



ACT
Government

Action Plan for Listed Migratory Species 2018

Implementation Progress Report 2023



Environment, Planning and Sustainable Development Directorate

Environment, Planning and Sustainable Development Directorate

The ACT Government acknowledges the Ngunnawal people as traditional custodians of the ACT and recognises any other people or families with connection to the lands of the ACT and region. We acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.

This report was prepared by the ACT Conservator Flora and Fauna, Bren Burkevics, in accordance with the requirements of the [Nature Conservation Act 2014](#) that requires the Conservator to report to the Minister every five years on an action plan (s. 108 (3)). The Minister is required to make the progress report publicly accessible (s. 108 (4)).

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Background

Distribution and Conservation Status

Listed Migratory Species under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) that occur regularly in the ACT are defined under the *Nature Conservation Act 2014* (NC Act) as ‘regular migratory species’. The current ACT [Action Plan for Listed Migratory Species 2018](#) (MS Action Plan) (ACT Government 2018) covers twenty-seven regular migratory bird species. The conservation status of birds in the MS Action Plan listed under the EPBC Act varies species by species, however all birds have ‘listed migratory species’ status and are considered Matters of National Environmental Significance (MNES). The distribution of the birds crosses numerous continents however many of them are found in 22 countries along the East Asian-Australasian Flyway (Flyway). The Flyway extends from Russia and Alaska, southwards through East Asia and South-east Asia, to Australia and New Zealand. In the ACT, migratory birds are found at listed important wetlands that include sites in urban areas such as Jerrabomberra Wetlands and Horse Park Wetlands, and remote areas such as Ginini Flats and Upper Naas Creek in Namadgi National Park.

The MS Action Plan supports the ACT Government’s international responsibility to maintain suitable habitat in the ACT and contribute to international research on migratory birds. This document is the five-yearly report on the implementation progress of the MS Action Plan.



Jerrabomberra Wetlands Nature Reserve. Photo: ACT Government.

Conservation

Objective

The main conservation objective of the MS Action Plan is to maintain, conserve and enhance habitats of migratory species in the ACT. The MS Action Plan identifies actions to protect and manage this habitat of migratory species listed under the EPBC Act which regularly visit the ACT. The MS Action Plan also outlines the ACT Government's contribution to the regional and national conservation of these species while they are present in the ACT.

Specific goals of this plan are to:

1. protect, restore and enhance important wetland, wildlife corridor and breeding habitat;
2. manage identified threats to important sites and habitat;
3. improve knowledge about the occurrence and management of Latham's Snipe in the ACT; and
4. raise community awareness and engagement in initiatives to survey and conserve listed migratory species.

The primary way migratory bird species are managed in the ACT is through the management of habitat.

Priorities

The management of migratory birds is based on four species-habitat groups. The groups have been selected based on common ecological characteristics and habitat preferences. Applying a species-habitat approach to the grouping of bird species provides a practical framework that enables management actions to be implemented. The four species-habitat groups that have been applied are swifts, shorebirds, waterbirds and flycatchers (ACT Government 2018).

The protection of breeding habitat is very important as it is a critical time within the lifecycle of a migratory species. Therefore, the prioritisation of management actions considers whether the species breeds in the ACT.

Some migratory bird species regularly occur in the ACT but have been assessed as not requiring specific management intervention. The two species-habitat groups not requiring management intervention are the Swifts (because they rarely land on the ground) and Waterbirds (because they are not associated with specific habitat). Also, migratory bird species that do not regularly occur in the ACT do not have management actions in the MS Action Plan. Management actions are provided only for the shorebirds and flycatchers.

The conservation of birds listed in the MS Action Plan, requires suitable habitat (wetlands) to be protected and enhanced. Important wetlands for shorebirds are found in and around Jerrabomberra Wetlands Nature Reserve (JWNR), Horse Park Wetlands and Mulligans Flat Dam. Stormwater retention ponds and sewage ponds also provide suitable habitat for shorebirds and waterbirds. Flycatchers require wet gullies in sclerophyll forest and open woodland. Most flycatcher habitat is protected in the conservation reserve system, especially within Namadgi National Park and Tidbinbilla Nature Reserve.



Latham's Snipe (Gallinago hardwickii). Photo: Deb Ralph.

Summary of implementation and effectiveness

Under the current MS Action Plan key conservation efforts to protect migratory birds in the ACT in this reporting period have included:

- an increase in the number of urban wetlands and ponds in new suburbs, with at least 50,000 m² water surface area (and additional surrounding vegetation) added;
- the addition of approximately 2.8 ha of aquatic habitat such as ponds, wetlands, raingardens and channel naturalisations, within existing urban and peri-urban areas;
- adoption of [cat containment laws](#) that apply to all cats born from 1 July 2022 that aim to support a reduction in predation of birds by cats in wetlands adjacent to urban areas;
- management activities at JWNR by PCS Rangers that have continued to improve the quality and quantity of suitable habitat for migratory bird species including activities to increase appropriate vegetation through additional plantings and weed control, and use of rotational grazing to manage biomass at optimal bird habitat levels;
- community engagement activities at JWNR that have supported volunteer efforts to engage in practical on-ground activities and bird surveys;
- activities to enhance shorebird habitat undertaken on private land including a dam enhancement program delivered by the Natural Resource Management (NRM) team within the Environment, Planning and Sustainable Development Directorate (EPSDD) that supported landholders to revegetate 11 dams across seven properties; and
- ongoing engagement with the Latham's Snipe Project that has progressed the understanding of the ecology of this migratory bird with highlights including:
 - the establishment and ongoing working relationship with the Wild Bird Society of Japan (WBSJ) and the Wetland Bird Surveying Group, which includes volunteers from the Australian National University (ANU) and the Canberra Ornithologists Group (COG);

- providing a focal point for the ACT community, and international counterparts, to engage in citizen science conservation projects at JWNR through annual surveys and the application of satellite tracking devices to provide data sets to inform research; and
- use of data by a current PhD candidate at the ANU that will lead to the development of habitat management guidelines for Latham's Snipe and other shorebirds.

Further efforts needed

Managing the impacts of invasive and domestic animals continues to be a priority to protect shorebirds close to residential areas, and disturbance from recreation and mowing operations is an ongoing challenge. Ongoing and increased engagement to raise awareness within the wider ACT community is essential to minimise impacts on, and enhance habitat of, listed migratory bird species.

A significant body of work that will require future prioritisation is the review of wetland areas on public land to determine whether current management is appropriate. Though some high-profile areas are reviewed for management effectiveness at regular intervals, a systematic review of all relevant wetlands is still required. Another major body of work that will require future prioritisation is the review into the impacts of dogs around wetland areas including dog off-leash areas.

Horse Park Wetlands is located within a site that is owned by the ACT Government and is currently under an agistment license and guided by a management plan that is currently being revised. The site is not publicly accessible which affords Horse Park Wetlands a degree of protection from disturbance. Actions that support community awareness and protection of Horse Park Wetlands will need to be prioritised if the site is made publicly accessible.

Managing the impacts of predation by foxes, cats and dogs in JWNR is an ongoing activity undertaken by the ACT Parks and Conservation Service (PCS). There is a high degree of complexity associated with these tasks and a feasibility study is required to understand this complex relationship and is a future priority.

Where possible, climate modelling should be undertaken to better understand the impacts of climate change on listed migratory species and associated habitat, to support on-ground decision making. Further data collection and analysis should also be undertaken to enable evaluation of several indicators that are not currently being tracked, that will enable better understanding of the effectiveness of management interventions and inform future management actions and research priorities.



Common Sandpiper (Actitis hypoleucos). Photo: Liam Manderson.

Progress Against Intended Management Actions

GOAL 1 (SHOREBIRDS): Protect, restore and enhance important wetland, wildlife corridor and breeding habitat.

Objective 1: Protect known sites and important habitat in the ACT.

Action	Indicator	Progress
1a. Take migratory species habitat into account when undertaking management planning for JWNR and urban open space that includes wetlands.	1a. Management plans for JWNR, and urban open space include material on protecting and managing habitat for migratory shorebirds and waterbirds.	<p>1a. An Activities Declaration for JWNR was made under the <i>Nature Conservation Act 2014</i> (ACT Government 2015). The Activities Declaration outlines a set of prohibited and restricted activities that protect important habitat for migratory species.</p> <p>The current Jerrabomberra Wetlands Nature Reserve Plan of Management 2010 (JWNR Plan)) includes material on protecting and managing habitat for migratory shorebirds and waterbirds.</p> <p>A primary management objective within the JWNR Plan is to ensure ‘the reserve supports diverse waterbird populations, including migratory species and rare or uncommon species. There are numerous actions within the JWNR Plan that are designed to protect and enhance migratory species habitat.</p>
1b. Regularly review important wetlands listings for the ACT.	1b. Updated information on the Australian Directory of Important Wetlands in Australia is available on the directorate’s website.	<p>1b. The information provided on the EPSDD website is up to date and can be found here: https://www.environment.act.gov.au/nature-conservation/conservation-and-ecological-communities/ginini-flats-wetland-complex-ramsar-site</p> <p>The ACT listing on the Australian Directory of Important Wetlands in Australia is updated and can be found here: https://www.environment.gov.au/cgi-bin/wetlands/list.pl</p>

Objective 2: Identify and manage areas of public land for their wetland values.

Action	Indicator	Progress
2a. Review wetland areas on public land to determine whether current management is appropriate.	2a. Review of wetlands is finalised.	2a. Not commenced.

Objective 3: Maintain mud flats and shallow water habitats at JWNR and Mulligans Flat Dam during the spring/summer shorebird season from September to March each year.

Action	Indicator	Progress
3a. Improve the ability to manage water levels to maintain habitat.	3a. Additional infrastructure to allow water levels to be managed is provided.	<p>3a. Mulligans Flat Dam: Initial consideration of additional infrastructure has been undertaken. In 2019, the dam was empty, and from August 2020 to November 2022 it flooded. These extreme conditions hampered assessment. The overall condition of the mud flats and shallow water habitat from 2018 to 2023 have been suitable water habitat for migratory bird species. Additional infrastructure is considered during annual management planning.</p> <p>JWNR: A solar powered pump was installed at one of the wetlands to maintain a steady flow of water into the pond for educational purposes. Use of grazing, slashing, and fire to reduce biomass and increase habitat areas along the riparian zones of the Paleochannels and several wetland and ponds is being applied. These methods have proven to be effective with an increase in suitable habitat for Latham Snipe.</p>
3b. Reduce biomass and monitor the effectiveness of the reduction.	3b. The numbers of listed migratory shorebird species is maintained or increased.	<p>3b. Biomass reduction in JWNR is achieved through an agistment license and management approach that applies rotational grazing of cattle. The ACT PCS engage with the licensee to ensure appropriate biomass requirements are maintained. Biomass is also managed using prescribed burning to improve habitat.</p> <p>COG quarterly surveys are undertaken, and other surveys are generally recorded on eBird. Analysis of these data will identify species but not necessarily indicate numbers (in the absence of surveys). The best population data is for Latham's Snipe, but this</p>

has limitations. This is being addressed through the ANU PhD on Snipe (i.e., population estimates for the ACT).

Biomass management at Mulligans Flat Dam occurs at accessible locations through slashing on tracks and the dam wall.

Objective 4: Enhance habitat for shorebirds.

Action	Indicator	Progress
4a. Where appropriate, in urban wetland areas, provide areas of shallow water, mudflat and marshy habitat for shorebirds together with shorelines that have low gradients for waterbirds.	4a. Increase in number and area of urban wetlands.	<p>4a. During the reporting period (2018–2023) additional urban wetlands have been built in new suburbs across the ACT in Ginninderry, Whitlam and North Coombs. The total additional area is approximately 50,000 m².</p> <p>Since 2018, the ACT Healthy Waterways Program has also created 2.8 ha of aquatic habitat—ponds, wetlands, raingardens and channel naturalisations—within urban and peri-urban areas of the ACT. Shorebirds have made use of the new habitat and ACT residents have reported sightings of listed migratory shorebirds at some of the new wetlands and JWNR.</p> <p>Guidelines for the creation and management of habitat for Latham’s Snipe are being developed by the Victorian Wader Study Group. The ACT has representatives in this group. The guidelines will be updated as new information arises through a PhD being undertaken at the ANU on Latham’s Snipe.</p>
4b. Encourage and support land managers with wetland areas on leased land to improve habitat for migratory species on land under their management.	4b. Increase in wetland areas on leased land managed for migratory species.	<p>4b. From 2021–2023, ACT Natural Resource Management (ACT NRM within the EPSDD) delivered a dam enhancement project across eleven dams on seven leases. The dam surrounds were revegetated with trees and shrubs and at some locations included wetland sedge species. The increase in vegetation cover supports greater aquatic biodiversity and provides increased habitat for shorebirds.</p>

Objective 5: Preserve the character and quality of exotic grassland areas adjacent to and within JWNr (e.g., Jerrabomberra Backwaters).

Action	Indicator	Progress
5a. Use cattle grazing, where appropriate, as a management treatment for rural lands adjacent to wetlands to provide additional habitat for Latham's Snipe.	5a. Increase in observations of Latham's Snipe.	<p>5a. Rotational grazing of cattle is being applied in suitable areas to rural lands adjacent to wetlands in JWNr. This intermittent grazing method improves habitat by preserving the character and quality of exotic grassland areas, creating suitable sedge height and attracting migratory birds. The cattle also create pugging which is favoured by Latham's Snipe for foraging.</p> <p>Numerous survey activities for Latham's Snipe are currently being undertaken. Activities include: COG quarterly surveys; GPS tracking of local movements of Latham's Snipe; monitoring every Sunday by two volunteers who walk a set path of 6.3km.</p> <p>Data for observations of Latham's Snipe is difficult to assess due to the impact of rainfall and extent of wet areas. This is one of the issues being addressed through the ANU PhD on Latham's Snipe. Accurate data will likely be available by 2025.</p>

GOAL 1 (FLYCATCHERS): Protect, restore and enhance important wetland, wildlife corridor and breeding habitat.

Objective 1: Manage known sites and important habitat in the ACT

Action	Indicator	Progress
1a. Take flycatcher habitat needs into account during management planning for Namadgi and Tidbinbilla.	1a. Management actions for flycatchers are included within reserve management plans.	<p>1a. The current management plans for Namadgi (2010) and Tidbinbilla (2012) contain management actions that aim to maintain and improve flycatcher habitat.</p> <p>Revision of these plans is due and communication to retain these management actions are ongoing.</p>

Objective 2: Maintain important breeding and foraging habitat for flycatcher species.

Action	Indicator	Progress
2a. Encourage citizen science to monitor breeding and foraging by flycatchers in forest and woodland gullies.	2a. Records identify the location and extent of important breeding and foraging habitat.	2a. Most observations of the species are added to the authoritative bird database eBird. No known analysis of these records has been undertaken to understand if the objective has been met.

GOAL 2 (SHOREBIRDS): Manage identified threats to important sites and habitat.

Objective 1: Monitor presence of invasive and roaming domestic animals (foxes, cats, dogs) at JWNR.

Action	Indicator	Progress
1a. Use remote camera trapping techniques to monitor predators.	1a. Camera trapping techniques for monitoring predators are deployed.	1a. Sensor cameras have been deployed to detect invasive species and the effectiveness of habitat improvements to protect native animals. Monitoring of foxes has indicated a very small stable population within acceptable levels of around three individuals (see Objective 5, action 5a). Spotlighting is used to monitor rabbits and other introduced or invasive animals within the reserve. Quarterly spotlighting surveys are undertaken to monitor presence of roaming domestic animals.

Objective 2: Monitor visitor disturbance.

Action	Indicator	Progress
2a. Set up a visitor monitoring system at JWNR near important foraging habitat at Kellys Swamp	2a. Visitor monitoring is undertaken.	2a. Regular monitoring is undertaken by ACT PCS staff and the bird watching community. Pedestrian counters are installed along the Kellys Swamp boardwalk, the shared path, and the Billabong walking track. A CCTV camera is installed at the Dairy

and Jerrabomberra Backwaters from September to March, when shorebirds use the area.

Road carpark and camera traps are randomly placed to monitor birds and any disturbance.

2b. Manage public access into Horse Park Wetlands.

2b. No indicator identified.

2b. Public access to Horse Park Wetlands is currently not permitted. The area is owned by the ACT Government and managed under a private agistment license.

2c. Provide signage to inform visitors about the Horse Park Wetlands.

2b. Signage is provided.

2b. Public access is currently prohibited. Signage is not required to manage disturbance, however, signage could be considered in the future for education of nearby residents.

Objective 3: Reduce impacts from roaming domestic cats at JWNR and Horse Park Wetlands.

Action	Indicator	Progress
3a. Review and improve cat management including cat containment near wetlands.	3a. Adoption of cat containment in areas adjacent to wetland areas.	<p>3a. Several new suburbs across the ACT have been declared cat containment areas in order to improve nature conservation. This benefits the new urban wetlands that have been built in new suburbs across the ACT including in Ginninderry, Whitlam and North Coombs.</p> <p>Horse Park Wetlands are located in Forde which is declared a cat containment area. The existing suburbs adjacent to JWNR have not been declared cat containment areas, however all cats in the relevant suburbs born after 1 July 2022 must be contained and all housing development sites in new areas will be required to be cat containment areas.</p>

Objective 4: Reduce impacts from roaming domestic animals (dogs).

Action	Indicator	Progress
4a. Review impacts of dogs around wetland areas including dog off-leash areas.	4a. Review completed.	4a. Not commenced.

4b. Maintain the prohibition of dogs within JWNR and at Horse Park Wetlands.

4b. No indicator identified.

4b. The [Activities Declaration](#) for JWNR prohibits dogs. 'No dog' signs have been added to several entry points along the shared path at JWNR. PCS staff monitor visitors and request visitors with dogs to leave the park as well as educating the visitors about bird habitat.

Horse Park Wetlands is owned by the ACT Government and is currently under a private agistment lease which does not allow members of the public or their dogs to enter the area. The current management plan for Horse Park Wetlands is being revised.

Objective 5: Manage impacts of predation by invasive animals through ongoing pest management at JWNR.

Action	Indicator	Progress
5a. Investigate the feasibility of broader pest control programs (e.g. foxes, feral cats, wild dogs) at JWNR.	5a. Feasibility study undertaken.	<p>5a. Biannual spotlight surveys have indicated there is a stable population of three foxes. Studies on fox control have suggested that exterminating the stable fox population will increase numbers of foxes in an area as others will readily move into vacated territory. ACT PCS staff monitor the fox population. Spotlight surveys have not found any feral cats or wild dogs in JWNR in the reporting period.</p> <p>The feasibility of broader pest control programs was considered unlikely at this stage considering there is a consistently very low number of foxes, no wild dogs and no feral cats in the reserve.</p>
5b. Monitor effectiveness of pest management at JWNR and Horse Park Wetlands.	5b. Annual operational programs indicate effectiveness of monitoring.	<p>5b. Annual surveys are undertaken for birds, frogs, spotlight counts (feral and native animals), Platypus, Rakali, and turtle nests at JWNR.</p> <p>Consistent results of biannual spotlight surveys and camera trapping since 2012 have shown stable and acceptable levels of pest animals at JWNR, therefore pest management controls have been unnecessary.</p> <p>Horse Park Wetlands is located within an ACT Government owned area under a private agistment license and is not subject to an annual operational program. ACT Government staff and the licensee informally monitor the site and have not observed predation by invasive animals.</p>

Objective 6: Manage recreation to limit disturbance at key wetlands including JWNR and Horse Park Wetlands.

Action	Indicator	Progress
6a. Included provisions to manage disturbance, such as through education, Activities Declarations or management of access, in management and operation plans.	6a. Management plans include provisions to address disturbance.	<p>6a. The JWNR Plan has numerous provisions to address disturbance from activities such as littering, trampling vegetation, eroding tracks, domestic animals and vandalism of bird hides. The JWNR Plan also includes the application of three 'management zones' (wildlife refuge, refuge buffer, and conservation, education and recreation) which protect ecological values through limiting the types of activities that are permitted.</p> <p>The current Activities Declaration for JWNR manages recreation by only allowing bike riding to occur on sealed cycle paths and marked trails. It also prohibits dogs, equestrian activities, camping, and swimming.</p> <p>Additionally, PCS staff, including the JWNR rangers, are proactive with educating/ advising the developers of adjacent future development to limit access to the reserve from the new development areas to reduce the impact of increased residential population surrounding JWNR.</p> <p>Horse Park Wetlands is not on public land, and recreation does not occur.</p>

Objective 7: Monitor the water quality at key sites including at JWNR.

Action	Indicator	Progress
7a. Monitor and analyse water quality at JWNR on an ongoing basis.	7a. Monitoring shows no decline in water quality or the health of wetlands.	<p>7a. As part of the ACT Waterwatch program, water quality monitoring activities are regularly undertaken by Friends of Jerrabomberra Wetlands. Results are reported in the annual Catchment Health Indicator Program (CHIP) report. Results from monitoring over the reporting period showed that no decline of water quality had occurred. Each year the overall rating for JWNR was C+ (fair).</p>

Objective 8: Manage impacts of residential development on wetland sites.

Action	Indicator	Progress
8a. Consider noise and lighting impacts from residential or recreational development in concept and estate development plans near wetland sites.	8a. Impacts from residential development are considered in development plans.	<p>8a. The Draft District Strategy: Inner South considers the impacts from residential development at East Lake and Dairy Road and makes provisions for reducing these impacts through requiring 'appropriate green space buffers to limit impact of future development'.</p> <p>Biodiversity Sensitive Urban Design guidelines (ACT Government 2023) have been prepared that will assist to manage development impacts throughout the development's design by guiding how new developments can work in harmony with the natural environment to help protect and improve biodiversity and ecological connectivity.</p> <p>The ACT Practice Guidelines for Water Sensitive Urban Design (ACT Government 2017; ACT Government 2018) provides guidance for developments to minimise water runoff, ensure runoff causes the least amount of damage and promotes the wise use of water to improve urban environments.</p> <p>Developments that may impact species listed under the Environment Protection and Biodiversity Conservation Act (1999) (EPBC Act) need to consider the National Light Pollution Guidelines for Wildlife.</p>

GOAL 2 (FLYCATCHERS): Manage identified threats to important sites and habitat.

Objective 1: Maintain breeding success for Rufous Fantail and Satin Flycatcher.

Action	Indicator	Progress
1a. Encourage citizen science to monitor breeding and foraging by flycatchers in forest and woodland gullies.	1a. Up-to-date records of the location and extent of flycatcher breeding habitat are kept and used to inform adaptive management.	<p>1a. Most observations of the species are added to the authoritative bird database eBird.</p> <p>No known analysis of these records has been undertaken to understand if the objective has been met.</p>

GOAL 3: Improve knowledge about the occurrence and management of listed migratory species in the ACT with particular focus on Latham's Snipe

Objective 1: Increased knowledge about the role of JWNR, Horse Park Drive Wetlands and other West Belconnen Pond and ACT wetlands for Latham's Snipe.

Action	Indicator	Progress
1a. Participate in cooperative regional and national conservation and research programs for the observation of listed migratory species, including: Latham's Snipe Japan-Australia Foundation (2015); Jerrabomberra Wetlands Latham's Snipe Project (ACT Govt 2016 unpubl.)	1a. Completion of annual ACT-wide Latham's Snipe surveys.	<p>1a. The Latham's Snipe Project was established in 2016. The project has included a range of survey and monitoring techniques including satellite tracking, geolocators, radiotracking, ACT-wide surveys and leg flagging.</p> <p>Annual surveys for Latham's Snipe are conducted between November and February.</p> <p>A PhD project awarded in 2022 is collating this data and collecting new movement data using Bluetooth GPS tracking devices in 2023 and Argos satellite devices in 2024 (funding dependent). Results will inform habitat use and population estimates for the ACT, and support development of habitat creation guidelines and management strategies for Latham's Snipe in both urban and rural landscapes.</p>
1b. Support expansion of the COG Waterbird Survey (WBS) to cover key sites in the ACT (e.g. JWNR, Fyshwick Sewage Ponds, major urban lakes and ponds)	<p>1b.i. COG's regular three-monthly surveys continue at JWNR.</p> <p>1b.ii. ACT sites are added to the COG waterbird survey.</p>	<p>1b.i. The 'Latham's Snipe Surveys' project has been set up on eBird. All surveys which record Latham's Snipe are placed onto eBird by the Canberra Ornithologists Group (COG) volunteers.</p> <p>Surveys at JWNR and Fyshwick Sewage Ponds continued throughout the reporting period except for one survey cancelled due to COVID restrictions.</p> <p>1b.ii. No other sites are included in the quarterly surveys, but other sites are opportunistically surveyed.</p>
1c. Encourage citizen scientists in the Canberra community to record opportunistic observations of migratory species and to participate in systematic surveys.	1c. Records of species are collated and reported on.	1c. Across the ACT there is an extensive network of highly knowledgeable volunteer bird surveyors. Three times each year, a group of these surveyors monitor specific sites in the ACT as part of National Snipe Surveys. Data from the surveys is collated and reported by the Wader Bird Study Group. PCS Rangers and other community members also provide data on Latham's Snipe sightings informally.

GOAL 4 (SHOREBIRDS): Raise community awareness and engagement in initiatives to survey and conserve listed migratory species.

Objective 1: Raise awareness about listed migratory shorebirds and the importance of JWNR.

Action	Indicator	Progress
1a. Use JWNR and other wetland locations for educating the community.	1a. Increase in the number of events at JWNR.	<p>1a. From 2018 to 2020 there was an overall increase in the number of events at JWNR including school group activities and open days.</p> <p>From 2015 to 2020 school visits to the wetlands were highly successful with up to 500 students a week. The Tails and Trails program for 2–5-year-olds was available once a week, the Young Ranger program for 7–15-year-olds occurred once a month, and a Wetlands Open Day occurs once a year.</p> <p>Volunteers through the Woodlands and Wetlands Trust and ParkCare help with various interpretation activities.</p> <p>Friends of Jerrabomberra Wetlands support and host events such as World Wetlands Day, the Trails and Tales toddler activity program, Young Rangers Program and Ministerial visits.</p>
1b. Prepare online interpretative material.	1b. Number of online interpretative materials.	<p>1b. The Jerrabomberra Wetlands website promotes events and activities at JWNR. The Woodlands and Wetlands Trust has developed an audio tour app for JWNR that users can take on three self-guided walks: (https://www.jerrabomberrawetlands.org.au/audiotour).</p> <p>The Jerrabomberra Wetlands Facebook page, managed by the Woodlands and Wetlands Trust, posts events, activities and stories.</p>

Objective 2: Engage the community in awareness activities to create understanding of Horse Park Wetlands and Horse Park Drive Wetlands.

Action	Indicator	Progress
2a. Survey the community and visitors and gain feedback from visitors for use in adaptive management plans.	2a. Increase in the number of community survey/engagement activities.	2a. Public access to Horse Park Wetlands is currently not permitted. Any potential future access to the wetlands through infrastructure, such as boardwalks, will form part of a heritage and ecologically sensitive revitalisation strategy for the precinct where Horse Park Wetlands are located. The community will be engaged should any future revitalisation of the precinct be considered.

Objective 3: Engage volunteers in programs and initiatives to maintain and restore habitat.

Action	Indicator	Progress
3a. Support habitat restoration work undertaken by community groups.	3a. Increase in the number of participants in programs to maintain and restore habitat.	<p>3a. Friends of Jerrabomberra Wetlands was established in 2013. Two work parties a month are held. Other volunteer groups include the Australian Defence Force Academy (ADFA) cadets through the Weary Dunlop Challenge, corporate groups through ParkCare and the Woodlands and Wetlands Trust. Canberra Institute of Technology students are involved in projects once a year and school students with indigenous heritage visit once a term.</p> <p>Friends of Jerrabomberra Wetlands is also involved in FrogWatch, Waterwatch, vegetation surveys, Platypus surveys, bird counts, turtle migration, nesting and monitoring and Latham's Snipe surveys.</p> <p>Advice is provided through the Lake Users Group to boat operators using Kingston Boat Harbour on the restrictions to enter Jerrabomberra Reach.</p> <p>Herbicide control and chipping of invasive plant species is undertaken throughout the year by dedicated volunteers, contractors, and PCS staff.</p>

References

- ACT Government 2010. *Jerrabomberra Wetlands Nature Reserve Plan of Management 2010*. Territory and Municipal Services. ACT Government, Canberra. <https://www.legislation.act.gov.au/di/2010-280/>
- ACT Government 2015. Nature Conservation (Jerrabomberra Wetlands Nature Reserve) Activities Declaration 2015 (No 1). ACT Government, Canberra. <https://www.legislation.act.gov.au/ni/2015-294/>
- ACT Government 2016. Unpublished Jerrabomberra Wetlands Latham's Snipe Project. ACT Government funded component. Deed of Grant between the Australian Capital Territory, Environment and Planning Directorate and the Woodlands and Wetlands Trust (Jerrabomberra Wetlands).
- ACT Government 2017. *ACT Practice Guidelines for Water Sensitive Urban Design (Module 1: Introduction to WSUD in the ACT)*. Environment, Planning and Sustainable Development Directorate. ACT Government, Canberra. https://www.environment.act.gov.au/_data/assets/pdf_file/0006/1501566/WSUD-Module-1-Introduction-to-WSUD-in-the-ACT-5Mar2018.pdf
- ACT Government 2018. *ACT Practice Guidelines for Water Sensitive Urban Design (Module 2: Designing Successful WSUD)*. Environment, Planning and Sustainable Development Directorate. ACT Government, Canberra. https://www.environment.act.gov.au/_data/assets/pdf_file/0007/1501567/WSUD-Module-2-Designing-Successful-WSUD-Solutions-in-the-ACT-1June2018.pdf
- ACT Government 2018. *Listed Migratory Species Action Plan*. Environment, Planning and Sustainable Development Directorate, ACT Government, Canberra. <https://www.legislation.act.gov.au/di/2018-27/>
- ACT Government 2021. *ACT Cat Plan 2021–2031*. A plan developed under the 2017 ACT Animal Welfare and Management Strategy. ACT Government, Canberra. <https://yoursayconversations.act.gov.au/cats-and-dogs/ACT-Cat-Plan>
- ACT Government 2022. *Draft Inner South District Strategy*. Environment, Planning and Sustainable Development Directorate. ACT Government, Canberra. <https://yoursayconversations.act.gov.au/act-planning-review/draft-inner-south-district-strategy>
- ACT Government 2023. *ACT Biodiversity Sensitive Urban Design Guide*. Environment, Planning and Sustainable Development Directorate. ACT Government, Canberra. <https://www.planning.act.gov.au/planning-our-city/planning-system/territory-plan/design-guides#biodiversity>
- DCCEEW 2023. *National Light Pollution Guidelines for Wildlife*. Department of Climate Change, Energy, the Environment and Water (Commonwealth), Canberra.
- Latham's Snipe Project 2023. Latham's Snipe Project website at: <https://lathamssnipeproject.wordpress.com/>
- Woodlands and Wetlands Trust 2023. Jerrabomberra Wetlands website at: <https://www.jerrabomberrawetlands.org.au/>

Martin E and Dowling P 2006. Unpublished Horse Park Gungahlin – Conservation Management Plan. Final report prepared for “Horse Park” lessees, Alan and Doris Pattinson.

Upper Murrumbidgee Waterwatch 2022. Catchment Health Indicator Program. Canberra. Waterwatch Upper Murrumbidgee website at: <https://www.act.waterwatch.org.au/data/chip-reports>



Latham's Snipe (Gallinago hardwickii). Photo: Deb Ralph.