

2025 Biodiversity Survey – Exploring Aquatic Fauna of Karrawirra Pari / River Torrens

**Thursday, 18 September 2025
Board Meeting**

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Public

Purpose

The purpose of the workshop is to share the results of the 2025 biodiversity monitoring, evaluation and reporting program (2025 biodiversity survey) which focused on aquatic fauna found along Karrawirra Pari / River Torrens. Surveys were undertaken from Port Road to Morphett Street, Pinky Flat and Frome Road to Hackney Road.

The 2025 biodiversity survey was completed between April and June 2025.

Strategic Alignment

The biodiversity program aligns directly with the Kadaltilla Strategic Plan 2023-2028 and Adelaide Park Lands Management Strategy – Towards 2036. It also supports outcomes of the City of Adelaide's Strategic Plan 2024-2028 and Integrated Climate Strategy 2030, Resilient, Protected, Sustainable.

Background

Monitoring, evaluating, and reporting on biodiversity in the Adelaide Park Lands is vital for understanding ecosystem health and identifying trends. This work supports Kadaltilla's strategic objective (2.2) to regularly review tree canopy, biodiversity, and environmental sustainability.

A comprehensive biodiversity survey was undertaken in 2023/24, providing the first major update on biodiversity values in the Adelaide Park Lands since 2003. It examined Key Biodiversity Areas, native vegetation and revegetation sites, and key aquatic habitats, including Karrawirra Pari / River Torrens, the Victoria Park / Pakapakanthi (Park 16) wetlands, and the G S Kingston Park / Wirrarninhi (Park 23) wetlands.

The survey assessed the following thematic groups:

- Possums
- Bats
- Fish
- Terrestrial vertebrates
- Butterflies
- Native bees
- Insects and arthropods (invertebrates)
- Native woodland and grasslands
- Aquatic vegetation (rivers and wetlands)

The 2023/24 biodiversity survey findings were presented to Kadaltilla in June ([Link 1](#) and [Link 2](#)) and September 2024 ([Link 3](#), [Link 4](#) and [Link 5](#)), published on the new Biodiversity in Adelaide website ([Link 6](#)), and shared with Green Adelaide to support state biodiversity planning and programs.

Key Findings from the Karrawirra Pari / River Torrens Fauna Survey (Attachment A)

Building on this work, the 2025 biodiversity survey updates the biodiversity evidence base for animal species found along a 5-kilometre section of Karrawirra Pari / River Torrens. It establishes transects and Geographical Information System (GIS) point coordinates to be used for future survey work and mapping enabling direct comparisons.

The 2025 field investigation improve understanding of the diversity of fauna species across the riparian corridor through a combination of timed area searches, opportunistic observations, spotlighting and baited camera traps.

The survey recorded several notable observations:

- **Fox activity:** No scats were detected, suggesting very low numbers along the city river corridor despite their urban adaptability.
- **Frogs:** Minimal calling was detected at only one site, reflecting broader national declines and potentially influenced by recent dry conditions.
- **Waterbirds:** Breeding activity was observed for little black cormorants and nankeen night herons, the latter indicating a persistent but uncommon local population.
- **Woodland birds:** Numbers were low, likely due to the dominance of noisy miners, whose overabundance reduces bird diversity and indirectly impacts tree health.
- **Environmental context:** Extremely dry conditions may have suppressed species activity, though the river and riparian zones provided refuge.
- **Survey methods:** Bird surveys were effective, while camera traps proved resource-intensive with limited return under the dry conditions.

The findings highlight the ecological pressures of drought and noisy miner dominance, with recommendations for targeted habitat restoration to improve bird diversity and ecosystem resilience.

The biodiversity survey recommendations include:

1. Ongoing seasonal and long-term surveys with consistent methods to allow future comparison
2. Integrate more acoustic monitoring - effective for birds and bats
3. Continued weed control and pest monitoring
4. Investigate methods to mitigate the abundance and impact of noisy miners
5. Investigate additional tools (DNA sampling) to allow better targeting of surveys and locations
6. Support citizen science activities backed by standardised methods for species identification.

Next Steps

Data from the 2025 biodiversity survey will be published to the Biodiversity in Adelaide website and promoted by social media throughout Nature Festival. Data will be shared with the Biodiversity Database of South Australia (DEW) ([Link 7](#)), the Atlas of Living Australia (hosted by CSIRO), and Green Adelaide. The Atlas of Living Australia ([Link 8](#)) is the Australian node of the Global Biodiversity Information Facility – an international network and data infrastructure aimed at providing open access to data about all types of life on Earth.

The following biodiversity related activities have commenced for 2025/26:

- Key Biodiversity Area (KBA) Management Plan updates for existing KBA1 to KBA 6.
- The creation of a new KBA Management Plan for KBA 7 (Wirrarninithi).
- Development of a Tree Martin Management Plan.
- Environmental DNA testing of water and soil samples.

- Preparation for the April 2026 City Nature Challenge
 - Monitoring of the Adelaide Park Lands iNaturalist project.
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Key Questions

1. What are the Board Members' views on the results of the aquatic fauna found along the Karrawirra Pari / River Torrens?
 2. Are there specific aspects or thematic groups of biodiversity within the Adelaide Park Lands that Board Members would like to explore in more detail?
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Data and Supporting Information

Link 1 - [Kadaltilla Board Meeting Thursday, 27 June 2024](#)

Link 2 - [Attachment A - Adelaide Park Lands Biodiversity Survey Summary Report](#)

Link 3 - [Kadaltilla Board Meeting Thursday, 26 September 2024](#)

Link 4 - [Workshop Adelaide Park Lands Biodiversity Digital Reporting Framework](#)

Link 5 - [Adelaide Park Lands Biodiversity Digital Reporting Framework](#)

Link 6 - [Biodiversity in Adelaide website](#)

Link 7 - [Biodiversity Database of South Australia](#)

Link 8 - [Atlas of Living Australia](#)

Attachments

Attachment A – Karrawirra Pari Riparian Fauna Survey Report – Eco Logical Australia
