

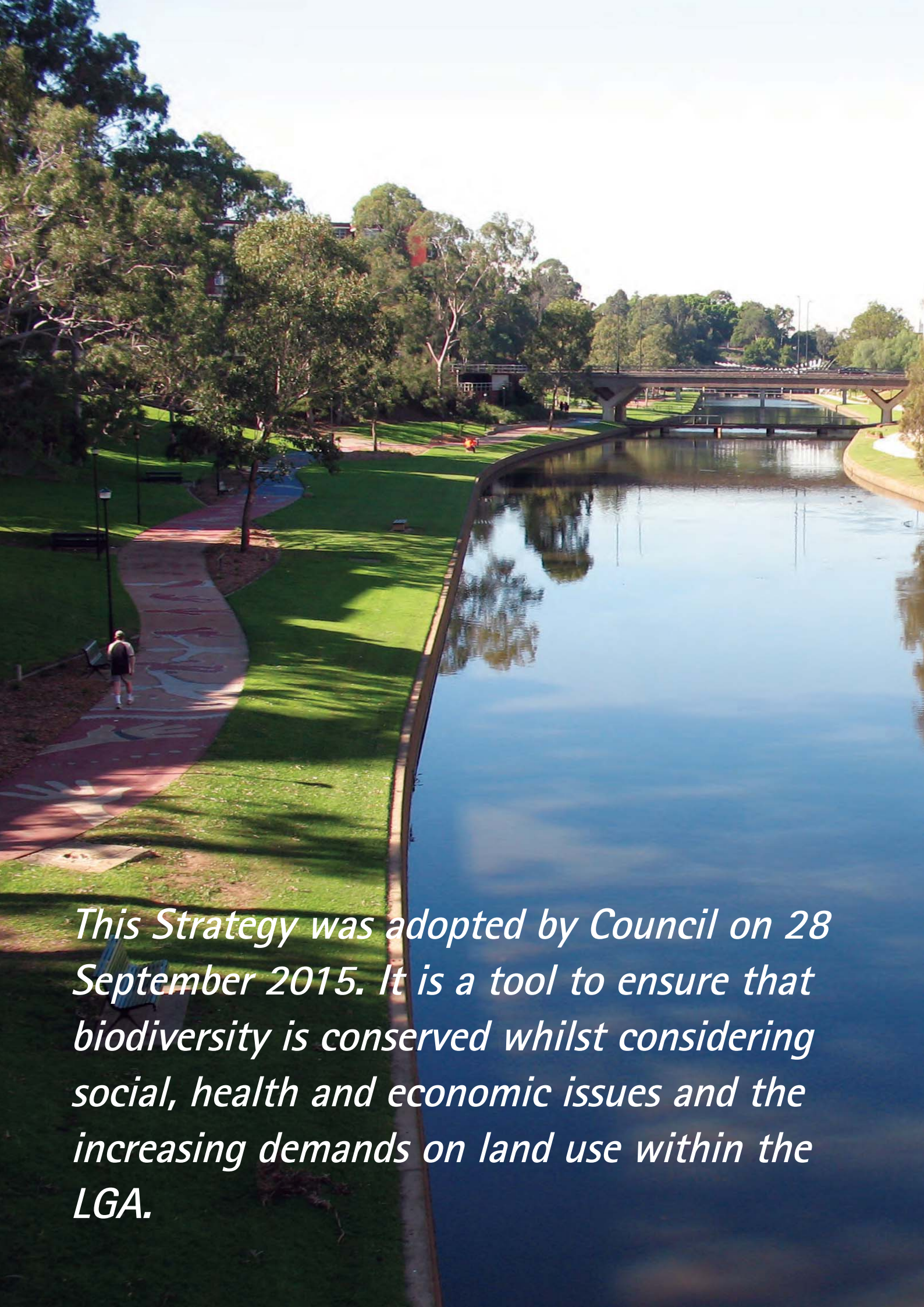
Life in our city

Parramatta City Council

Summary

Parramatta
Biodiversity
Strategy
2015 – 2025





This Strategy was adopted by Council on 28 September 2015. It is a tool to ensure that biodiversity is conserved whilst considering social, health and economic issues and the increasing demands on land use within the LGA.

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Lord Mayors Message

Parramatta has a significant cultural history directly linked to the resources provided in the natural landscape. From the significance of eels and the river to the Darug peoples for nearly 60 000 years to the establishment of the first farms for the European settlers in the late 1700's, the biodiversity of Parramatta has helped us to thrive. Parramatta is currently home to over 600 different plant species and around 230 animal species from 17 different vegetation communities identified in recent studies.

Councillor Scott Lloyd
Lord Mayor Parramatta City Council.

Parramatta 2038 and Council's Corporate Plan outlines our commitment to improve, protect and value our natural heritage and systems; including the extensive network of parks and bushland reserves so we continue to protect biodiversity while improving our connections between these areas and people.

Our Vision

'Parramatta is recognised as a city with unique natural assets, places where people can experience nature and our community can feel confident that we have secured the integrity and function of our unique bushland areas now and into the future to ensure our city and people prosper in a healthy landscape.'



Executive Summary

Parramatta City Council has developed 'Life in Our City' to ensure we meet the many legislative requirements (local, state, federal and international law) as well as provide opportunities to our community as we enter a period of economic growth and development during the next decade. 'Life in our City' recognises that biodiversity **supports life** through provision of clean air, clean water and natural resources (ecosystem services) and also provides **quality of life** for our community as spaces where people can enjoy nature and recreate.

Key Features of the Strategy

- Parramatta has a significant cultural history directly linked to the resources provided in the natural landscape. From the significance of eels and the river to the Darug peoples for nearly 60 000 years to the establishment of the first farms for the European settlers in the late 1700's, the biodiversity of Parramatta has helped us to thrive. Parramatta is currently home to over **600 different plant species and around 230 animal species** from 17 different vegetation communities identified in recent studies.
- Although we have secured good representation of natural places, **many of our plants and animals are currently threatened with extinction** and protected under the *NSW Threatened Species Conservation Act 1995*. Managing species and ecological communities presents a challenge particularly in a landscape that supports 190 000 residents and provides jobs for 120 000 people and the infrastructure to support a built environment that will service these communities.
- We have used Conservation Significance Assessment Mapping (CSA) to determine our strategic approach to managing our natural assets. This includes prioritising actions for land management in the following order: **protect core, protect support for core and revegetate**. Fortunately most of Parramatta's biodiversity is contained within Council owned and managed land (predominantly core reserves).
- Some of the key targets we are working towards include:
 - **Increasing total vegetation cover by 1% across the LGA by 2025**
 - **Increasing protection of the most significant vegetation to 75% or greater by 2025**
- The Strategy includes **110 actions**. The range of actions we will deliver during the next ten years: *include planning and development controls, flora and fauna conservation actions, bushland and waterways enhancement, forming community partnerships and educating our community.*
- We will fund these actions through a combination of existing sources including general revenue, special rates and charges as well as state and federal grants and community partnerships. We will monitor and review the actions on an ongoing basis and ensure that the outcomes are **linked to our integrated reporting system** and *Community Strategic Plan Parramatta 2038*.

A close-up photograph of two Rainbow Lorikeets perched on a tree trunk with peeling bark. The bird in the foreground is facing the viewer, showing its vibrant green, blue, and red plumage. The second bird is positioned slightly above and to the left, looking towards the left. The background is a textured, brownish-grey bark.

Restoring habitat or setting up reserves in cities can boost people's health, improve their ability to think and lower violence and aggression in the community.

(National Environmental Research Program 2013)

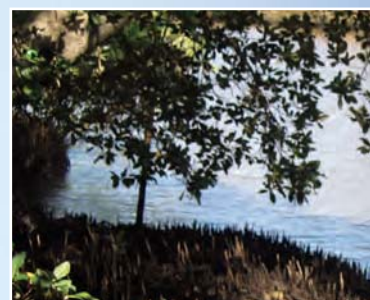
How Much Biodiversity Do We Have And Where Does It Occur?

Parramatta's biodiversity can be found in our bushland areas, our rivers and creeks as well as our built environment.

For a comprehensive list of plants and animals, more information about why we need to protect biodiversity and all relevant policies and legislation governing biodiversity in Parramatta please see *Life in Our City Volume 1 and Volume 2*. The Table below provides a snapshot of the current status of biodiversity assets in Parramatta.

Parameter	Area	%
Total Vegetation Cover	964Ha of 6135Ha of the entire LGA is vegetated	15.7% of the LGA contains vegetation
Significant Vegetation	678Ha of vegetation is significant and must be conserved	70% of the vegetation in the LGA is significant and must be conserved
How much of the significant vegetation is currently protected?	425Ha of the most significant vegetation is already protected in Council parks and reserves	44% of the total vegetation and 63% of the most significant vegetation is currently protected
How much of the significant vegetation is currently outside of the public reserve system?	252Ha of significant vegetation is outside of the reserve system and needs to be protected	37.2% of significant vegetation is outside the reserve system
How much opportunity is there to increase vegetation cover and offset significant vegetation loss?	64Ha of Council owned and operated land has been identified as potential revegetation sites	This would provide a 1% increase in total vegetation cover across the LGA
What is the value and extent of other vegetation?	286.5Ha of other vegetation (native and exotic) is located in backyards and street tree plantings	This vegetation is highly fragmented and scattered across the LGA on private property but has value as reducing heat, amenity and as small island habitat
What are the key challenges?	123.9Ha of the 203.9Ha of support to core; 118Ha of the 236.3Ha of primary corridor; and 10 of the 20.5 Ha of wetlands needs further protection	60.7% of <i>support to core</i> , 49.9% of <i>primary corridor</i> and 48.8% of <i>wetlands</i> need further protection or offsetting
How many of our vegetation communities are listed as endangered?	12 of 17 vegetation communities are listed as endangered	More than two-thirds (70%) of our vegetation communities in Parramatta are threatened with extinction
How many of our fauna species are threatened?	32 of 230 fauna species are threatened	14% of our fauna species are currently threatened with extinction
How many of our plant species are threatened?	13 of our 600+ flora species are threatened	2% of our plant species are threatened with extinction
What is our current level of community participation in biodiversity?	Community participation in key biodiversity related events and activities include 500 volunteers in community planting events, 160 Bushcare volunteers and 500 participants in the Get Into Nature program	1100 of 190 000 residents in Parramatta (0.6%) have been engaged and participated in biodiversity related activities and events during 2014 – 2015

Parramatta City Council is a signatory to the Parramatta River Catchment Group working together to protect and enhance estuarine biodiversity.



Our Unique Parramatta Landscape

Significant diversity exists even within the LGA, with different Council wards supporting different vegetation communities.



Caroline Chisholm Ward contains beautiful herbaceous plants amongst the Sydney Turpentine Ironbark Forest in Toongabbie Creek



Arthur Phillip Ward is home to the stunning ochre colours of the Coastal Enriched Sandstone Dry Forest at Lake Parramatta



Elizabeth Macarthur Ward hosts a rich estuarine community with mangroves and salt marsh along the Ermington Bay Cycleway



Lachlan Macquarie Ward supports the tall timbers of Blue Gum High Forest in Galaringi Reserve and Edna Hunt Sanctuary



Woodville Ward contains the rare open woodland of the Cumberland Plain in Waddangalli Woodland

Many businesses and residents in our community have already been working hard to restore natural areas through our Bushcare program to protect and preserve our environment for future generations.



Our community has planted 35,000 native plants in the last three years



Why is it Important to Protect Biodiversity?

Biodiversity is critically important for human wellbeing.
*"It is recognised that biodiversity loss can have significant direct human health impacts if ecosystem services are no longer adequate to meet social needs."
(World Health Organisation 2012).*



Figure A) Green and Golden Bell Frog have been recorded in the Parramatta LGA and are protected under the NSW *Threatened Species Conservation Act 1995*.



Figure B) Medical Research

Biodiversity protection is a requirement governed by a complex array of legislation and policy. Our community expect us to protect the environment as a key service provision of government.

One Frog Could Save Millions of Lives

At Sydney Olympic Park investment in the protection of Green and Golden Bell Frogs and their habitat has cost millions of dollars including the creation of two new wetland precincts and ongoing habitat management works. The significance of this investment in protecting just one frog species has often been questioned, until recently, when a study investigating a new treatment for infection with multidrug resistant bacteria (MDR) was discovered (*Sydney Morning Herald* March 17, 2012).

Medical researchers have discovered that skin secretions from Green and Golden Bell Frog are toxic to a range of bacteria, including multi-drug-resistant golden staph known as MRSA.

Currently we do not know what resources (medicines) our unique ecosystems can provide. By preserving and protecting our biodiversity we will ensure that our children will have access to the same opportunities we have.



Our Strategic Approach to Managing Biodiversity for Future Generations

Managing natural assets in an urban setting can be complex. Parramatta's landscape is multi-faceted with both built and natural heritage features as well as being a major hub for jobs, growth and transport infrastructure. As land managers we require a practical system for dealing with this complexity. Our management must be considerate of multiple species strategies, be able to identify priority sites for native biodiversity and be complementary to integrated catchment management. Our management of the landscape needs to be considerate of social and economic needs not only for Parramatta residents but also for greater western Sydney.

Definition of Priority Areas for Conservation

We have used Conservation Significance Assessment Mapping as our primary tool for determining our strategic approach to biodiversity management. Please refer to *'Life in Our City' Volume 1* which contains comprehensive maps identifying vegetation significance and management categories.

High Priority	Core	Council manages 8 Core Bushland Reserves which include remnants >10Ha as well as Endangered Ecological Communities. These lands are considered significant to achieving local and regional conservation management goals and should be protected and enhanced as the highest priority.
	Support for Core	These are patches of vegetation that are in relatively poorer condition but are adjacent to Core reserves. They have value in the longer term, increasing the size of Core (buffering against edge effects), and should be retained and protected. Loss of vegetation on these lands should be offset accordingly.
	Primary Corridors	This includes vegetation along riparian waterways and terrestrial links between core and support to core vegetation that enable migration, colonisation and inter-breeding of animals and plants. Investment in securing tenure and revegetating these lands will be important in securing a sustainable landscape.
	Threatened Species	These are pinpoint locations for threatened plants and fauna sightings (e.g. breeding locations) across the LGA. They are marked as lands which are not protected in Core Reserves but will be significant to achieving threatened species legislation compliance and biodiversity protection.
	Wetlands	Parramatta has a number of wetland areas which include both estuarine and freshwater wetlands. These sites are biodiversity hotspots for Parramatta and will need to be protected and enhanced to comply with legislation and to help secure clean water for the catchment.
Medium Priority	Revegetate Open Space	This category scopes areas within public land (parks and reserves) that are currently turfed with exotic grasses and contain scattered plantings. Revegetating these areas will ensure we meet Parramatta 2038 targets to increase vegetation cover as well as establishing structural diversity to improve the quality of native vegetation in the LGA. Revegetating and 'offset' plantings at these sites will compensate for loss of significant trees and EEC vegetation from private property within the LGA to ensure 'no net loss' to biodiversity occurs.
Low Priority	Other Vegetation	Other Vegetation that does not fall into the above categories but could be expanded to support fauna and may provide value as vegetation corridors and amenity in an urban setting. This vegetation is primarily large stands of trees in urban backyards and street trees.

Our Strategic Framework includes setting measurable, quantifiable targets and identifying actions to ensure we reach our vision for *'Life in Our City'*.



GOALS		STATUS	ACTIONS
Outcome	Targets	Baseline Data	Broad Mechanisms
1 – We have complied with and implemented all relevant legislation	100% compliance with key legislation by 2025	100% Compliance	Planning and Development
2 – We have prioritised and conserved the most significant biodiversity	75% or greater of the most significant vegetation in the LGA will be managed for conservation by 2025	63% of the most significant vegetation currently conserved	Bushland and Waterways Enhancement Planning and Development
3 – We have delivered best practice biodiversity conservation techniques	All significant threats from pest animals have been abated in core bushland reserves by 2025 Weed density will be <10% in core bushland reserves by 2025 Aquatic biodiversity will be at current or better levels by 2025	Weed Density for Core Bushland Reserves <i>(Adapted from Draft Weed Mapping 2010 Report)</i> Wategora Reserve 10% Quarry Branch Reserve 25% Lake Parramatta Reserve 4% Vineyard Creek Reserve 10% Galaringi Reserve 50% Edna Hunt Sanctuary 20% Waddangalli Woodland 50%	Bushland & Waterways Enhancement Flora and Fauna Conservation Planning and development
4 – We have ensured confidence for developers and our community	No net loss to biodiversity will occur across the LGA between 2015 and 2025 Total vegetation cover will increase by 1% across the LGA by 2025 Landuse planning will provide a mechanism for developers to address biodiversity loss by 2025	Total vegetation cover 15.7% (964Ha) of LGA	Flora and Fauna Conservation Bushland and Waterways Enhancement
5 – Our community have participated and are engaged in biodiversity conservation	>1% of our population will have participated in key community biodiversity events and activities by 2025	(1100) 0.6% of current Parramatta population residents engaged	Community Partnerships and Education



ACTIONS	MEASURES
Specific Mechanisms	Indicators
Review and update policies and documents	Hours council staff spent advising the public on legislation governing conservation issues Number of non-compliance orders received All Plans of management are taken into account when setting annual operational works plans and budgets? Yes/No All natural assets confirmed as having current plans of management as per State policy and legislative requirements? Yes/No
Expand area to reduce edge effects Increase buffer zones Increase protection through regulation	Number of areas outside the conservation zones implementing Property Management Plans or covenants Area managed for biodiversity conservation Percentage of area protected % of Threatened Species and Endangered Ecological Communities covered by a conservation zone
Improve quality of bushland and waterways Protect threatened flora and fauna Incorporate research into decision making and management	Expenditure on measures to prevent environmental degradation \$ spent on ground management of pest animals and weeds/ Area dominated by non-native species Area of primary corridor, support to core and wetlands Aquatic Bioindicator diversity and density
Expand habitat for flora and fauna Abate threats to flora and fauna Improve quality of bushland and waterways	Area of native vegetation cleared annually /Proportion of land under native vegetation Green ring and canopy cover Application of net gain concept to areas undergoing redevelopment Offset policy adopted by 2017
Inform Engage Equip Empower	Number of staff trained in biodiversity conservation Number of demonstrations in place to encourage the broader community Number of local schools participating in environmental management and monitoring initiatives Number of active members and conservation groups in the LGA Frequency of hits on the natural resource page on council web site Results of surveys testing community biodiversity knowledge. (i.e success of education campaigns) Area managed by volunteers/Number of volunteer hours Number of eco-tourism enterprises/events Number of open forums arranged to discuss environmental issues.



*Children who experience contact with nature develop improved self worth and higher cognitive function.
(Beyond Blue 2010)*

The Actions listed under these themes will ensure we reach our management targets and secure good biodiversity outcomes for our community.

Action Plan

We have developed a comprehensive Action Plan with the following themes to deliver a strategic approach to managing biodiversity. We will monitor and review the actions on an ongoing basis to ensure we deliver good outcomes for biodiversity in Parramatta.

Planning and Development

Bushland and Waterways Enhancement

Flora and Fauna Conservation

Community Partnerships and Education



Epacris purpurescens is one of 19 plants threatened with extinction in Parramatta.

'Life in Our City' Volume 1 contains a comprehensive Action Plan with 110 actions. These include; protecting threatened species and communities, expanding areas of core bushland to reduce edge effects and improving vegetation quality, abating threats to biodiversity (weed removal and feral animal control) as well as increasing protection through regulation and working in partnership with business and community to deliver education and empower our citizens to protect their local environment.



Parramatta Biodiversity Strategy 2015 – 2025

To learn more about Parramatta City Council
or '*Life in Our City*'

Go to www.parracity.nsw.gov.au/biodiversity
or contact us 9806 5050

