Ministerial approval does not mean that the management direction cannot change in the future. Ministerial approval can be given to amend a plan provided the proposed changes have firstly been exhibited for public comment.



Blue Gum High Forest - Darvall Park

SELECTED REFERENCES

City of Ryde. 2001.	Generic Plan of Management Sportsground Parks Natural Areas General Community Use.
City of Ryde 2012.	Integrated Open Space Plan. Prepared for City of Ryde by Clouston Associates and OneEighty Sport & Leisure Solutions.
City of Ryde. 2016.	Ryde Biodiversity Plan. Prepared for City of Ryde by Eco Logical Australia.
City of Ryde 2018.	Flora and Fauna Surveys 2018 Small and Mixed Use Bushland Reserves. Prepared for City of Ryde by Applied Ecology.
City of Ryde, 2018.	2028 Community Strategic Plan – City of Ryde.
City of Ryde, 2018.	Bushfire Prone Lands Map.
City of Ryde, 2019.	Dumping Hot Spots Map. June 2019
City of Ryde, 2019.	Els Hall Park, Greenwood Park and Booth Reserve Master Plan Report 2019. Prepared for City of Ryde by Group GSA
Hunters Hill Lane Cove Parramatta Ryde Bush Fire Management Committee, 2019.	Draft Bush Fire Risk Management Plan, 2019 – 2024.
OCULUS Environmental Planning. 2001.	Urban Bushland in the Ryde LGA. Prepared for City of Ryde.
Office of Local Government and Department of Industry. 2018.	Developing Plans of Management for Community Land Crown Reserves: Interim Guideline for Council Crown land Management – Plan of Management Training.
Sydney Water. 2018. City of Ryde	Water Quality Monitoring Report Spring 2017 and Autumn 2018.

RELEVANT CITY OF RYDE POLICIES

Relevant City of Ryde policies as at May 2020 include:

- Access and Equity Policy April 2003
- Aged Services- Access Equity Policy 17 Aug 2011
- Asset Management Policy May 2019
- Child Protection Policy 06 Sep 2018
- Children’s Activities Policy 08 Aug 2011
- City of Ryde- Plaque Standard Guidelines- November 2011 Guideline 02 Mar 2018
- Code of Conduct Policy- May 2017
- Community Buildings Licensing Policy June 2013
- Community Gardens Policy 10 Dec 2010
- Community Hall Policy 06 Oct 2016
- Companion Animal Management Plan Policy 16 Aug 2013
- Contaminated Land Policy 09 Aug 2011
- CSI001 Information Policy 30 Sep 2015
- CSI006 IT Asset- Use and Disposal Policy Sept. 2013
- Customer Feedback Policy 10 Jul 2012
- Enforcement of Parking Policy 26 Nov 2014
- Engagement Policy Dec 2008
- Engagement Framework Dec 2008
- Equal Employment Opportunity Policy 05 Jul 2018
- Facility Opening and Plaque Policy 02 Mar 2018
- Final Service Level Agreement Policy 08 Jul 2013
- Footpath Activity Controls Policy 09 Aug 2011
- Gifts and Benefits Policy- September 2013 Policy 03 Oct 2013
- Keying System Policy 09 Aug 2011
- Local Biosecurity Weeds Policy Feb 2020
- Memorial Plaques and Donation of Park Furniture and Trees Policy 20 Jan 2011
- Naming of Parks & Park Facilities Policy May 2019
- No Smoking Policy April 2006
- Offensive Noise Management Policy 20 Aug 2011
- Open Space Lighting Policy 2019
- Outdoor Dining Policy 20 Aug 2011
- Pesticide Plan Policy 12 Aug 2011
- Pesticide Use Notification Plan Feb 2016
- Public Art- Developers Guide Guideline 18 Jan 2012
- Public Art- Implementation Guide Guideline 24 Jan 2012
- Public Art- Organisational Policy 23 Nov 2011
- Publications and Advertising Policy and Procedures Policy 08 Aug 2011
- Sponsorship Policy 04 Sep 2012
- Statement of Business Ethics Policy 16 Aug 2018

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- Surveillance Policy 05 Jul 2018
 - Sustainable Procurement Policy
 - Voluntary Planning Agreements Policy and Procedures July 2015
 - Work Health and Safety Policy 15 Dec 2017

CITY OF RYDE FLORA AND FAUNA LISTS

Information from the City of Ryde Flora and Fauna Survey December 2018. Prepared by Applied Ecology (Extracted from ELS Hall Park Plan of Management, 2019)

Native Flora – Comparison of flora inventories 2008-2018 (update/replace with comprehensive list relevant to sites within this Plan as/when available)

SPECIES NAME	COMMON NAME	2008	2018
<i>Acacia decurrens</i>	Sydney Green Wattle	y	y
<i>Acacia falcata</i>	Hickory Wattle	y	y
<i>Acacia floribunda</i>	White Sallow Wattle	y	y
<i>Acacia linifolia</i>	Flax-leaved Wattle	y	y
<i>Acacia longifolia</i>	Sydney Golden Wattle	y	y
<i>Acacia parramattensis</i>	Parramatta Green Wattle	y	y
<i>Acacia suaveolens</i>	Sweet-scented Wattle	y	y
<i>Acacia terminalis</i>	Sunshine Wattle	y	y
<i>Acacia ulicifolia</i>	Prickly Moses	y	y
<i>Acmena smithii</i>	Lilly-pilly	y	
<i>Adiantum aethiopicum</i>	Maidenhair Fern	y	y
<i>Adiantum hispidulum</i>	Rough Maidenhair		y
<i>Allocasuarina littoralis</i>	Black She-oak	y	y
<i>Angophora costata</i>	Sydney Red Gum	y	y
<i>Anisopogon avenaceus</i>	Oat Speargrass		y
<i>Aristida ramosa</i> var. <i>ramosa</i>	Three-awn Speargrass	y	y
<i>Austrostipa pubescens</i>		y	
<i>Baeckea linifolia</i>	Weeping Baeckea	y	
<i>Banksia spinulosa</i> var. <i>spinulosa</i>	Hair-pin Banksia	y	y
<i>Billardiera scandens</i>	Dwarf Appleberry	y	y
<i>Blechnum neohollandicum</i> = <i>Doodia aspera</i>	Rasp Fern		y
<i>Bursaria spinosa</i>	Blackthorn	y	y
<i>Callicoma serratifolia</i>	Black Wattle		y
<i>Callistemon citrinus</i>	Crimson Bottlebrush	y	y
<i>Callistemon linearis</i>	Narrow-leaved Bottlebrush	y	y
<i>Calochlaena dubia</i>	Soft Bracken, False Bracken	y	y
<i>Calystegia marginata</i>		y	y
<i>Cassytha pubescens</i>	Common Devil's Twine	y	y
<i>Centella asiatica</i>	Indian Pennywort	y	y
<i>Ceratopetalum gummiferum</i>	NSW Christmas Bush	y	
<i>Christella dentata</i>	Binung		y
<i>Clematis glycinoides</i>	Old Man's Beard	y	y
<i>Commelina cyanea</i>	Scurvy Weed	y	y
<i>Cymbopogon refractus</i>	Barbed Wire Grass		y
<i>Dianella caerulea</i>	Blue Flax Lily	y	y

SPECIES NAME	COMMON NAME	2008	2018
<i>Dianella revoluta</i>	Mauve Flax Lily	y	y
<i>Dichelachne rara</i>	Plumegrass		y
<i>Dichondra repens</i>	Kidney Weed	y	y
<i>Digitaria parviflora</i>	Finger Grass	y	y
<i>Dodonaea triquetra</i>	Large-leaf Hop-bush	y	y
<i>Echinopogon caespitosus</i>	Tufted Hedgehog Grass	y	y
<i>Einadia hastata</i>	Seaberry Saltbush	y	y
<i>Elaeocarpus reticulatus</i>	Blueberry Ash	y	y
<i>Entolasia marginata</i>	Bordered Panic	y	y
<i>Entolasia stricta</i>	Wiry Panic	y	y
<i>Epacris pulchella</i>	Coral Heath	y	y
<i>Eucalyptus pilularis</i>	Blackbutt	y	y
<i>Eucalyptus resinifera</i> subsp.	Red Mahogany	y	y
<i>Eucalyptus robusta</i>	Swamp Mahogany	y	y
<i>Eucalyptus saligna</i>	Sydney Blue Gum	y	y
<i>Eucalyptus tereticornis</i>	Forest Red Gum	y	y
<i>Eustrephus latifolius</i>	Wombat Berry	y	
<i>Geranium homeanum</i>	Native Geranium	y	y
<i>Glochidion ferdinandi</i>	Cheese Tree	y	y
<i>Glycine clandestinus</i>	Love Creeper	y	y
<i>Glycine microphylla</i>	Lesser Love Creeper	y	y
<i>Goodenia hederacea</i> subsp. <i>hederacea</i>	Violet-leaved Goodenia	y	y
<i>Grevillea linearifolia</i>	White Spider Flower	y	y
<i>Hakea sericea</i>	Bushy Needlebush	y	y
<i>Hardenbergia violacea</i>	False Sarsparilla	y	y
<i>Hibbertia scandens</i>	Twining Guinea Flower	y	y
<i>Homalanthus populifolius</i>	Bleeding Heart	y	y
<i>Imperata cylindrica</i>	Blady Grass	y	y
<i>Indigofera australis</i>	Austral Indigo		y
<i>Juncus subsecundus</i>	Finger Rush	y	y
<i>Kennedia rubicunda</i>	Dusky Coral Pea	y	
<i>Lepidosperma gunnii</i> y	Flat Saw-sedge	y	
<i>Leptospermum polygalifolium</i> subsp. <i>polygalifolium</i>	Lemon-scented Tea-tree	y	
<i>Leptospermum trinervium</i>	Paperbark Tea-tree	y	y
<i>Leucopogon juniperinus</i>	Prickly Heath	y	y
<i>Lomandra confertifolia</i>	Mat Rush	y	
<i>Lomandra cylindrica</i>		y	y
<i>Lomandra longifolia</i>	Spiny Mat Rush	y	y
<i>Lomandra obliqua</i>	Fish Bones	y	y
<i>Lomatia silaifolia</i>	Crinkle Bush	y	y
<i>Melaleuca linariifolia</i>	Flax-leaved Paperbark	y	y
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark		y

SPECIES NAME	COMMON NAME	2008	2018
<i>Micrantheum ericoides</i>		y	y
<i>Microlaena stipoides</i> var. <i>stipoides</i>		y	y
<i>Opercularia aspera</i>	Thin Stink Weed	y	y
<i>Oplismenus aemulus</i>	Basket Grass	y	y
<i>Oplismenus imbecillis</i>	Slender Basket Grass	y	y
<i>Oxalis perennans</i>		y	y
<i>Ozothamnus diosmifolius</i>	Paper Daisy	y	y
<i>Panicum simile</i>	Two Colour Panic	y	y
<i>Paspalidium distans</i>		y	y
<i>Persicaria lapathifolia</i>	Pale Knotweed		y
<i>Persoonia levis</i>	Smooth Geebung	y	y
<i>Persoonia mollis</i>	Soft Geebung		y
<i>Pittosporum revolutum</i>	Rough-fruit Pittosporum	y	y
<i>Pittosporum undulatum</i>	Sweet Pittosporum	y	y
<i>Platylobium formosum</i> subsp. <i>formosum</i>	Handsome Flat-pea	y	y
<i>Platysace lanceolata</i>	Native Parsnip	y	
<i>Plectranthus parviflorus</i>	Cockspur Flower	y	
<i>Podocarpus elatus</i>	Plum Pine		y
<i>Polyscias sambuccifolia</i>	Elderberry Panax	y	y
<i>Pomaderris discolor</i>		y	
<i>Pomax umbellata</i>	Pomax	y	y
<i>Poranthera microphylla</i>		y	y
<i>Pratia purpurascens</i>	White Root	y	y
<i>Pteridium esculentum</i>	Harsh Bracken	y	y
<i>Pteris tremula</i>	Tender Brake		y
<i>Pultenaea daphnoides</i>	Large-leaf Bush-pea		y
<i>Rytidosperma tenuius</i> [= <i>Austrodanthonia tenuior</i>]		y	
<i>Sigesbeckia orientalis</i> subsp. <i>orientalis</i>	Indian Weed	y	y
<i>Smilax glycyphylla</i>	Native Sarsparilla	y	y
<i>Stylidium lineare</i>	Heath Trigger Plant	y	
<i>Themeda australis</i>	Kangaroo Grass	y	y
<i>Trachymene incisa</i> subsp. <i>incisa</i>		y	y
<i>Trema tomentosa</i>	Native Peach, Poison Peach	y	
<i>Tylophora barbata</i>			y
<i>Typha orientalis</i>	Cumbungi	y	y
<i>Veronica plebeia</i>	Trailing Speedwell	y	
<i>Woolsia pungens</i>	Snow Wreath	y	
<i>Zieria smithii</i>	Sandfly Zieria	y	y

Exotic Flora – Comparison of flora inventories 2008-2018

SPECIES NAME	COMMON NAME	2008	2018
<i>Acer negundo</i>	Box Elder		y
<i>Acetosa sagittata</i>	Turkey Rhubarb	y	y
<i>Aloe vera</i>	Aloe Vera	y	y
<i>Alstroemeria psittacina</i>	Parrot Lily		y
<i>Anredera cordifolia</i>	Madeira Vine	y	y
<i>Araucaria heterophylla</i>	Norfolk Island Pine		y
<i>Araujia sericiflora</i>	Moth Plant, Moth Vine	y	y
<i>Asparagus aethiopicus</i>	Asparagus Fern	y	y
<i>Asparagus asparagoides</i>	Bridal Creeper		y
<i>Asparagus plumosus</i>	Climbing Asparagus	y	
<i>Axonopus affinis</i>	Narrow-leaved Carpet Grass	y	y
<i>Bidens pilosa</i>	Cobbler's Pegs	y	y
<i>Bidens subalternans</i>	Beggars Ticks	y	
<i>Briza maxima</i>	Quaking Grass, Blowfly Grass	y	y
<i>Bromus catharticus</i>	Prairie Grass	y	y
<i>Bryophyllum delagoense</i>	Mother of Millions	y	y
<i>Cenchrus clandestinus [=Pennisetum clandestinum]</i>	Kikuyu	y	y
<i>Cestrum parqui</i>	Green Cestrum	y	y
<i>Cinnamomum camphora</i>	Camphor Laurel	y	y
<i>Colocasia esculenta</i>	Purple Taro	y	y
<i>Conyza sp.</i>	Fleabane	y	y
<i>Cotoneaster glaucophylla</i>	Cotoneaster	y	y
<i>Crassocephalum crepidioides</i>	Thickheads		y
<i>Crococsmia x crocosmiiflora</i>	Montbretia		y
<i>Cyclosporum leptophyllum</i>	Slender Celery		y
<i>Cynodon dactylon</i>	Common Couch	y	y
<i>Cyperus eragrostis</i>	Umbrella Sedge		y
<i>Cyrtomium falcatum</i>	Holly Fern	y	y
<i>Delairea odorata</i>	Cape Ivy	y	y
<i>Digitaria didactyla</i>	Queensland Blue Couch	y	
<i>Digitaria sanguinalis</i>	Summer Grass	y	
<i>Ehrharta erecta</i>	Ehrharta, Panic Veldtgrass		y
<i>Eragrostis curvula</i>	African Lovegrass	y	y
<i>Erythrina x sykesii</i>	Coral Tree	y	
<i>Eucalyptus microcorys</i>	Tallow Wood		y
<i>Euphorbia peplus</i>	Petty Spurge		y
<i>Fumaria sp.</i>	Fumitory	y	y
<i>Galinsoga parviflora</i>	Potato Weed	y	y
<i>Genista monspessulana</i>	Cape Broom, Montpellier Broom	y	
<i>Gnaphalium sp.</i>	Cudweed		y

SPECIES NAME	COMMON NAME	2008	2018
<i>Grevillea robusta</i>	Silky Oak	y	y
<i>Hedera helix</i>	English Ivy	y	y
<i>Hedychium gardnerianum</i>	Ginger Lily		y
<i>Hirschfeldia incana</i>	Buchan Weed		y
<i>Hypochaeris radicata</i>	Flatweed, Catsear	y	y
<i>Jacaranda mimosoides</i>	Jacaranda		y
<i>Lantana camara</i>	Lantana	y	y
<i>Leucanthemum x superbum</i> [<i>Chrysanthemum x superbum</i>]			y
<i>Ligustrum lucidum</i>	Broad-leaved Privet	y	y
<i>Ligustrum sinense</i>	Small-leaved Privet	y	y
<i>Lonicera japonica</i>	Honeysuckle	y	y
<i>Melia azadarach</i>	White Cedar	y	
<i>Modiola caroliniana</i>	Red-flowered Mallow		y
<i>Morus albus</i>	White Mulberry	y	y
<i>Musa sp</i>	Banana Tree		y
<i>Nephrolepis cordifolia</i>	Fishbone Fern		y
<i>Nothoscordum borbonicum</i>	Onion Weed		y
<i>Ochna serrulata</i>	Mickey Mouse Plant	y	y
<i>Olea europaea subsp. cuspidata</i>	African Olive	y	
<i>Oxalis corniculata</i>	Yellow Wood Sorrel		y
<i>Parietaria judaica</i>	Asthma Weed		y
<i>Paspalum dilatatum</i>	Paspalum	y	y
<i>Paspalum urvillei</i>	Vasey Grass	y	
<i>Passiflora subpeltata</i>	White Passionfruit	y	y
<i>Pellaea viridis var. viridis</i>	Green Cliff Brake		y
<i>Plantago lanceolata</i>	Plantain	y	y
<i>Poa annua</i>	Winter Grass		y
<i>Polycarpon tetraphyllum</i>	Four-leaf Allseed		y
<i>Prunus sp.</i>	Cherry Blossom		y
<i>Ranunculus repens</i>	Creeping Buttercup		y
<i>Ricinus communis</i>	Castor Oil Plant		y
<i>Rorippa nasturtium-aquaticum</i>	Watercress		y
<i>Rubus fruticosus aggregate species</i>	Blackberry	y	y
<i>Rumex crispus</i>	Curled Dock		y
<i>Rumex obtusifolius</i>	Broad-leaved Dock		y
<i>Senecio madagascariensis</i>	Fireweed		y
<i>Senna pendula var. glabrata</i>	Easter Senna		y
<i>Setaria palmifolia</i>	Palm Grass		y
<i>Setaria sp.</i>	Pigeon Grass	y	y

SPECIES NAME	COMMON NAME	2008	2018
<i>Sida rhombifolia</i>	Paddy's Lucerne	y	y
<i>Solanum nigrum</i>	Blackberry Nightshade	y	y
<i>Sonchus oleraceus</i>	Sowthistle, Milk Thistle	y	y
<i>Sporobolus africanus</i> [= <i>indicus</i> var. <i>capensis</i>]	Parramatta Grass	y	y
<i>Stellaria media</i>	Chickweed		y
<i>Stenotaphrum secundatum</i>	Buffalo Grass	y	y
<i>Taraxacum officiale</i>	Dandelion	y	y
<i>Tradescantia fluminensis</i> [= <i>albiflora</i>]	Trad, Wandering Jew	y	y
<i>Trifolium repens</i>	White Clover	y	y
<i>Tropaeolum majus</i>	Nasturtium	y	y
<i>Ulmus</i> sp.	Elm	y	y
<i>Verbena</i> sp.	Purpletop	y	y
<i>Veronica persica</i>	Creeping Speedwell		y
<i>Vicia sativa</i>	Slender Vetch	y	

Fauna List – Comparison of fauna inventories 2008-2018

SPECIES NAME	COMMON NAME	2008	2018
Australian Brush-turkey	<i>Alectura lathami</i>		y
Australian King-Parrot	<i>Alisterus scapularis</i>		y
Australian Magpie	<i>Cracticus tibicen</i>	y	y
Australasian Pipit	<i>Anthus novaeseelandiae</i>	y	
Australian Raven	<i>Corvus coronoides</i>	y	y
Australian White Ibis	<i>Threskiornis molucca</i>	y	
Australian Wood Duck	<i>Chenonetta jubata</i>		y
Black-faced Cuckoo-shrike	<i>Coracina novaehollandiae</i>	y	
Brown Thornbill	<i>Acanthiza pusilla</i>	y	
Channel-billed Cuckoo	<i>Scythrops novaehollandiae</i>		y
Collared Sparrowhawk	<i>Accipiter cirrocephalus</i>	y	y
Eastern Koel	<i>Eudynamis orientalis</i>	y	
Eastern Rosella	<i>Platycercus eximius</i>		y
Eurasian Coot	<i>Fulica atra</i>	y	
Fan-tailed Cuckoo	<i>Cacomantis flabelliformi</i>	y	
Grey Butcherbird	<i>Cracticus torquatus</i>		y
Grey Fantail	<i>Rhipidura albiscapa</i>	y	
Laughing Kookaburra	<i>Dacelo novaeguineae</i>		y
Magpie-lark	<i>Grallina cyanoleuca</i>		y
Masked Lapwing	<i>Vanellus miles</i>	y	
New Holland Honeyeater	<i>Phylidonyris novaehollandiae</i>	y	
Noisy Miner	<i>Manorina melanocephala</i>	y	y

SPECIES NAME	COMMON NAME	2008	2018
Pacific Black Duck	<i>Anas superciliosa</i>	y	y
Pied Currawong	<i>Strepera graculina</i>	y	
Rainbow Lorikeet	<i>Trichoglossus haematodus</i>	y	y
Red-browed Finch	<i>Neochmia temporalis</i>	y	
Red Wattlebird	<i>Anthochaera carunculata</i>	y	y
Spotted Pardalote	<i>Pardalotus punctatus</i>	y	
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	y	y
Superb Fairy-wren	<i>Malurus cyaneus</i>		y
Tawny Frogmouth	<i>Podargus strigoides</i>		y
Welcome Swallow	<i>Hirundo neoxena</i>	y	y
White-browed Scrubwren	<i>Sericornis frontalis</i>		y
White-faced Heron	<i>Egretta novaehollandiae</i>	y	y
Willie Wagtail	<i>Rhipidura leucophrys</i>	y	
INTRODUCED BIRDS			
Common Myna	<i>Sturnus tristis</i>	y	y
House Sparrow		y	
Spotted Turtle-Dove	<i>Streptopelia chinensis</i>	y	
REPTILES			
Dark-flecked Garden Sunskink	<i>Lampropholis delicata</i>	y	y
Eastern Blue-tongue Lizard	<i>Tiliqua scincoides</i>		y
Eastern Water Dragon	<i>Intellagama lesueurii</i>		y
Eastern Water-skink	<i>Eulamprus quoyii</i>	y	y
Lace Monitor	<i>Varanus varius</i>		
Pale-flecked Garden Sunskink	<i>Lampropholis guichenoti</i>	y	y
Weasel Skink	<i>Saproscincus mustelinus</i>	y	
FROGS			
Brown-striped Frog	<i>Limnodynastes peronii</i>		y
Common Eastern Froglet	<i>Crinia signifera</i>	y	y
NATIVE MAMMALS			
Common Brushtail	<i>Trichosurus vulpecula</i>	y	y
Common Ringtail Possum	<i>Pseudocheirus peregrinus</i>	y	y
Grey-headed Flying-fox	<i>Pteropus poliocephalus</i>	y	y
BATS			
White-striped Free-tailed Bat	<i>Austronomus australis</i>		y
Gould's Wattled Bat	<i>Chalinolobus gouldii</i>		y
Chocolate Wattled Bat	<i>Chalinolobus morio</i>		y
Eastern Bentwing-bat	<i>Miniopterus orianae oceanensis</i>		y
Ride's Free-tailed Bat	<i>Mormopterus ridei</i>		y

SPECIES NAME	COMMON NAME	2008	2018
Long-eared Bat	<i>Nyctophilus sp</i>		y
Large Forest Bat	<i>Vespadelus darlingtoni</i>		y
INTRODUCED MAMMALS			
Black Rat	<i>Rattus rattus</i>		y
Dog	<i>Canis lupus familiaris</i>		y
Mouse	<i>Mus musculus</i>	y	
Red fox	<i>Vulpes vulpes</i>		y