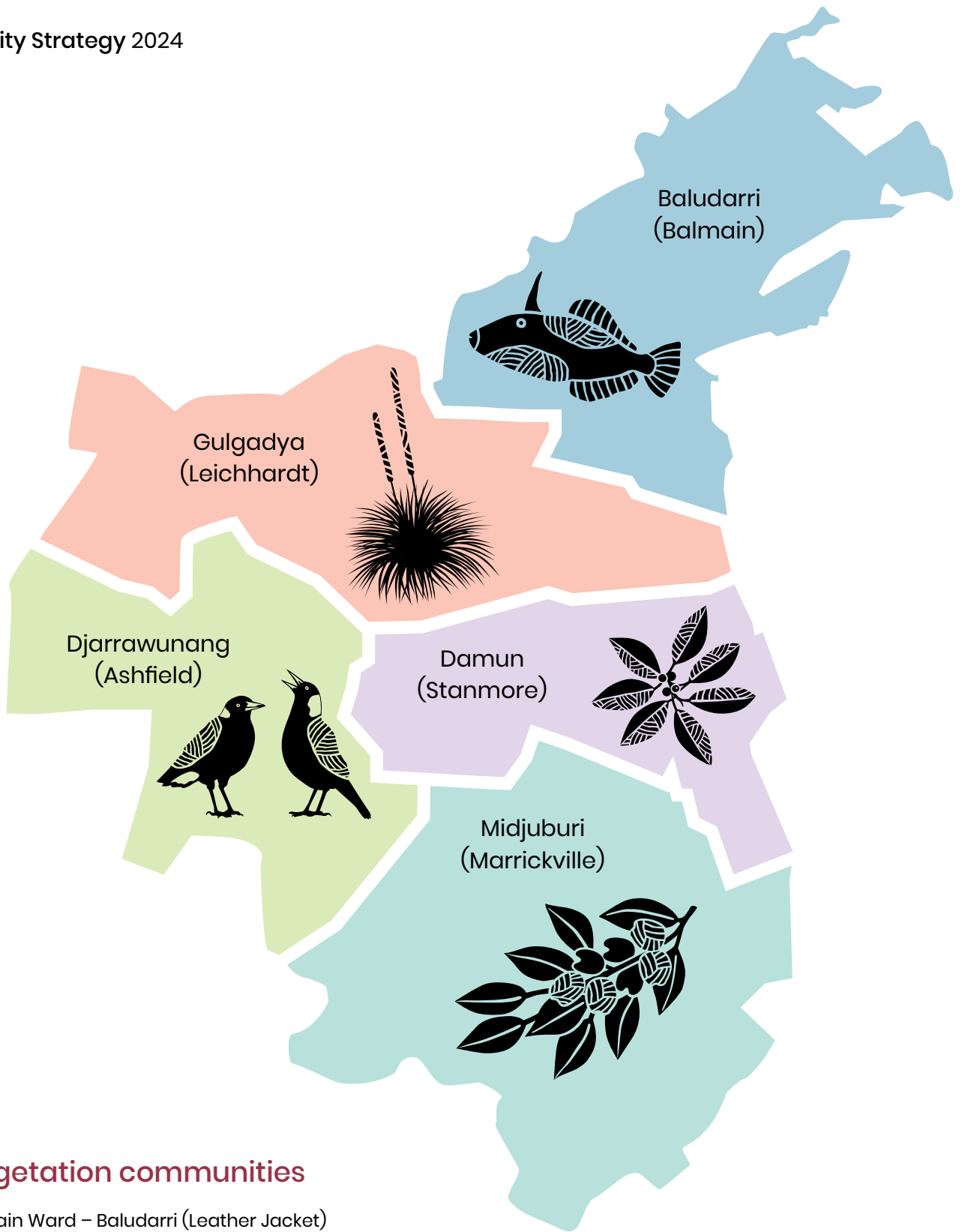


INNER WEST

Biodiversity Strategy 2036







LGA vegetation communities

-  Balmain Ward – Baludarri (Leather Jacket)
Coastal Sandstone Foreshores Forest/Mangrove Estuarine Forests
-  Leichhardt Ward – Gulgadya (Grass Tree)
Sandstone Slopes Forest and Woodland
-  Ashfield Ward – Djarrawunang (Magpie)
Sydney Turpentine Ironbark Forest
-  Stanmore Ward – Damun (Port Jackson Fig)
Sydney Turpentine Ironbark Forest
-  Marrickville Ward – Midjuburi (Lillypilly)
Coastal Sandstone Foreshores Forest/Estuarine Swamp Oak Forest

Aboriginal and Torres Strait Islander Recognition Statement

Council acknowledges the Gadigal and Wangal clans of the Eora Nation, who are the traditional custodians of the lands in which the Inner West is situated. We celebrate the survival of Aboriginal and Torres Strait Islander cultures, heritage, beliefs and their relationship with the land and water. We acknowledge the continuing importance of this relationship to Aboriginal and Torres Strait Islander peoples living today, despite the devastating impacts of European invasion.

We pay our respects to their Elders – past and present.

We express our sorrow for past injustices and support the rights of Aboriginal and Torres Strait Islanders to self-determination. Council understands our responsibilities and role in working with the Aboriginal community to promote cultural heritage and history, address areas of disadvantage, and protect and preserve the environment as well as sites of significance to Aboriginal peoples. In doing so, we acknowledge that Aboriginal cultures continue to strengthen and enrich our community.

Today, diverse groups of Aboriginal and Torres Strait Islander peoples

live and work across Inner West. We admire the resilience displayed in their significant achievements and in making immense contributions to both Council and the broader community. Council is committed to embedding the values and perspectives of the Aboriginal and Torres Strait Islander communities to ensure we learn from the mistakes of our past and forge a positive future of long-lasting value built on mutual respect, equality and opportunity.

We acknowledge their evolving, living cultures and dynamic relationships with Country. We recognise that Country has been cared for by First Nations peoples for millennia. We also pay our respects to the cultural knowledge-holders who have guided us in the development of this project.



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Australian pelican
(*Pelecanus conspicillatus*)



52 

Natural Area sites

5 

Reconstructed wetlands

24 

hectares of land managed for ecological outcomes

128 

in-person nursery events

5 

threatened species

119 

bushcare events

2 

native plant community nurseries

21.3 

tonnes of weeds removed from Natural Areas

13,355 

plants propagated

3 

citizen science groups

10 

Urban Ecology staff

1,708 

Bushcare volunteer hours

7 

Aboriginal and Torres Strait Islander partnerships

200+ 

endemic plant species grown

100 

new verge gardens and 3 Adopt-a-spots

3 

reconstructed saltmarsh systems

Figure 1.
Inner West Biodiversity snapshot 2023-24

Silver Princess
(*Yoyetta celis*)



Our approach to improving Biodiversity

The establishment of the Inner West Draft Biodiversity Strategy 2036 provides the Inner West Community with an achievable plan to improve indigenous biodiversity within our local government area, capitalising and building partnerships with the community and identifying new opportunities for the delivery of programs which enhance our stewardship and care for the environment.

This plan has been written by a Technical Advisory Group comprised of staff from teams across Council which are involved in the development and delivery of programs to manage and enhance biodiversity.

Importantly this plan has also been developed in consultation with the community and the community volunteers which support Council's ongoing efforts to improve and care for the environment.

Urban development, while providing for population needs, is leading to the dramatic loss of urban biodiversity in NSW. Land clearing, habitat fragmentation, invasive species, and changes to microclimate, lighting, and hydrology are some of the major development pressures leading to a decline in urban wildlife diversity and abundance. The Inner West area also faces a series of complex planning challenges, including future predicted changes in population growth that will increase pressure on our existing biodiversity and blue-green infrastructure.

This plan recognises the very real challenges which are associated with urban growth and the significant impacts that such growth has on land use and in the Inner West.

The Biodiversity Strategy, once adopted, will provide a key tool for Council in ensuring that the values of biodiversity are carefully considered in future decision making and that habitat protection is at the forefront of Council's planning and strategic planning framework.

This plan has been developed strategically in two parts – firstly a Biodiversity Strategy which establishes the importance of the Inner West's biodiversity and provides the context for Council's strategic approach to protecting and enhancing biodiversity. Secondly, Part 2 of the Strategy, the Draft Actions framework, sets out

ambitious and measurable actions to achieve our strategic priorities. Upon formal Council adoption, the strategy will be reviewed internally on a yearly basis, with key actions and implementation plans assessed to determine targets.

Council's Biodiversity Strategy 2036 assesses the current state of the local environment and strengthens our resolve to create an ecologically sustainable Inner West as a top priority of the community. Valuing traditional knowledge, and learning from the past, to ensure the Inner West continues to be a great place to live, work, and play for many generations to come is central to this strategy.



Eastern Dwarf Tree Frog
(*Litoria fallax*)

1 Introduction

Biodiversity is short for biological diversity. It describes the variety of living organisms and is commonly measured at the genetic, species, and ecosystem levels. The variety of life forms in the Inner West includes all our plants, animals and micro-organisms, the genetic information they contain, and the different ecosystems they form with the non-living components of our landscape.

Urban areas, like the Inner West, are highly developed landscapes that are best known for their dense populations and human land uses. Although they can look like 'concrete jungles', cities are increasingly described as 'urban ecosystems' (Figure 2) that have an essential role in the conservation of biodiversity.

Figure 2. Definition of Key Terms

Urban ecosystem

An ecological community where the living components of an urban area (plants, animals, organisms) interact with each other and the non-living components of their environment (soil, water, weather).

Blue-green infrastructure

The network of blue and green spaces in a city. This includes parks, cemeteries, gardens, community gardens, urban forests, street trees, green roofs, wetlands, streams, rivers, lakes, and ponds.

Country

A term indigenous people use to describe the lands with which they have traditional attachment or relationship. Country is not simply land. It has been called a "nourishing terrain" that gives and receives life. Country is central to indigenous identity, spirituality, community, and culture.

Natural Areas

Land or natural feature that is managed for the core outcomes of biodiversity conservation, critical habitat restoration and regeneration of ecosystem function. Provides community use of land in a manner that will minimise and mitigate any disturbance caused by human intrusion.

Cues to Care

Landscape cues in urban areas that indicate human presence and intention in an ecological space. For example, sandstone rocks surrounding a Natural Area.

Aboriginal Ecological Knowledge (A.E.K.)

The evolving knowledge acquired by indigenous and local peoples over hundreds or thousands of years through direct contact with the environment. This knowledge includes the relationships between plants, animals, natural phenomena, landscapes and weather patterns.

1.2. Biodiversity in Urban Areas

The conservation of biodiversity in urban areas is essential for sustaining ecosystem health and safeguarding the future of Australia's unique native species.

Cities are often found in 'biodiversity hotspots' and more than 30% of Australia's nationally threatened species live in our urban or regional centres. The Inner West is part of a biodiversity hotspot called the Forests of Eastern Australia. There are 15 threatened fauna species or populations that call the Inner West home (see pages 44-45 in Section 5).

In urban areas, biodiversity depends on the quantity and quality of habitat provided by blue-green infrastructure (Figure 2).

The Inner West's waterway corridors, for example, provide roosting and foraging habitat for threatened species like the Powerful Owl and Grey-headed Flying Fox. Even small-scale, urban greening initiatives that add native shrubs and groundcovers can have substantial biodiversity benefits.

Urban development is leading to the dramatic loss of urban biodiversity in NSW. Land clearing, habitat fragmentation, invasive species, and changes to microclimate, lighting, and hydrology are some of the major development pressures leading to a decline in urban wildlife diversity and abundance.

To protect biodiversity, urban authorities need to conserve existing habitat and develop measures to reduce the ecological impact of new development.

1.3 Biodiversity and the Community Strategic Plan

Protecting and enhancing biodiversity in the Inner West will support the implementation of Council's Community Strategic Plan (CSP), Our Inner West 2036. The Biodiversity Strategy is most closely aligned with Strategic Direction 1. An Ecologically Sustainable Inner West.



Outcomes and actions from Inner West Council's Community Strategic Plan Strategic direction 1 – An ecologically sustainable Inner West

Strategies in the CSP that promote the conservation of biodiversity include:

- Providing the community with knowledge and tools for sustainability
- Increasing the Inner West's urban tree canopy
- Improving the Inner West's mid-storey and understorey vegetation
- Protecting, connecting, and enhancing Natural Areas and biodiversity corridors
- Implementing water-sensitive policies and projects to improve waterway health

The Biodiversity Strategy will support the CSP by providing a holistic framework for protecting biodiversity and enhancing ecosystem health across the Inner West.

While the Inner West is home to a range of native species and Natural Areas, our green cover is in decline and biodiversity is vulnerable to a range of threatening processes. The Inner West also faces a series of complex planning challenges that will increase pressure on our existing biodiversity and blue-green infrastructure.

1.4 Actions

Action is needed to enhance the health of our local environment so Council can continue delivering high-quality services that are valued by the community.

Council is committed to working with the community to develop innovative and collaborative responses that acknowledge and protect the contribution biodiversity makes to the health, liveability, and sustainability of the Inner West. The actions proposed in this strategy can help unite the community in the stewardship of our local environment

and develop deeper connections to the Country of the Gadigal and Wangal that sustains us (Figure 2).

The vision for the Biodiversity Strategy 2036 is to protect, repair, and Care for Country to secure a future where people and nature thrive together.

To develop this vision, the strategy has proposed 7 goals and 12 priorities under the themes of Increase Biodiversity, Unite Community, and Lead by Example (Figure 3). Each theme has a set of supporting

actions that provide direction for improving the planning and management of biodiversity in the Inner West (See page 50 in Section 6).

New Holland Honeyeater
(*Phylidonyris novaehollandiae*)



' Protect, repair, and Care for
Country to secure a future
where people and nature
thrive together. '



Forest Day-moth
(*Cruria synopla*)

Theme 1: Increase Biodiversity

Goals

1

Increase terrestrial biodiversity throughout the Inner West Council area

2

Increase marine, freshwater, and riparian biodiversity throughout the Inner West

3

Establish baselines and bridge knowledge gaps

Priorities

1. Enhance the protection of biodiversity by improving the quantity and quality of habitat for local fauna and flora

2. Improve quality of waters flowing through Inner West

3. Expand, enhance, and protect natural riparian habitat

4. Enhance the monitoring of local species, ecosystem health, and evaluation of biodiversity management actions

5. Develop better understanding of current state of environment and knowledge gaps

Theme 2: Unite Community

Goals

1

Increase opportunities for people to connect with, and care for, biodiversity in the Inner West

2

Strengthen the representation and integration of Aboriginal ecological knowledge in the protection of biodiversity

Priorities

1. Citizen science and community stewardship

2. Education, transparency, and promotion of biodiversity achievements

3. Care for Country

Figure 3.
Overview of Action Plan

Theme 3: Lead by Example

Goals

1

Council is a leader in supporting urban biodiversity

2

Strengthen partnerships to improve biodiversity outcomes

Priorities

1. Embed ecological principles as a core responsibility of Council
2. Redefine good decision making with an orientation around strategic risk management
3. Establish cooperative processes for biodiversity within Council
4. Establish connections with external agencies and pool resources



Tawny Frogmouth
(*Podargus strigoides*)

2 The Value of Biodiversity

Biodiversity has intrinsic value and a right to exist on its own terms.

However, biodiversity is also vital to human wellbeing and the continuing prosperity of our societies.

Biodiversity supports the stability of ecosystems and enhances their ability to adapt to environmental change. It is a cornerstone of ecosystem health and provides a range of services that are critical to the development of healthy, liveable, and sustainable cities.

This section describes how enhancing biodiversity can deliver value to Inner West Council and the local community it serves.

2.1 Biodiversity and Ecosystem Services

Ecosystem services are defined as the benefits obtained from the healthy functioning of ecosystems (Figure 4). This simple definition, however, understates their true value. Human survival depends on provisioning and supporting services like photosynthesis, pollination, and the supply of fresh water. Regulating services manage environmental quality and ensure we have healthy, comfortable places to live.

Biodiversity plays a crucial role in delivering the urban ecosystem services that sustain the health and liveability of the Inner West. Our soils, plants, and micro-organisms moderate the microclimate, remove air pollution, absorb harmful wastes, and improve water quality. Our waterways and green spaces directly support community wellbeing by providing space for recreation, improving cognitive function, beautifying the landscape and contributing to social connectedness.

Importantly, Natural Areas can deliver greater physical and mental health benefits than conventional green open space.

Natural Areas provide better access to environments that increase people's ability to restore their mental health, expand their physical activity, and create a sense of belonging. Vegetation complexity, and greater species diversity,

fosters higher levels of relaxation and self-reflection.

The contribution ecosystem services make to health, liveability, and sustainability means the economic value of urban biodiversity is substantial. The concept can also aid responsible urban planning by allowing the full costs and benefits of government programs and planned development to be anticipated.

The Australian Capital Territory (ACT) government calculated the financial costs and benefits of increasing its tree canopy cover from 21% to 30%. The financial value of 7 ecosystem services was estimated, with each hectare of urban tree canopy in the ACT providing the community with \$7,671 in benefits. This meant every dollar spent on increasing the ACT's tree canopy would generate \$1.15–\$1.25 in benefits.

The value of ecosystem services means that biodiversity, in the very real sense, is a community asset that generates returns on investment. The conservation of biodiversity is a fiscally responsible investment in the health, liveability, and sustainability of the Inner West.

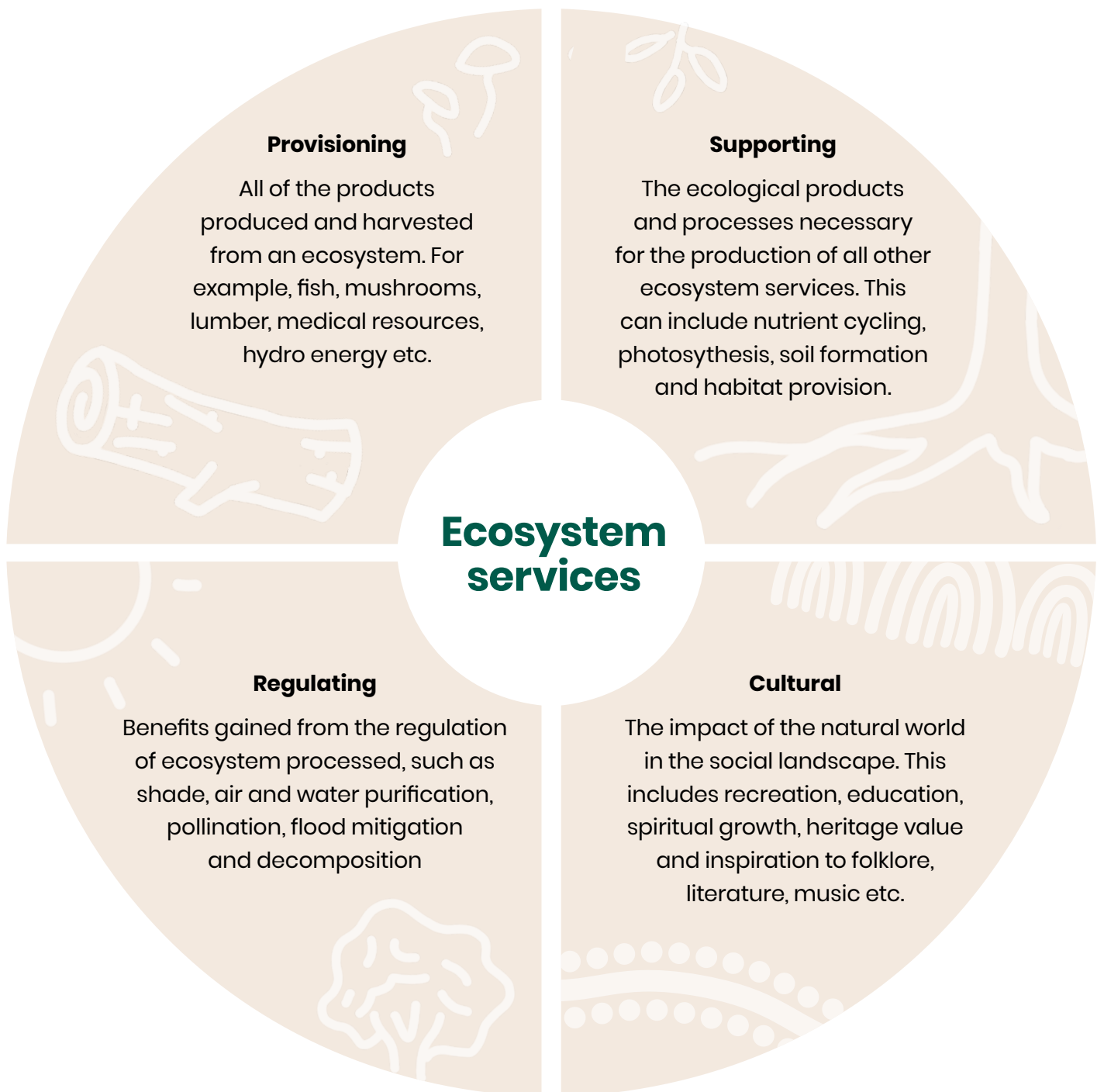


Figure 4.
Definition and Description of
(Urban) Ecosystem Services

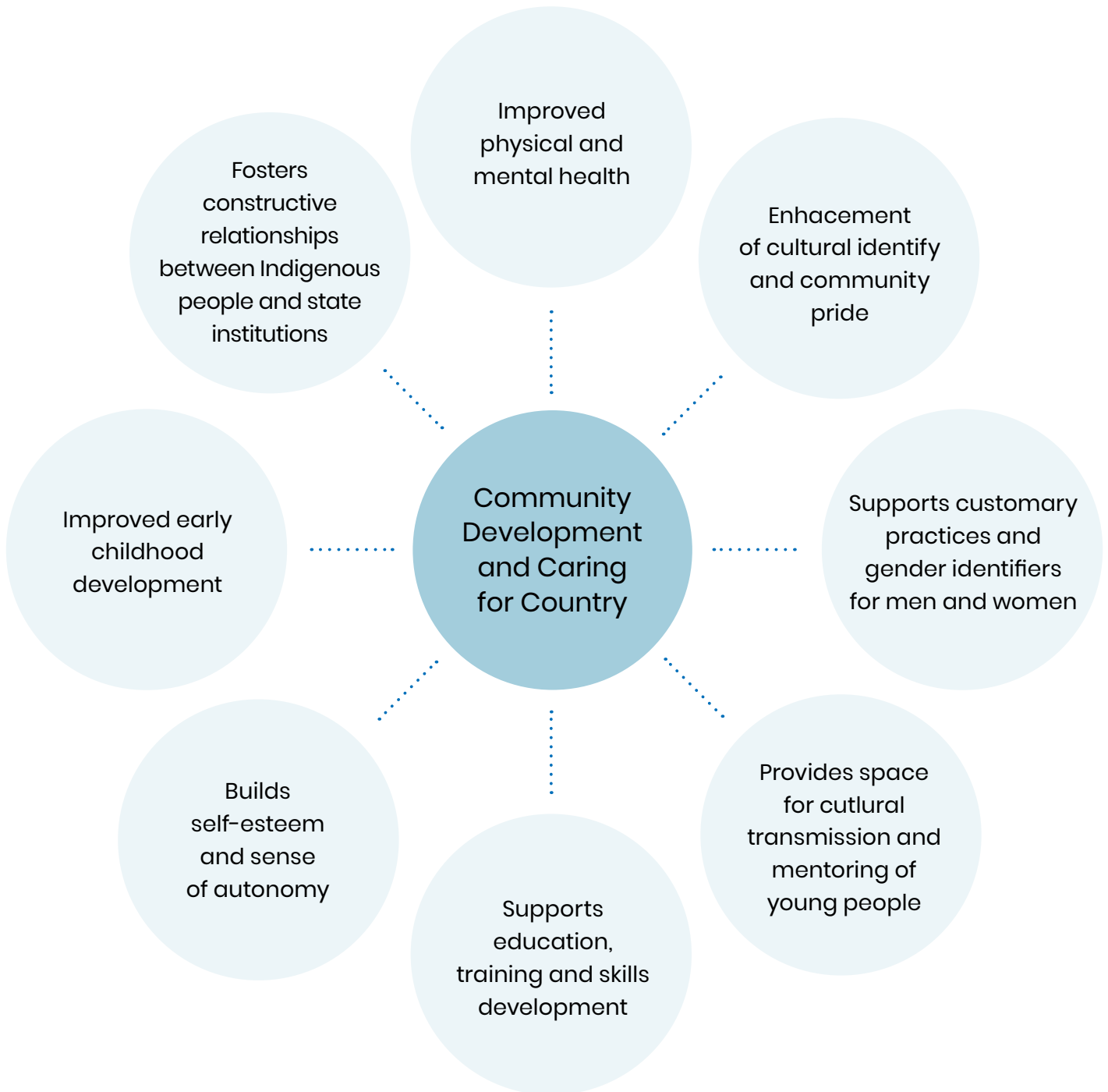


Figure 5.
Aboriginal Community
Development and Caring for
Country

2.2 Biodiversity and Reconciliation

The Inner West Reconciliation Action Plan acknowledges the link between reconciliation and community development for Aboriginal and Torres Strait Islander peoples. It includes the call to promote inclusive decision-making and nurture connection to Country through placemaking and cultural practices.

The conservation of biodiversity in the Inner West can contribute to the reconciliation process by supporting Caring for Country, and the practical delivery of community outcomes through enhanced biodiversity actions which support this concept.

Caring for Country is an approach to land and sea management that is based on the ancestral laws and customs of Aboriginal and Torres Strait Islander peoples. Caring for Country is intricately linked to indigenous cultural life, identity, autonomy, and health. It creates a range of benefits that support community development for Aboriginal and Torres Strait Islander peoples (Figure 5).

Conserving biodiversity is linked to Caring for Country as it typically involves protecting sacred areas and cultural heritage, enhancing species diversity and animal welfare, and restoring the health of waterways and terrestrial ecosystems.

Importantly, Caring for Country requires that Aboriginal and Torres Strait Islander peoples can access, use and relate to Country. This can be supported by developing more opportunities for immersive cultural practices such as walking Country, cool burning, gathering resources, and teaching and performing ceremony.

By better integrating Caring for Country, with the protection of biodiversity, Council will have additional avenues to implement its vision for reconciliation. Nurturing connections to Country can support community development for Aboriginal and Torres Strait Islander peoples and unite the broader Inner West community in the stewardship of our local environment.

Theme 1: Increase biodiversity Actions

Investigate opportunities to expand on existing wetlands, remediate degraded wetlands and build new wetlands across the LGA (1.2.2.3)

Theme 2: Unite community Actions

Investigate opportunity for equal partnerships including partnering the Native Community Nursery with Indigenous providers and educators (2.2.1.1)

Partner with Aboriginal and Torres Strait Islander peoples to integrate appropriate methods of Caring for Country principles in Urban Ecology programs and projects, such as reintroduction of fire protocols into the landscape (2.2.1.2)

Co-design programs in collaboration with Aboriginal and Torres Strait Islander peoples to support engagement and participation in decision making (2.2.1.3)

Theme 3: Lead by example Actions

Facilitate truth telling and embed Caring for Country principles (3.1.2.2)

Understanding of Biodiversity and the Value of Biodiversity

- 69%** of IW residents can correctly define biodiversity
- 98%** of IW residents agreed that biodiversity is essential to the production of clean air and water
- 88%** of IW residents agreed that biodiversity is important for their personal recreation, relaxation, and spiritual renewal

Environmental Regulation

- 91%** of IW residents agreed that environmental regulation should aim to improve, rather than merely maintain, the health of the environment.
- 49%** of IW residents believed environmental regulation of property development and construction is too relaxed.
- 62%** of IW residents believed environmental regulation is not restricting the growth of the NSW economy.

Concern with Biodiversity Loss and Environmental Problems

- 93%** of IW residents were concerned about extinction of native species in NSW
- 79%** of IW residents were concerned that environmental problems will negatively affect their health and quality of life
- 74%** of IW residents were concerned that environmental problems will negatively affect the NSW economy

Figure 6.
Environmental Attitudes of the Inner West Community

Information sourced from NSW Office of Environment & Heritage
"Who Cares About the Environment?" Cross-tabulated survey data 2015

2.3 Community Values and Priorities

The vision of the Community Strategic Plan describes an Inner West that has a vibrant, caring and progressive community where people live in harmony with nature. This vision of harmony reflects the distinctive environmental values of the Inner West community (Figure 6).

Inner West residents have a good understanding of biodiversity and place a high value on the ecosystem services nature provides. They are concerned about the decline of native species in NSW and the negative impact environmental problems will have on their quality of life. They support stronger regulations to improve environmental health, and agree we have a responsibility to protect biodiversity for future generations.

Inner West residents highly value Council services that protect the natural environment and support environmental education. The community's top two priorities for Council to focus on in the next 10 years were (1) adequate planning and management of development, and (2) environmental protection, climate change, and the provision of green open space.

Council continues to implement the community's vision for the Inner West and will develop actions that increase opportunities for people to connect with, and care for, our local biodiversity.

Theme 1: Increase biodiversity Actions

Investigate and prioritise opportunities for water sensitive urban design (WSUD) to be incorporated into Council managed land and collaborate with private landholders to increase WSUD uptake (1.2.1)

Theme 2: Unite community Actions

Increase opportunities and participation in environmental citizen science (2.1.1)

Activate Council's Sustainability Hub with Urban Ecology staff for consultation with public and hold events on site (2.1.2.1)

Investigate the development of a Biodiversity Sensitive Urban Design (BSUD) workshop to help residents create native habitat in their backyards (2.1.2.5)

Theme 3: Lead by example Actions

Investigate and pursue relevant grant opportunities which increase natural capital (3.2.2.2)



3 Urban Ecology at Inner West Council

Urban ecology is the field of research, planning and management practice that is focused on the protection of biodiversity and ecosystem services in urban areas.

Council's Parks Planning and Ecology team is responsible for protecting, enhancing, and managing biodiversity including Natural Areas, habitat, foreshores, water and soils. This team delivers both planning and operational restoration and maintenance programs. This team also develops and implements Council's ecology policies and prepares park master plans that include key biodiversity improvements and opportunities.

Council's Blue-Green Grid Strategy is a long term, aspirational plan for creating a network of multipurpose corridors across the Inner West. The strategy's vision is to create blue and green links that will improve accessibility, recreation, biodiversity, waterway health, and recognition of Aboriginal culture.

The Blue-Green Grid Strategy includes ecological objectives for providing native habitat, increasing waterway health and vegetation, and creating opportunities for people to connect with the local environment. The Blue-Green Grid Strategy also establishes 20 priority links for development in the first 10-15 years of implementation.

3.2 Natural Areas program

Council manages 24 hectares of Natural Areas, with 52 sites spread across the five wards in the Inner West.

Natural Areas are pockets of bushland, wetland, watercourses, riparian corridors, or escarpments that are managed in perpetuity. Each year the Natural Areas program aims to progress landscape resilience and measures to safeguard our biodiversity improvements and investment.

Natural Areas in the Inner West provide spaces for species recovery and natural regeneration to occur. The core objective of Natural Areas is to provide native habitat, maintain ecosystem function, and protect conservation values for Inner West residents now and into the future.

Natural Areas are revegetated using endemic plants propagated at the IWC native nurseries. The aim is to protect or re-create the indigenous plant communities that covered different land features in the Inner West prior to 1750. At Dibble Waterhole, for example, ongoing restoration and maintenance work is undertaken to restore the endangered Swamp Oak Floodplain Forest that once lined the Cooks River.

Profile of Dibble Avenue Waterhole



Dibble Waterhole is the only remaining open brick pit within the Inner West. It was once a small natural spring, and the water in Dibble has accumulated over time contributing to a wildlife refuge. In 2021, bank stabilisation and restoration works were undertaken to recreate the endangered Swamp Oak Floodplain Forest that historically lined the Cooks River. The local waterhole is now a habitat haven for terrestrial and freshwater wetland species. The waterhole also holds cultural significance for local Aboriginal people, acknowledged as a women's site and a place of healing.

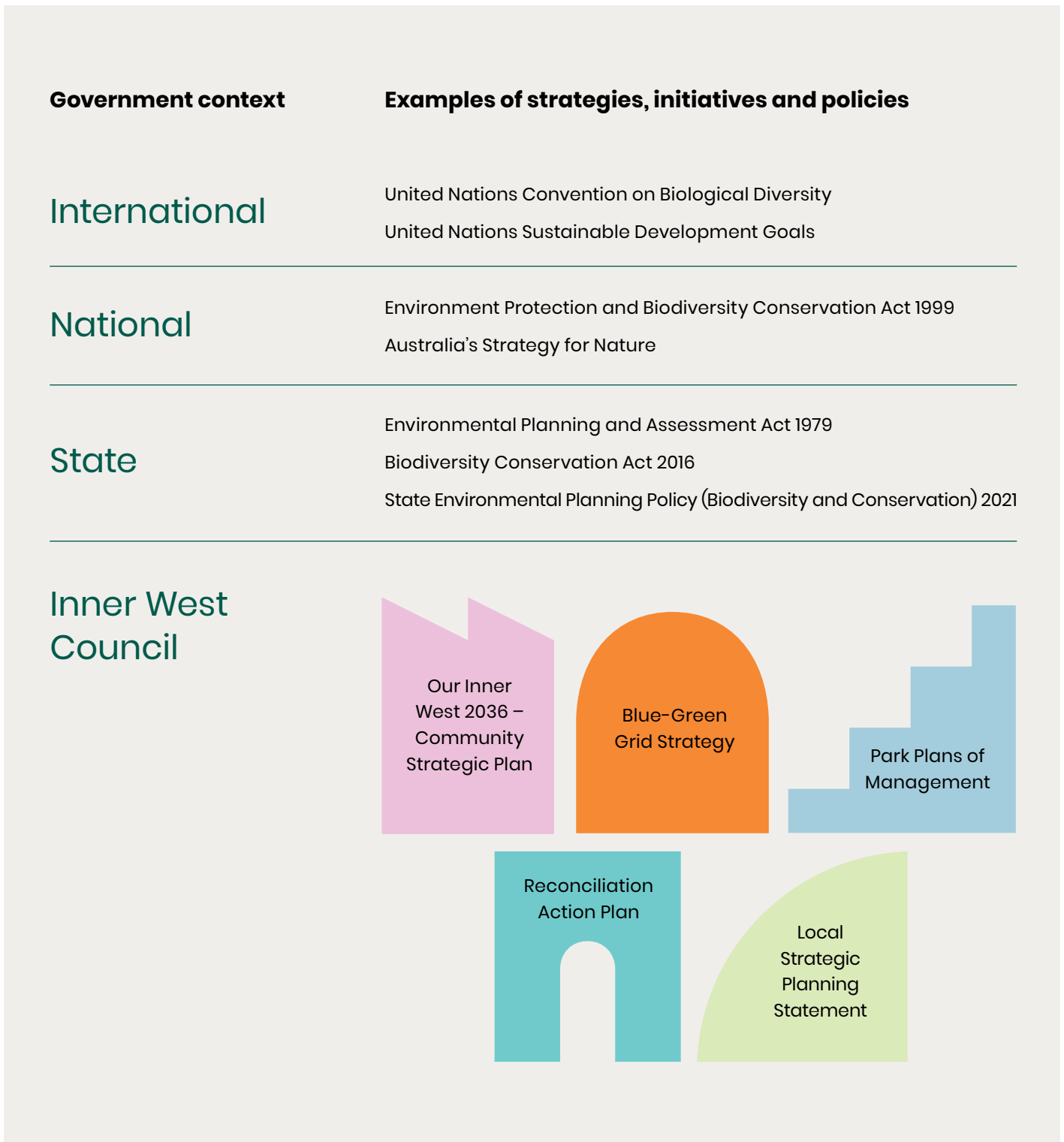


Figure 7.
 Visual Representation of
 Strategic Planning Context

3.3 Waterways and Catchment Management

To improve waterway health and functionality in the Inner West, Natural Area lands in riparian zones are managed according to best practice principles to retain water in the landscape and encourage natural biofiltration.

Council supports residents in installing rainwater harvesting systems in their homes through the Rainwater Tank Rebate program.

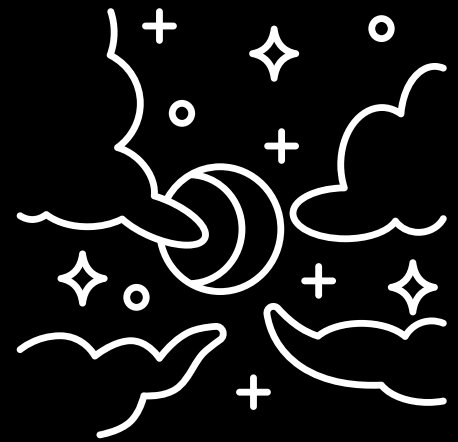
There are four major wetlands in the LGA managed by Council: Tempe Wetland, Blackmore Oval Wetland, Dibble Waterhole, and Whites Creek Wetland. Additionally, there are 3 reconstructed saltmarsh systems at Tempe Lands Reserve, Hawthorne Canal, and Steel Park.

As a member of the Cooks River Alliance and Parramatta River Catchment Group, Council works collaboratively with other councils, the state government, and external stakeholder agencies to pool resources and improve ecological outcomes for the two rivers. This includes work in advocacy, planning, education, monitoring and on-ground works.

Council works to improve catchment health through the inclusion of Water Sensitive Urban Design (WSUD) principles on Council lands, including the construction of rainwater gardens, wetlands and swales. Council is active in searching for naturalisation opportunities, to convert old channelised creeks back to natural creek lines.

The only remaining natural creek line, a small unnamed creek behind Hercules Street in Dulwich Hill, is planned as an offset site to be managed by Council. Many freshwater tributaries, such as this, once lined the natural banks before channelisation of the Cooks River began in the late 19th century.

Wave Rock is the only sandstone escarpment and natural feature meeting the water's edge at Marrickville Parklands and Golf Course. It is surrounded by a Natural Area that is collaboratively managed with Bushcare volunteers. Downstream lies Fatima Island, the only island remaining in the Cooks River, viewable from Kendrick Park.



The Inner West's dark sky zone

Dark skies initiatives have been implemented around the world to reduce light pollution. Dark skies are known to improve sleep patterns of nearby people, reduce energy usage, and preserves wildlife's natural habitats and behavioural patterns. Here, in the Inner West, our local dark sky zone is situated around Tempe Lands Reserve.

3.4 Living Streets Program

The Living Streets Program was initiated by community members that want to improve ecological outcomes in their local streets and neighbourhoods. The program supports appropriate, community-led care of Council-owned land so it can work harder to contribute to the ecological health and liveability of the Inner West.

The Living Streets Program consists of the Verge Garden and Adopt-a-Spot programs.

The Verge Garden program allows for individual residents to plant and maintain a garden on the Council-owned verge next to their property. The Adopt-a-Spot program is for

groups to care for a nominated area of Council-owned land that is not a verge or community garden. Adopt-a-Spot activities might include gardening, habitat creation, wildlife watching and citizen science projects.

3.5 Community Native Plant Nurseries

Council has two Community Native Nurseries, located in Marrickville and Annandale. The primary purpose of the nurseries is to provide local indigenous plants for Council projects such as the GreenWay, Natural Area and Bushcare sites. The nurseries are also open to the public and plants are available for sale.

The nursery staff, supported by community volunteers, collect and

process seed from locally native plant species, under Scientific license, for propagation in the nurseries. In this way, seed conservation is targeted at species most at risk in the wild and helps protect vulnerable or threatened species from extinction.

The nurseries supply plants for Natural Area restoration in the Inner West and neighbouring local government areas. They also provide free plants for the Living Streets Program, and to local schools for Schools Tree Day.

The nurseries currently have over 200 species on their plant list. These species are indigenous to the Inner West, and their seeds are generally sourced from remnant vegetation of the Sydney Basin to maintain genetic diversity and ensure they are adapted to local conditions.

In 2023, the nurseries sold or supplied 7,939 plants. These plants help green our streets, restore our waterways, and provide habitat for native wildlife in parks and Natural Areas.

Profile of The Steel Park saltmarsh



The Steel Park saltmarsh, reconstructed in 2010, represents a significant effort to restore lost wetland ecosystems in the Inner West. This saltmarsh consists mainly of low-growing forbs and occasional shrubs, with *Sarcocornia quinqueflora* and *Sporobolus virginicus* being the dominant species. Positioned in the high tide zone, the saltmarsh is capable of withstanding periodic inundation and elevated salinity levels.

The saltmarsh provides essential habitat for fish, crustaceans, and migratory shorebirds. It also enhances water quality by filtering nutrients and sediments, reduces erosion, and protects the foreshore from flooding and storm events.

Theme 1: Increase biodiversity Actions

Identify current Dark Sky Zones, investigate potential establishment of new zones, and implement wildlife friendly lighting standards around Natural Areas (1.1.4)

Theme 2: Unite community Actions

Provide volunteering opportunities through Adopt-a-Spot and Verge Garden, Native Community Nurseries and Bushcare programs (2.1.3)

Conduct Natural Area tours (2.1.2.3)

Establish a new Native Community Nursery in the Southern LGA and increase nursery capacity (2.1.1.5)

3.6 Bushcare

Council manages local biodiversity in partnership with community volunteers who provide regular Bushcare of Natural Areas across the Inner West.

Community Bushcare groups restore, maintain, and monitor areas of native habitat. At some sites, such as Camperdown Cemetery, volunteers protect rare examples of remnant indigenous bushland in the Inner West (Figure 10). There are currently 8 Community Bushcare groups in the Inner West working at 14 sites.

Bushcare volunteers make an invaluable contribution to the Inner West community and the health of the local environment. In 2023-24, 119 bushcare events were held, with 700 volunteer attendances. This provided 1,708 hours of bushland restoration and maintenance work on sensitive ecological projects.



Passionate Bushcare volunteers working to restore native bushland

Profile of Camperdown Cemetery Community Bushcare Group



Camperdown Cemetery is home to one of the last remaining remnant patches of the critically endangered Sydney Turpentine-Ironbark Forest (STIF) ecological community. A unique and diverse assemblage of the STIF understory species remain intact and undisturbed by urban sprawl. It has been managed by the Friends of Camperdown Cemetery Bushcare group since the early 2000s.

3.7 Citizen Science

Citizen Science groups regularly meet to monitor species diversity and population trends in the Inner West. There are two birdwatching groups—Tempe Birdos and GreenWay Birdos—that conduct monthly surveys and provide publicly accessible data and resources about local bird species (Figure 11).

The Inner West Microbat Monitors is another group that periodically meets to survey microbat populations. Inner West residents also participate in annual citizen science surveys such as Frog ID and the Aussie Bird Count.

These citizen science projects and events help to provide key biodiversity data for Council's

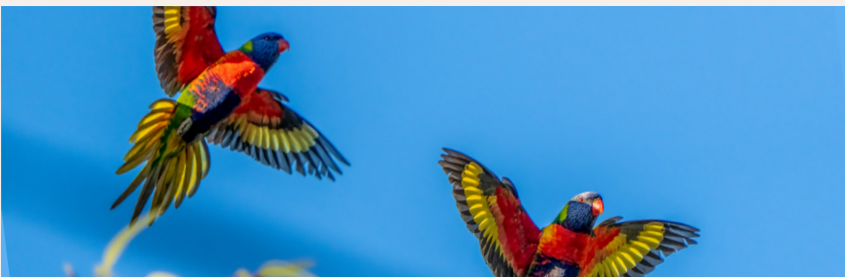
ecology service. They also provide community education and engagement opportunities for children and adults alike.

3.8 Grants and Education

The Inner West Environment Grants program supports community projects that contribute to ecological sustainability in the Inner West. The grants provide up to \$10,000 for projects that address biodiversity, healthy waterways, water sensitive urban design and other environmental issues. Recently funded grant projects have supported the rescue and rehabilitation of injured fauna, the construction of native gardens and habitat, and the creation of outdoor play and learning spaces to support education about urban ecology.

Inner West Council provides educational resources for residents to improve ecological outcomes on their property. The 'Water Sensitive Design on Your Property' workshop introduces the principles of Water Sensitive Urban Design (WSUD) and instructs participants in how to build a water sensitive feature on their property. The Nature for Backyards guide provides advice for planning and maintaining native gardens that provide habitat for local wildlife.

Profile of Citizen Science Group — GreenWay Birdos



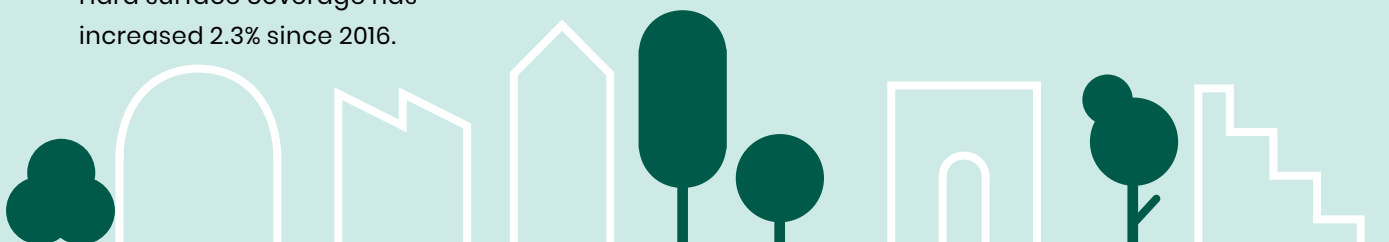
GreenWay Birdos is a citizen science community group that formed in 2016. The group meets fortnightly, along the GreenWay, to conduct surveys of birds in the local area and Bushcare sites. Their survey data is made publicly accessible in the Atlas of Living Australia and is used to help protect biodiversity in the Inner West. In 2021 the group developed a community resource, "A Photo Guide to the Birds of the GreenWay". The group has completed over 180 surveys at 10 different sites in the LGA and regularly record over 30 species each survey.



Inner West Council workers delivering trees

Green Cover in the Inner West *

- The Inner West ranks 16/29 for green cover in LGAs that are urban, compact, with high-average rainfall.
- Hard surfaces (e.g. roads, roofs, and pavement) in the Inner West = 65.7%.
- Hard surface coverage has increased 2.3% since 2016.
- Green space in the Inner West = 34.3%.
- Most of the green space consists of tree canopy (19.3%) and grass cover (12.1%). Shrub cover is very low at 2.9%.
- Green space coverage has declined 2.4% since 2016.
- The Inner West has a very high challenge rating for maintaining and growing future green cover.



*Information sourced from RMIT Centre for Urban Research. *Where will all the trees be? - an assessment of urban forest cover and management for Australian cities*



Aerial Shot of Haberfield demonstrating the contribution of backyard Biodiversity.

4 Biodiversity Planning Challenges and Opportunities

4.1 Population Growth and Service Demands

The Inner West LGA will have significant population growth in the next 10–15 years. By 2036, the resident population is projected to grow by around 20%.

Maintaining ecosystem health and liveability, while servicing the needs of a growing population, is a critical planning challenge for Inner West Council.

Population growth directly threatens biodiversity as urban development reduces the quantity and quality of existing habitat, and the land available for new habitat. New infrastructure typically leads to vegetation removal, habitat fragmentation, and increased pollution of Natural Areas and waterways.

Population growth also increases demand for the active and passive recreation opportunities provided by blue-green infrastructure. If demand outstrips supply, this can lead to over or misuse of the local environment, increasing the risk that Natural Areas and native species are directly harmed or degraded.

Tree and shrub cover is declining in the Inner West (Figure 12), and there is a clear shortfall in the provision of green open space. In 2019, the Inner West LGA had the second lowest amount of per capita green space in Greater Sydney. To keep up with population growth, and maintain the current standard, Council will need to add substantially to the existing

stock of green space by 2036.

Further decreases in the quantity and quality of blue-green infrastructure will negatively affect biodiversity and the health and wellbeing of Inner West residents. To address this challenge, Council needs to work with our community to protect green cover on private land and maximise the contribution public land makes to enhancing biodiversity.

4.2 Urban Consolidation and Densification

Dwelling targets set by the NSW Government to accommodate population growth require an increase in medium and high density development in the Inner West.

Protecting biodiversity, while increasing density, is a critical planning challenge that will affect the community's access to nature and the ecosystem services it provides.

Higher density, in-fill development typically reduces the quantity and quality of habitat provided on private land. The loss of green cover can negatively affect liveability by reducing the supply of ecosystem services. It can also increase demand on waterways and Natural Areas as new residents seek a missing connection to nature.

To address the challenge of urban densification, Council will need to reduce the decline of green cover on private land. A combination of 'land sparing' and 'land sharing' techniques can be used to promote

development that is green and dense. New works on public land will also need to provide habitat for local species and create more opportunity for the community to connect with nature.

Theme 1: Increase biodiversity Actions

Recognise the Gadigal Bat Roost as a key threatened species habitat site and ensure ongoing protection and monitoring (1.1.15)

Identify key threatening processes to local biodiversity, mitigation strategies and natural recovery processes (1.3.1.3)

Theme 2: Unite community Actions

Install 'cues to care' in appropriate Natural Areas to better inform and engage the community in the protection of valuable habitat zones, such as the Gadigal Bat Roost (2.1.2.4)

Theme 3: Lead by example Actions

Review existing policies, strategies, and Plans of Management (PoM) to ensure biodiversity outcomes are prioritised and identify on ground actions that have not yet been realised (3.1.1.2)

Investigate suitable planning controls, policies, projects, targets, or incentives to:

- Reduce decline of habitat on private land
- Protect and increase mid/low-storey vegetation cover
- Establish a "Greenweb" program to identify existing vegetation links.
- Improve management of transition zones between Natural Areas and parks/streetscape
- Advise on the financial value of blue-green infrastructure (3.2.1.1)



Land Sharing and Land Sparing Strategies to Achieve Green and Dense Urban Areas

Land Sparing: balancing the ratio of built area to blue-green space in urban areas

- Preserve remnant patches
- Maintain riparian corridors
- Create managed parks
- Build home gardens and backyards
- Create stormwater green infrastructure

Land Sharing: integrating green-blue space into the built area.

- Greening vacant lands
- Install green roofs and facades
- Increase perimeter vegetation
- Increase vegetation along streets and right of way.

4.3 Climate Change

Climate change will transform environmental conditions in the Inner West and increase the frequency and intensity of extreme weather events. Without adequate planning, the predicted impacts will harm local biodiversity, erode ecosystem services, and reduce Council's ability to provide and maintain green open space. This would reduce liveability and increase the vulnerability of community health and wellbeing.

Increasing the resilience of biodiversity is a critical planning challenge for the Inner West that will affect our ability to mitigate and adapt to climate change.

Climate change is a major driver of biodiversity loss in cities and may seriously disrupt the Inner West's blue-green infrastructure. The Inner West has 73 parks in foreshore, creek, and river corridors that may be damaged by rising sea levels and extreme flood events. Climate change is predicted to negatively affect the health of 96% of Sydney's tree species, threatening the sustainability of the Inner West's Natural Areas.

Although climate change is a major threat to biodiversity, biodiversity can also be planned and managed to enhance the Inner West's resilience to climate change. Protecting and enhancing biodiversity presents opportunities for Council to expand its inventory of climate actions and develop biodiversity as a mitigation and adaptation solution.

Theme 1: Increase biodiversity Actions

Review local impacts of climate change on biodiversity and natural assets to identify knowledge gaps and mitigation methods (1.3.2.2)

Theme 3: Lead by example Actions

Establish best practice principles for decision making to address impact and dependency on nature (3.1.2.1)

4.4 Land Management for Biodiversity

Population growth and densification strengthen the need to enhance the quantity and quality of habitat on Council-owned land. Multi-purpose management of recreational land is an established trend in open space planning. However, steps must be taken to ensure managing land for biodiversity, and ongoing community uses, is complimentary.

Designing multi-functional green spaces, where increasing habitat is compatibly managed with other land uses, is an important role of Council.

The design and management of urban green space greatly affects its capacity to support biodiversity and provide ecosystem services. Because blue-green infrastructure provides a wide range of functions, it is often subject to competing objectives and management practices that can limit biodiversity outcomes.

Quality native habitat can appear messy and unmanaged compared to manicured landscapes in public

parks or private gardens. This can lead people to think they are uncared for, creating demands to 'clean up' Natural Areas in ways that negatively affect their biodiversity values.

Conventional landscape maintenance can also harm biodiversity if it is not effectively managed. Turfgrass maintenance, pesticide application, and removing leaf litter and woody debris are common horticultural practices that can harm local fauna and reduce the ability of green spaces to support biodiversity. Council can enhance the multi-purpose management of green open space with design, maintenance and community education actions. Providing more "cues to care" in sensitive areas, for example, can reduce maintenance conflicts and show the community that native habitat in the Inner West is valuable and actively cared for.

Theme 1: Increase biodiversity Actions

Utilise Council's Community Native Nurseries to provide locally native plants to a mid-storey and ground cover planting program to improve habitat quality on suitable Council-owned land (1.1.1.3)

Plan for the loss and adaptation of identified Natural Areas to sea level rise scenarios (1.2.2.4)

Theme 2: Unite community Actions

Work in partnership with citizen science, environmental and Bushcare groups on the collection and integration of data with proposed Council managed databases (2.1.1.2)

Theme 3: Lead by example Actions

Develop and deliver Biodiversity Training for Council staff (3.1.2.3)

Include Natural Areas and Waterways in open space and recreation needs analyses (3.1.2.4)



Aboriginal Culture in the fabric of our society

The Inner West is located on the unceded lands of the Gadigal and Wangal clans of the Eora nation. Gadi (gal) territory centres around Sydney Harbour, the Eastern Suburbs, South to the River's mouth and west up to Petersham area. Wan (gal) territory includes the Balmain Peninsula and extends west between Burramattagal (Parramatta River) and the Cooks River.

Prior to colonisation, fishing was a central part of Gadigal and Wangal life on the rivers, with the Wangal practicing aquaculture and agriculture upstream of the Inner West. Our creeks and saltmarsh were a rich source of shellfish and waterbirds. The Floodplain and Turpentine-Ironbark Forests in the Inner West contained extensive hunting grounds and supplied raw materials for medicine, storage, shelter and canoe building.

The Gadigal and Wangal managed Country in a systematic and regenerative manner. This was informed by a thorough understanding of local species and their interaction with water flows, seasons and weather patterns represented in the D'harawal Calendar. Fire is an important ceremonial and land management tool employed to manipulate plants and create new ecosystems for cultivation purposes. Cultural burns use cool, low-intensity fire to modify and regenerate the landscape and maintain ecological health.

The colonisation and urbanisation of inner Sydney has devastating impacts on the Eora nation and

Country. The Gadigal and Wangal suffered unjustly, were forced to leave their Country by violent dispossession of land, introduced diseases, industrial and urban development, and the segregation imposed by Aboriginal 'protection' programs. These events caused long-term harm to Gadigal and Wangal language, culture, and kinship systems, which supported the health of the environment and Aboriginal people.

Despite the destructive impacts of first contact Aboriginal people continued to live in the Inner West and were part of the region's earliest industries – fishing and lime-kiln – on the Cooks River and Gamay (Botany Bay). They were later joined by Aboriginal migrants from rural NSW, who moved to Sydney as Aboriginal Protection Board reserves were closing in the mid-20th century. New and returning Aboriginal residents faced racial discrimination, and their struggle for social justice continues today.

Although the Inner West landscape has been radically transformed, Aboriginal people maintain a vital connection to the local environment. In Urban Areas Country lies dormant under concrete and roads and can be revitalised with the correct approach. Our parks and river corridors contain Aboriginal heritage sites, provide places for connection to Country, and support ancestral identity and belonging. They also host memorials to Aboriginal

Survival, and the Wayfinding art project that celebrates Gadigal and Wangal culture.

These connections support Aboriginal custodianship for the cultural and natural heritage of the Inner West. The Aboriginal and Torres Strait Islander community Care for Country in multiple ways, including partnerships with Council.

Indigenous Australians have strong relationships to urban ecosystems arising from spiritual beliefs and kinship with plants and animals. There is a deep connection to Country, and a responsibility to Care for Country. Protecting and enhancing urban ecosystems enables this connection to continue. By learning, valuing and understanding the natural world we can acknowledge and appreciate Aboriginal culture in the fabric of our society.



D'harawal calendar



Burran
Hot and dry
January - March

Male kangaroos aggressive
Meat forbidden
Weetjellan blooming



Marraigang
Wet becoming cool
April-June

Quolls seeking mates
Lillypilly ripens



Burrugin
Cold and frosty
June-July

Echidna seeking mates
Burringoa flowering
Shellfish forbidden





Caring for Country: Aboriginal and Torres Strait Islander partnerships with Inner West Council Urban Ecology Team

1. Caring for Country project with Gunawirra at Richard Murden Reserve, Lilyfield

The Yarning Mothers program is supported by IWC for co-management of an established Natural Area. Aboriginal people access and actively Care for Country which involves, bushcare and cultural activities including selective harvesting and replanting, cultivation and regenerating endemic plants on Country. The program empowers co-design on best practise methodologies incorporated into an annual action plan.

2. Natural heritage tours of Gadigal and Wangal Country

The Aboriginal and Torres Strait Islander community and Elders co-lead Natural Areas tours with Council. This includes the First Nations and Natural Heritage Tour of the Gumbramorra Swamp for the Inner West

Heritage Festival 2024. These tours are organised in partnership with the Inner West Council's Library and History Services, and the Creative Communities Team, for Edge Festival, Footprints Festival and Heritage Festival.

3. Ecological Management of Aboriginal Cultural Heritage sites

Council collaborates on the management of cultural heritage sites, including middens, freshwater flows, and natural feature sites. This includes the propagation of endemic plants, plant lore, restoration of indigenous plants to pre-1750 plant communities to repair Country, celebrate continuity of culture and unlock cultural stories that may be shared with the wider community.

Red Wattlebird
(*Anthochaera carunculata*)



5 The Urban Ecosystem of the Inner West

Historical and Regional Context

The Inner West is located in the southern and eastern reaches of the Cooks River and Parramatta River catchments. These river catchments form the northern and southern boundaries of the Inner West LGA. Both rivers are estuarine systems in the Inner West. They receive water from a modified network of tributaries that include Whites Creek, Hawthorne Canal and Iron Cove Creek.

Prior to European colonisation, the Gadigal and Wangal managed multiple plant communities that were spread across the Inner West (Map 2).

Tidal mudflats, saltmarshes, and mangrove forests fringed the foreshores of the Southern LGA boundary and created an extensive estuary connecting the Cooks River to Botany Bay. The Floodplain Forest of Swamp Oaks and salt-tolerant sedges preferred the wetlands and low-lying areas along the major waterways. They were found through Tempe, Marrickville, and the Hawthorne Canal from Summer Hill to Iron Cove.

Coastal Sandstone Forest was the dominant plant community in the northern suburbs, extending from Haberfield along the higher elevations through to the Balmain peninsula, where sandstone escarpments fell to Estuarine Reedlands. It was also found on the sandstone valley moving north and west from the Cooks River into Marrickville and Dulwich Hill. Here, shrubby heath grew on the dry,

shallow soils of ridges and exposed rock platforms.

Sydney Turpentine-Ironbark Forest is now an Endangered Ecological Community, but it once covered the Inner West from Croydon to St Peters. These well-drained forests often had a grassy understorey. The area between Newtown and St Peters was a Kangaroo Ground managed by the Gadigal and Wangal for hunting.

The Turpentine-Ironbark Forest included the iconic Gumbramorra Swamp. This system of freshwater and brackish wetlands spread across Sydenham and Marrickville up to Addison Road. The Gumbramorra Swamp was likely a popular campsite for the Gadigal and Wangal because of the freshwater and abundance of resources.

5.1 Flora

The Inner West has a variety of plants and vegetation types on public and privately owned land across the LGA (Figure 8).

There have been 477 unique flora species recorded in the Inner West since 2014. Just under half of these species are native to NSW (229). The remaining 248 species are from other Australian states or international regions.

Our urban forest is one of the Inner West's largest vegetation assets. Council manages 75,000 trees in public parks and streets. Total canopy cover for the LGA was between 17-19% in 2020-21. However, it is unevenly distributed across the Inner West's suburbs and land

tenures (Map 3). Although Council is increasing public tree canopy, tree removal on private land is driving an overall decline in urban forest cover. 72% of the Inner West's suburbs lost tree canopy between 2020-21.

To support biodiversity, each vegetation layer is required. Increasing the volume of native groundcover, shrub, and understorey vegetation is one of the most effective ways to increase the diversity and abundance of urban fauna. This type of vegetation is currently low and declining in the Inner West. Between 2016-2020, shrub cover in the Inner West declined by 0.7% to only 2.9% of the LGA. Groundcovers and shrubs are the least common, and most degraded, type of vegetation in the Leichhardt and Balmain wards' green spaces.

The restoration of indigenous plant communities provides the most valuable biodiversity asset in the Inner West. The remaining indigenous plant communities in the Inner West are called:

1. Sydney Turpentine-Ironbark Forest
2. Sydney Coastal Sandstone Foreshores Forest
3. Swamp Oak Floodplain Forest
 - a. Estuarine Reedland
 - b. Estuarine Swamp Oak Forest
4. Estuarine Mangrove Forest and Saltmarsh

Degraded remnants and revegetation sites of these plant communities can be found in the Inner West's Natural and Priority Biodiversity Areas

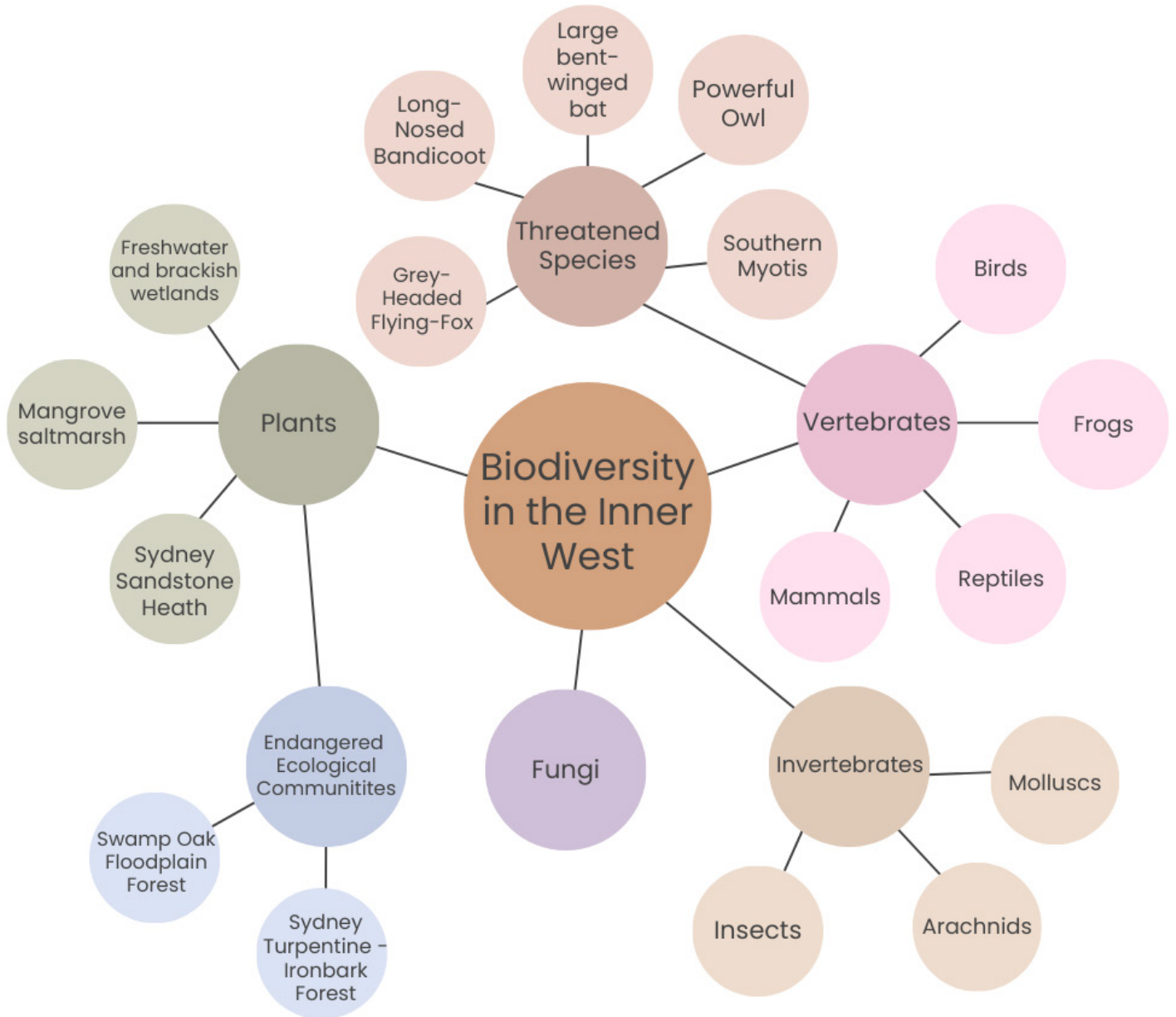
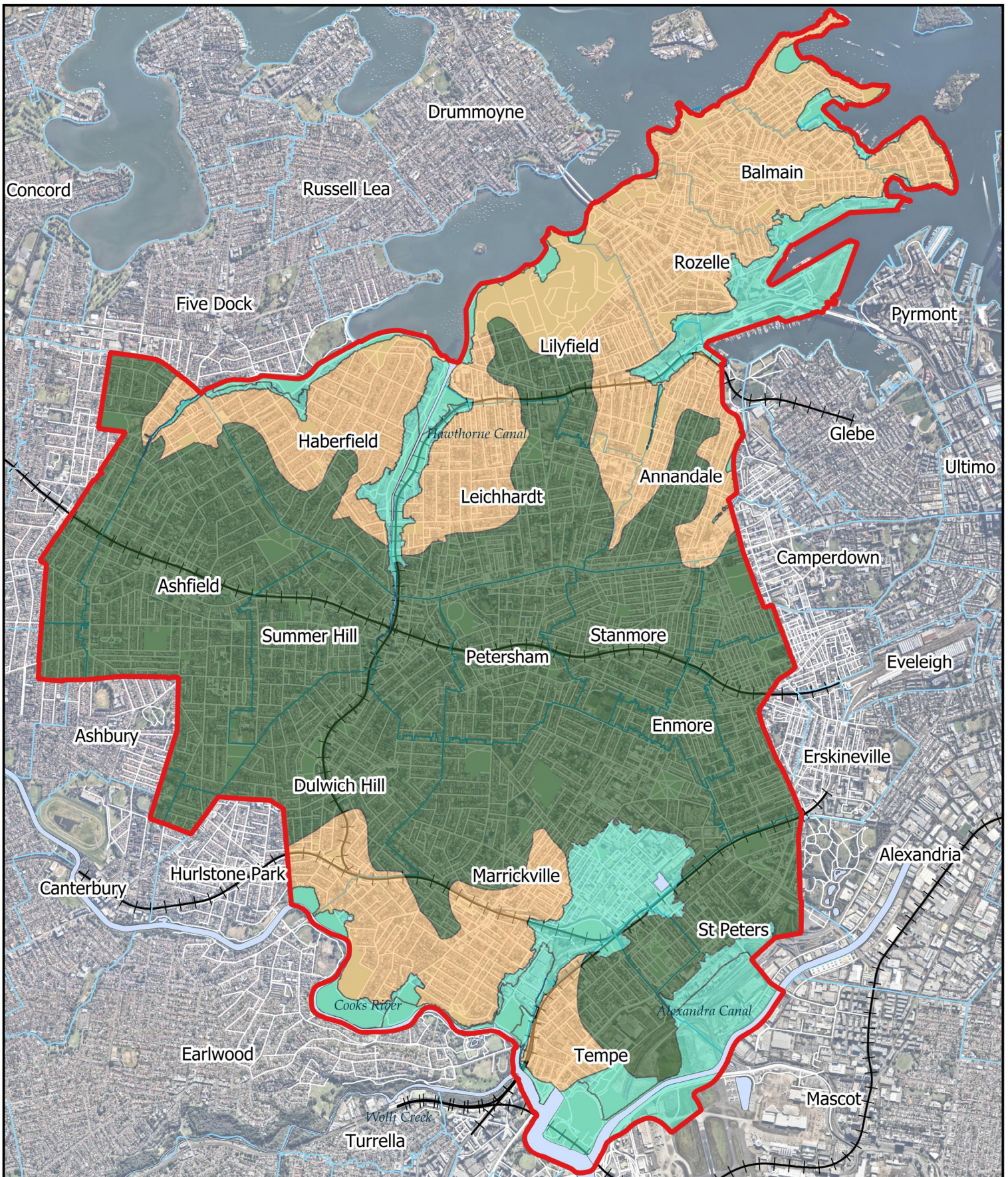


Figure 8. Biodiversity in the Inner West



Pre 1750 Vegetation

0 1,000 2,000 m



Legend

LGA Boundary	Pre1750 Vegetation Sandstone Slopes Forest and Woodland
Rail Line	Sydney Turpentine-Ironbark Forest
Parks	Wetland Complex
Water Areas	

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Map 2 - awaiting content

This map will feature the two river catchment boundaries in the Inner West and the location of key biodiversity assets such as our Natural Areas. Currently collaborating with the GIS team to produce this mapping.

Map 3 - awaiting content

This map will show the distribution of tree canopy and vegetation cover across the suburbs of the Inner West LGA. Currently collaborating with the GIS team to produce this mapping.

These areas support the conservation of Endangered Ecological Communities (EECs) and preserve an important part of the Inner West’s natural and cultural heritage conservation. These areas are of high biodiversity significance, and they also supply Council’s community nurseries with provenance seed stock for propagation of indigenous species. This is critical to the success of ecological restoration and ongoing community engagement on biodiversity.

To enhance biodiversity in the Inner West, Council will develop measures that aim to improve the coverage and condition of our native flora. This includes actions for new planting and monitoring, as well as investigating planning options for vegetation on public and private land.

5.2 Fauna

Theme 1: Increase biodiversity Actions

Install carved tree hollows/nest boxes in suitable parks and Natural Areas (1.1.1.2)

Audit currently installed nest boxes, map all locations and assess whether in use by native animals (1.3.2.3)

Theme 2: Unite community Actions

Develop concept plans for a bird watching hide at the Dibble Avenue Waterhole (2.1.1.4)

Theme 3: Lead by example Actions

Include Natural Areas and Waterways in open space and recreation needs analyses (3.1.2.4)

The Inner West is home to a range of wildlife that includes amphibians, reptiles, birds, mammals, and aquatic and invertebrate species of which much less is known.

There has been 217 unique fauna species recorded in the Inner West since 2014. Compared to the five neighbouring council areas, the Inner West has the third lowest fauna diversity. It has substantially fewer species than the smaller and more densely populated City of Sydney (Table 1).

The vast majority (198) of fauna species in the Inner West are native to Australia. The most successful are usually mobile and urban-adapted species that are not easily deterred by human presence. Birds are our most abundant fauna group, with 140 species recorded in the BioNet Atlas and previous surveys for Council.

Most of our fauna species could be considered uncommon or rare, and some are threatened or protected migratory species (Figure 18). Threatened fauna include 14 bird and bat species, plus an endangered

LGA	BioNet Atlas (post-2014) Recorded Fauna Species	Land Area (km ²)	Population Density (persons per km ²)
Canterbury-Bankstown	326	110.3	3,445
City of Sydney	251	26.68	8,660
Bayside	240	50.64	3,614
Inner West	217	35.22	5,347
Canada Bay	185	19.93	4,585
Burwood	78	7.13	5,960
Average (mean)	216	41.65	5,268

population of Long-nosed Bandicoot. Most of the threatened species in the Inner West have small populations and are extremely vulnerable to urban development and other environmental threats.

Consultation with the community consistently raised the need to address the impact of domestic animals. Pet cats kill many millions of native animals each year at a rate that is 25–52 times higher than feral cats in natural environments. The presence of pet dogs in Natural Areas is associated with lower bird diversity and abundance.

Improving the quantity and quality of native flora in the Inner West will benefit many of our native fauna species. However, Council can develop additional measures that would help increase fauna diversity, and enhance the resilience of threatened, uncommon or rare species in the Inner West. This includes artificially improving important habitat features (e.g. tree hollows), developing a monitoring program for priority species, and investigating options to reduce the impact of major environmental threats to vulnerable species.

Theme 1: Increase biodiversity Actions

Complete mapping and condition reporting on threatened species and Endangered Ecological Communities (EEC) (1.3.2.1)

Develop monitoring programs for target/indicator species to measure ecosystem health, habitat value and species richness/diversity (1.3.1.1)

Theme 2: Unite community Actions

Develop an education program on the threatened and unique species of the Inner West and habitat creation (2.1.2.2)

Theme 3: Lead by example Actions

Investigate solutions to risks posed by domestic animals to local wildlife (for example potential curfews for domestic pets close to Priority Biodiversity Areas, Catch, Neuter and Release programs etc.) (3.1.1.1)

Facilitate local research opportunities through external agencies, such as universities, CSIRO etc., to improve knowledge and foster innovation in the urban ecology sector (3.2.2.4)



Sacred Kingfisher
(*Todiramphus sanctus*)



Threatened and protected migratory species in the Inner West (2007 – 2024)

Threatened Species (Recorded in Field Surveys: Confirmed, Probable, or Predicted)

- *Pteropus poliocephalus* (Grey-headed Flying-fox)
- *Miniopterus australis* (Little Bent-winged Bat)
- *Miniopterus orianae oceanensis* (Large Bent-winged Bat)
- *Falsistrellus tasmaniensis* (Eastern False Pipistrelle)
- *Micronomus norfolkensis* (Eastern Coastal Free-tailed Bat)
- *Scoteanax rueppellii* (Greater Broad-nosed Bat)
- *Perameles nasuta* (Long-nosed Bandicoot) – endangered population

Threatened Species (BioNet Search for IWC LGA 2014+)

- *Saccolaimus flaviventris* (Yellow-bellied Sheathtail-bat)
- *Chalinolobus dwyeri* (Large-eared Pied Bat)
- *Myotis Macropus* (Southern Myotis)
- *Ptilinopus superbus* (Superb Fruit-Dove)
- *Lathamus discolor* (Swift Parrot)
- *Ninox strenua* (Powerful Owl)
- *Grantiella picta* (Painted Honeyeater)
- *Petroica boodang* (Scarlet Robin)

EPBC Act Migratory Species (Field Surveys + BioNet Search 2014+)

- *Apus pacificus* (Fork-tailed Swift)
- *Ardenna pacifica* (Wedge-tailed Shearwater)
- *Ardenna tenuirostri* (Short-tailed Shearwater)
- *Pluvialis squatarola* (Grey Plover)
- *Monarcha melanopsis* (Black-faced Monarch)

Suspected locally extinct species in the inner West*

Reptiles

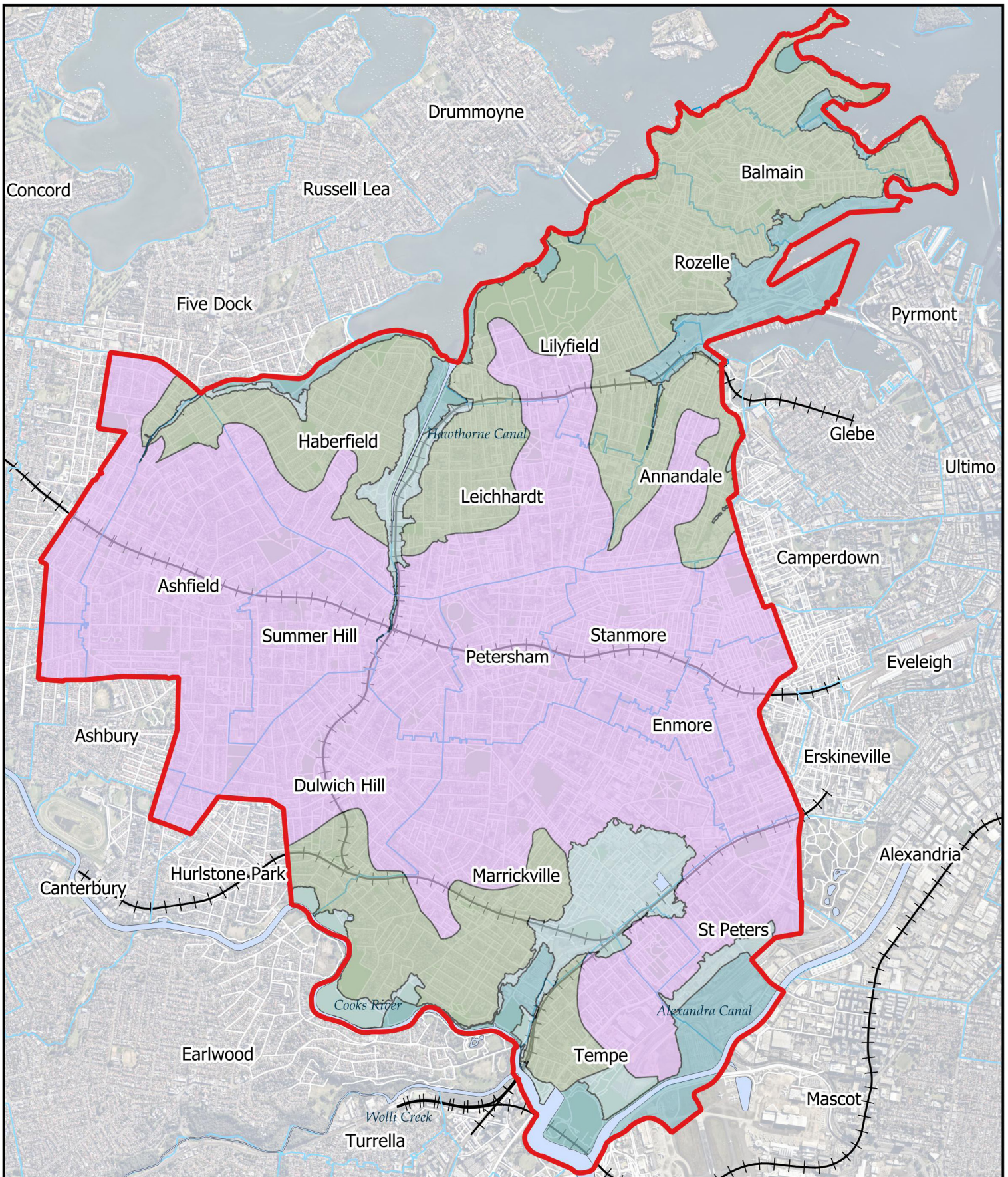
- *Sacrospinous mustelina* (Weasal Shadeskink) – 2007
- *Cryptoblepharus virgatus* (Striped snake-eyed skink) – 2010

Birds

- *Acanthiza chrysorrhoa* (Yellow-rumped Thornbill) – 1996
- *Anthus novaeseelandiae* (Richard's pipit) – 1996
- *Falcunculus frontalis* (Crested Shrike-tit) – 1996
- *Sterna bergii* (Crested Tern) – 1996
- *Acrocephalus stentoreus* (Clamorous Reed-Warbler) – 2007
- *Charadrius melanops* (Black Fronted Dotterel) – 2007
- *Cisticola exilis* (Golden-headed Cisticola) – 2007
- *Lonchura castaneothorax* (Chestnut Breasted Mannikin) – 2007
- *Megalurus gramineus* (Little Grassbird) – 2007
- *Philemon corniculatus* (Noisy Friarbird) – 2007

* Not recorded in field survey or BioNet after 2010. Stated years are the year of last recording.










Pre 1750 Vegetation

0 1,000 2,000 m



Legend

-  Rail Line
-  LGA Boundary
-  Parks
-  Water Areas
-  Coastal Sandstone Foreshores Forest
-  Estuarine Mangrove Forest / Saltmarsh
-  Estuarine Swamp Oak Forest
-  Sydney Turpentine-Ironbark Forest

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Common Brushtail Possum
(*Trichosurus vulpecula*)



5.3 Waterways

The Inner West sits across two catchment areas, the Parramatta River Catchment and the Cooks River Catchment (Map 1). Across these two catchments a wide variety of riparian and water habitat types are present, including creek lines, rivers, coastal areas and wetlands. Local animals, plants and fungi depend on these for survival in the urban environment.

Much of the Inner West's creeks have been re-routed, piped or channelised throughout the 1900's and reclassified as "stormwater drains". This was done with the goal of quickly moving water away from the land to reduce flooding and flush out pollutants.

Unfortunately, this has removed many of the natural processes that alleviate these issues. Natural catchment features, such as wetlands and riparian vegetation, normally act as a sponge by retaining the water in the landscape for longer periods of time. This prevents flooding, filters pollutants, and slowly releases water to ensure flows continue through dry periods.

One example of this is the Gumbramorra Swamp, a wetland expanding across much of today's Marrickville and Sydenham. Before colonisation this brackish and freshwater swamp's expanse would vary depending on the season and rainfall patterns, doubling in size during wet periods. In the present day, the water has been redirected into concrete drains and

a concrete overflow pit. The area now experiences frequent flooding and erosion, with no natural 'sponge' to soak up the water.

Five wetlands are currently managed by Council: Dibble Waterhole, Blackmore Park Wetland, Tempe Wetland, Whites Creek Valley Park Wetland and Peter Bulger Wetland in Camdenville Park. These areas have been restored to have higher biodiversity values. The only remaining sandbar island in the Cooks River, Fatima Island, provides critical nesting habitat for sea birds. One natural creek line remains, tucked behind Hercules Street in Dulwich Hill.

Increasing riparian habitat, reducing pollutants and restoring the natural water regime is a key element to improving local biodiversity, as well as reducing erosion, flooding and improving water quality. This can be through bank naturalisation, rainwater harvesting, incorporation of Water Sensitive Urban Design (WSUD) in developments, reducing hard surfaces and improving/increasing wetlands and rainwater gardens.

Theme 1: Increase biodiversity Actions

Support residents looking to install rainwater harvesting systems through the Rainwater Tank Rebate Program (1.2.1.2)

Review Council managed rainwater gardens and swales to assess current conditions and effectiveness (1.2.1.3)

Investigate opportunities to naturalise channelised waterways and reduce stormwater runoff (1.2.2.1)

Develop a River Report Card system for monitoring and reporting water quality throughout the LGA (1.3.1.2)

Theme 3: Lead by example Actions

Collaborate with external agencies (such as Sydney Water, Transport for NSW, Local Land Services, and other local Councils) and participate in regional partnerships (such as SSROC, Parramatta River Catchment Group and the Cooks River Alliance) (3.2.2.1)

5.4 Priority Biodiversity Areas

The Inner West has key Priority Biodiversity Areas (PBA's) that contribute to habitat connectivity, conservation of species and deliver improved ecosystem services through nature regenerative land management. Five of the PBA's form a corridor that links the Iron Cove to Alexandra Canal, following the Greenway and The River Parklands at the southern end of the Inner West (Map 4).

Significant restoration and maintenance work has been completed in the PBAs as part of Inner West Council's Natural Areas Program. Community volunteers are central to the rehabilitation of PBA sites. Community-led work on the GreenWay began in 1977, and there are currently 11 community bushcare sites across the PBAs.

The PBAs help build habitat connectivity and support the protection and regeneration of indigenous plant communities. They also provide critical habitat features that are often missing from the wider LGA. This includes nectar producing trees, coarse woody debris, sandstone rocks and crevices, publicly inaccessible areas of dense woody weeds and native shrubs, and artificial structures (e.g. culverts and bridges) that provide roosting habitat.

The PBAs provide invaluable refuges for native fauna in the Inner West.

Mobile and urban adapted species of birds, bats, and lizards are likely the most common fauna. However, the PBAs also provide critical habitat for a range of threatened and rare fauna species in the Inner West.

The biodiversity values present in the PBAs suggests the concept could be expanded to other parts of the Inner West. The PBAs are concentrated in the former Marrickville LGA, and there are other locations with Natural Areas that have been identified as potential local and regional biodiversity corridors (e.g. Balmain Peninsula). Creating new PBAs would support Outcome 1.2.3 in the Community Strategic Plan and Action 3.1. in the Inner West Local Strategic Planning Statement. Council will also develop further initiatives to strengthen the monitoring and condition of habitat values in the PBAs

Theme 1: Increase biodiversity Actions

Explore potential for additional Priority Biodiversity Areas land designation to other valuable ecological sites in the broader LGA (1.1.1.1)

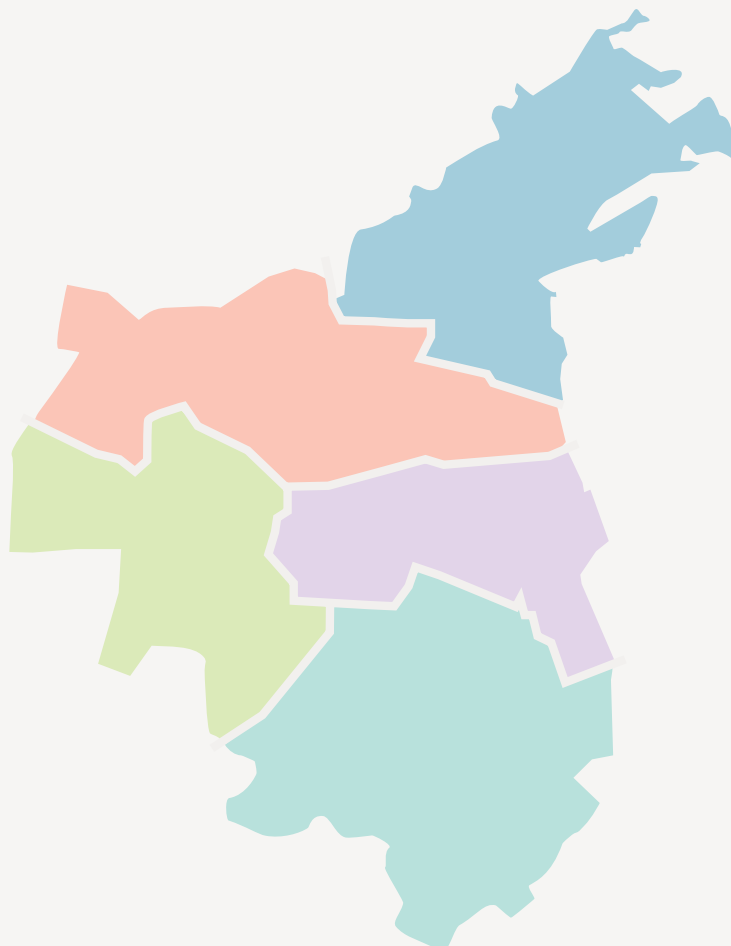
Appreciate and protect existing natural riparian zones such as the unnamed Hercules St creek line and Mort Bay ephemeral creek (1.2.2.2)

Theme 3: Lead by example Actions

Recognise Callan Park and Marrickville Golf Course as significant biodiversity refuges and collaborate with land managers to protect remnant habitats (3.2.2.3)

Potential Priority Biodiversity Areas (PBA)

Area	Inner West Council Ward
Callan Park Leichhardt Park Mort Bay to Ballast Point	Baludari
Camperdown cemetery	Damun
Greenway - Cooks to Cove	Djarrawunang / Gulgadya
Victoria Square	Djarrawunang
Dibble Avenue Waterhole Peter Bulger Wetlands Tempe Lands Reserve/Alexandria canal The River corridor (Marrickville Golf Course to Kendrick Park)	Midjuburi



Grey-headed Flying-Fox
(*Pteropus poliocephalus*)



6 Action Plans

6.1 Theme 1 – Increase Biodiversity

The first theme for this strategy is simply “Increase Biodiversity”. Inner West Council is looking not just to maintain current levels, but to enhance and become an urban haven for biodiversity. The theme also includes strengthening our knowledge of local flora and fauna to improve strategies and outcomes. This is directly linked to Inner West’s Community Strategic Plan (CSP), strategic direction 1: An ecologically sustainable Inner West. This is closely aligned with CSP outcomes 1.1, 1.2, 1.3, 1.4 and 1.5.

Theme 1 – Increase biodiversity				
Goals	Priorities	Actions	Timeline	Responsibility
Increase terrestrial biodiversity throughout the Council area (1.1)	Enhance the protection of biodiversity by improving connectivity and quality of habitat for local fauna and flora (1.1.1)	Explore potential for additional Priority Biodiversity Areas land designation to other valuable ecological sites in the broader LGA (1.1.1.1)	Medium term	Coordinator Urban Ecology
		Install carved tree hollows/nest boxes in suitable parks and Natural Areas (1.1.1.2)	Short term	Team Leader Ecology Projects Public Trees Manager
		Utilise Council’s Community Native Nurseries to provide locally native plants to a mid-storey and ground cover planting program to improve habitat quality on suitable Council-owned land (1.1.1.3)	Medium term	Coordinator Urban Ecology Supervisor Community Nurseries
		Identify current Dark Sky Zones, investigate potential establishment of new zones, and implement wildlife friendly lighting standards around Natural Areas (1.1.1.4)	Medium term	Parks Planning & Ecology Manager Coordinator Urban Ecology
		Recognise the Gadigal Bat Roost as a key threatened species habitat site and ensure ongoing protection and monitoring (1.1.1.5)	Medium term	Coordinator Urban Ecology
Increase marine, freshwater, and riparian biodiversity throughout the Council area (1.2)	Improve quality of waters flowing through Inner West (1.2.1)	Investigate and prioritise opportunities for water sensitive urban design (WSUD) to be incorporated into Council managed land and collaborate with private landholders to increase WSUD uptake (1.2.1.1)	Medium term	Coordinator Urban Ecology Senior Environment Officer - Catchments
		Support residents looking to install rainwater harvesting systems through the Rainwater Tank Rebate Program (1.2.1.2)	Ongoing	Coordinator Urban Ecology Senior Environment Officer - Catchments
		Review Council managed rainwater gardens and swales to assess current conditions and effectiveness (1.2.1.3)	Medium term	Coordinator Stormwater & Emergency Planning Project Engineer Capital Projects

	Expand, enhance, and protect natural riparian habitat (1.2.2)	Investigate opportunities to naturalise channelised waterways and reduce stormwater runoff (1.2.2.1)	Long term	Coordinator Urban Ecology Senior Environment Officer - Catchments
		Appreciate and protect existing natural riparian zones such as the unnamed Hercules St creek line and Mort Bay ephemeral creek (1.2.2.2)	Medium term	Coordinator Urban Ecology
		Investigate opportunities to expand on existing wetlands, remediate degraded wetlands and build new wetlands across the LGA (1.2.2.3)	Long term	Parks Planning & Ecology Manager Senior Manager Operations
		Plan for the loss and adaptation of identified Natural Areas to sea level rise scenarios (1.2.2.4)	Long term	Parks Planning & Ecology Manager
Establish baselines and bridge knowledge gaps (1.3)	Enhance the monitoring of local species, ecosystem health, and evaluation of biodiversity management actions (1.3.1)	Develop monitoring programs for target/indicator species within our Natural Areas to measure ecosystem health, habitat values and species richness/diversity (1.3.1.1)	Short term	Coordinator Urban Ecology Team Leader Ecology Projects Public Trees Manager
		Develop a River Report Card system for monitoring and reporting water quality throughout the LGA (1.3.1.2)	Short term	Coordinator Urban Ecology Senior Environment Officer - Catchments
		Identify key threatening processes to local biodiversity, mitigation strategies and natural recovery processes (1.3.1.3)	Medium term	Coordinator Urban Ecology
	Develop better understanding of current state of environment and knowledge gaps (1.3.2)	Complete mapping and condition reporting on threatened species and Endangered Ecological Communities (EEC) (1.3.2.1)	Medium term	Coordinator Urban Ecology
		Review local impacts of climate change on biodiversity and natural assets to identify knowledge gaps and mitigation methods (1.3.2.2)	Medium term	Urban Sustainability Manager
		Audit currently installed nest boxes, map all locations and assess whether in use by native animals (1.3.2.3)	Short term	Team Leader Ecology Projects

6.2 Theme 2 – Unite Community

Community is a key focus for this strategy, and as such our second theme is to “Unite Community” under one goal of improving biodiversity. Inner West aims to actively include community as partners in this strategy and see the Inner West Council’s residents, visitors, workers and stakeholders working hand in hand to create a more resilient, healthy and thriving Inner West, for now and future generations. This is connected to CSP strategic direction 1: An ecologically sustainable Inner West and strategic direction 4: Healthy, resilient, and caring communities. This directly supports outcomes 1.1, 1.3, 4.1, 4.2, 4.3 and 4.4 of the CSP.

Theme 2 – Unite community					
Goals	Priorities	Actions	Timeline	Responsibility	
Increase opportunities for people to connect with, and care for, biodiversity in the Inner West (2.1)	Citizen science & community stewardship (2.1.1)	Increase opportunities and participation in environmental citizen science (2.1.1.1)	Ongoing	Team Leader Ecology Projects	
		Work in partnership with citizen science, environmental and Bushcare groups on the collection and integration of data with proposed Council managed databases (2.1.1.2)	Ongoing	Coordinator Urban Ecology	
		Provide volunteering opportunities through Adopt-a-Spot and Verge Garden, Native Community Nurseries and Bushcare programs (2.1.1.3)	Medium term	Coordinator Urban Ecology Team Leader Ecology Projects	
		Develop concept plans for a bird watching hide at the Dibble Avenue Waterhole (2.1.1.4)	Long term	Parks Planning & Ecology Manager	
		Establish a new Native Community Nursery in the Southern LGA and increase nursery capacity (2.1.1.5)	Medium term	Senior Manager Environment and Sustainability	
	Education, transparency and promotion of biodiversity achievements (2.1.2)	Activate Council’s Sustainability Hub with Urban Ecology staff for consultation with public and hold events on site (2.1.2.1)	Develop an education program on the threatened and unique species of the Inner West and habitat creation (2.1.2.2)	Medium term	Coordinator Urban Ecology
			Conduct Natural Area tours (2.1.2.3)	Ongoing	Coordinator Urban Ecology
			Install ‘cues to care’ in appropriate Natural Areas to better inform and engage the community in the protection of valuable habitat zones, such as the Gadigal Bat Roost (2.1.2.4)	Medium term	Team Leader Ecology Projects
			Investigate the development of a Biodiversity Sensitive Urban Design (BSUD) workshop to help residents create native habitat in their backyards (2.1.2.5)	Short term	Coordinator Urban Ecology

Strengthen the representation and integration of Aboriginal ecological knowledge in the protection of biodiversity (2.2)	Care for Country (2.2.1)	Investigate opportunity for equal partnerships including partnering the Native Community Nursery with Indigenous providers and educators (2.2.1.1)	Medium term	Parks Planning & Ecology Manager Coordinator Urban Ecology
		Partner with Aboriginal and Torres Strait Islander peoples to integrate appropriate methods of Caring for Country principles in Urban Ecology programs and projects, such as reintroduction of fire protocols into the landscape (2.2.1.2)	Medium term	Cultural Advisor Coordinator Urban Ecology Team Leader Ecology Projects
		Co-design programs in collaboration with Aboriginal and Torres Strait Islander peoples to support engagement and participation in decision making (2.2.1.3)	Medium term	Coordinator Urban Ecology Cultural Advisor

6.3 Theme 3 – Lead by Example

Inner West Council has committed to becoming an example of how urban local governments can make a difference to biodiversity on a large scale. This is realised through the strategy's third theme, "Lead by Example". Through strengthening partnerships, both internally and externally, and embedding ecological principles into Council's decision making we look to inspire our local community through our leadership. This is aligned with CSP strategic direction 1: An ecologically sustainable Inner West and strategic direction 5: Progressive, responsive and effective civic leadership including outcomes 1.1, 5.2, 5.3 and 5.4.

Theme 3 – Lead by example				
Goals	Priorities	Actions	Timeline	Responsibility
Inner West Council is a leader in supporting urban biodiversity (3.1)	Embed ecological principles as a core responsibility of Council (3.1.1)	Investigate solutions to risks posed by domestic animals to local wildlife (for example potential curfews for domestic pets close to Priority Biodiversity Areas, Catch, Neuter and Release programs etc.) (3.1.1.1)	Short term	Coordinator Urban Ecology; Team Leader Companion Animal / Monitoring Services
		Review existing policies, strategies, and Plans of Management (PoM) to ensure biodiversity outcomes are prioritised and identify on ground actions that have not yet been realised (3.1.1.2)	Medium term	Parks Planning & Ecology Manager Senior Planning and Policy Officer
		Develop a Natural Areas Policy for nature regenerating lands (3.1.1.3)	Medium term	Coordinator Urban Ecology
	Redefine good decision making with an orientation around strategic risk management (3.1.2)	Establish best practice principles for decision making to address impact and dependency on nature (3.1.2.1)	Medium term	Senior Manager Environment and Sustainability
		Facilitate truth telling and embed Caring for Country principles (3.1.2.2)	Ongoing	Coordinator Urban Ecology Cultural Advisor
		Develop and deliver Biodiversity Training for Council staff (3.1.2.3)	Short term	Coordinator Urban Ecology
		Include Natural Areas and Waterways in open space and recreation needs analyses (3.1.2.4)	Medium term	Parks Planning & Ecology Manager

Strengthen partnerships to improve biodiversity outcomes (3.2)	Establish cooperative processes for biodiversity within Council (3.2.1)	Investigate suitable planning controls, policies, projects, targets, or incentives to: <ul style="list-style-type: none"> a. Reduce decline of habitat on private land b. Protect and increase mid/low-storey vegetation cover c. Establish a "Greenweb" program to identify existing vegetation links. d. Improve management of transition zones between Natural Areas and parks/streetscape e. Advise on the financial value of blue-green infrastructure (3.2.1) 	Medium term	Parks Planning & Ecology Manager Senior Manager Operations Team Leader Planning Policy Strategic Planning Senior Planning and Policy Officer Chief Financial Officer
		Establish cross Council collaboration for effective delivery of Council biodiversity projects (3.2.1.2)	Short term	Parks Planning & Ecology Manager
	Establish connections with external agencies and pool resources (3.2.2)	Collaborate with external agencies (such as Sydney Water, Transport for NSW, Local Land Services, and other local Councils) and participate in regional partnerships (such as SSROC, Parramatta River Catchment Group and the Cooks River Alliance) (3.2.2.1)	Ongoing	Parks Planning & Ecology Manager
		Investigate and pursue relevant grant opportunities which increase natural capital (3.2.2.2)	Ongoing	Parks Planning & Ecology Manager External Grants Officer
		Recognise Callan Park and Marrickville Golf Course as significant biodiversity refuges and collaborate with land managers to protect remnant habitats (3.2.2.3)	Short term	Parks Planning & Ecology Manager Coordinator Urban Ecology
		Facilitate local research opportunities through external agencies, such as universities, CSIRO etc., to improve knowledge and foster innovation in the urban ecology sector (3.2.2.4)	Ongoing	Coordinator Urban Ecology

7 References

The following texts were key references in the preparation of this strategy.

- Adapt NSW. (2014). *Metropolitan Sydney Climate Change Snapshot*. Sydney: NSW Office of Environment and Heritage.
- Aronson, M. F., Lepczyk, C. A., Goddard, M. A., et al. (2017). Biodiversity in the City: Key Challenges for Urban Green Space Management. *Frontiers in Ecology and the Environment*, 15(4), 189-196.
- Barros, E. (2021). Urban Forest Update: Councillor Briefing, 23rd February 2021. Inner West Council.
- Davies, P., Corkery, L., and Nipperess, D. (2017). *Urban Ecology: Theory, Policy and Practice in New South Wales, Australia*. National Green Infrastructure Network.
- Elmqvist, T., Setälä, H., Handel, S. N., van der Ploeg, S., et al. (2015). Benefits of restoring ecosystem services in urban areas. *Current Opinion in Environmental Sustainability*, 14(June), 101-108.
- Greener Spaces, Better Places*. (2020). Inner West Council. Retrieved from <https://www.greenspacesbetterplaces.com.au/wwattb/inner-west-council/>
- Inner West Council. (2017). *Creating our Inner West 2036: Community Strategic Plan issues Paper*. Petersham: Inner West Council.
- Inner West Council. (2021). Recreation Needs Study, *A Healthier Inner West (October 2021 Update)*. Petersham, NSW: Inner West Council.
- Inner West Council. (2021). *The Greenway In-Corridor Works Flora and Fauna Assessment*. Petersham, NSW: Inner West Council.
- Inner West Council. (2021). *Inner West Council Community Research*. Retrieved from <https://www.innerwest.nsw.gov.au/ArticleDocuments/1909/Report%20-%20Inner%20West%20community%20research%202021.pdf.aspx>
- Irish, P. (2016). *Aboriginal History Along the Cooks River*. Cooks River Alliance.
- Leichhardt Council. (2017). *Leichhardt Fauna Survey 2016: Final Report Prepared for Leichhardt Council*. Sydney: Ecological Consultants Australia.
- Marrickville Council. (2007). *2007 Fauna Study, Marrickville*. Petersham, NSW: Marrickville Council.
- Marrickville Council. (2011). *Marrickville Council Biodiversity Strategy 2011-2021*. Marrickville, NSW: Marrickville Council.
- Mata, L., and Hahs, A. K. (2023). Large positive ecological changes of small urban greening actions. *Ecological Solutions and Evidence*, 4(3), e12259.
- Office of Environment and Heritage. (2017). *Cross-tabulated Survey Data for Who Cares about the Environment? A Survey of the Environmental Knowledge, Attitudes, and Behaviours of People in New South Wales in 2015*. Sydney: NSW Office of Environment and Heritage.
- Threatened Species Recovery Hub. (2020). *Research Findings Factsheet: The Impact of Pet Cats on Australian Wildlife*.
- Threlfall, C. G., Mata, L., Mackie, J. A., and Hahs, A. K., et al. (2017). Increasing Biodiversity in Urban Green Spaces through Simple Vegetation Interventions. *Journal of Applied Ecology*, 54, 1874-1883.
- Weir, J. K., Stacey, C., and Youngetob, K. (2011). *The Benefits Associated with Caring for Country*. Department of Sustainability, Environment, Water, Population and Communities. Canberra: Australian Institute of Aboriginal and Torres Strait Islander Studies.
- Young, Nadia and Parramatta River Catchment Group. (2023). *First Nations Peoples of the Parramatta River and Surrounding Region*. Parramatta River Catchment Group.

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Australian Brush Turkey
(*Alectura lathami*)

Pictured on cover:
Powerful Owl (*Ninox strenua*)

For more information about Biodiversity
in the Inner West, visit
[www.innerwest.nsw.gov.au/live/
environment-and-sustainability](http://www.innerwest.nsw.gov.au/live/environment-and-sustainability)