



Yellow-billed Spoonbill & Black-winged Stilt

Local Government Taking Action to Protect Ecosystems

2016/17
Central Tablelands
Local Land Services
Incentive Funding

Restoration of Detention Basins to Provide Habitat Linkages

ENVIRONMENTAL ISSUES

Habitat Linkages: Bellevue Estate

Mid-Western Regional Council

There are three detention basins along White Circle in Bellevue Estate, Mudgee, as well as an additional basin off Rifle Range Road which are all part of a major catchment feeding into the Cudgegong River.

These detention basins are barren grassed landscapes that currently provide little to no amenity value or environmental benefit. This project will result in planting of the detention basins and associated drainage reserves with native vegetation to create valuable habitat and linkages for native fauna.

Plant species will include those known to be critical habitat for a number of threatened bird species including the Regent Honeyeater and Glossy Black Cockatoo amongst others.

What is a Detention Basin?

Detention basins are engineered structures designed to capture stormwater during rainfall

events and release the captured stormwater to downstream receiving waters in a more controlled manner.

Detention basins are primarily designed as a flood mitigation tool and typically remain as dry, grassed basins outside of rain events. By collecting and slowing the flow of stormwater, these basins act to direct water to creeks and rivers at a slower, more natural rate thereby minimising erosion and flooding of waterways.

Improving Habitat

As well as planting these existing detention basins with native vegetation, wetland areas will be constructed within the base of the detention basins. This will help to further slow water flows, remove contaminants and capture water during smaller rainfall events.

Additionally, these wetlands will provide valuable migratory bird habitat by facilitating open water connections.



Urbanisation

Ever expanding urban areas mean that natural waterways are often negatively altered having impacts on water quality and habitat values. Stormwater typically travels at high velocities and collects pollutants from roads, roofs and other hard surfaces.



Habitat Creation

By utilising existing detention basins and drainage reserves, which often dissect urban areas, habitat linkages can be created. Constructed wetlands capture and treat stormwater while providing important foraging habitat for a range of wetland species.

Habitat Linkages: Bellevue Estate



Mid-Western Regional Council

The project sites, consisting of drainage reserves and detention basins, are located 1.5km south of Putta Bucca Wetlands. Putta Bucca has been proven to attract threatened and migratory birds to the area as well as to provide a refuge for these species.

Additionally, a very large dam is located 400m north-east of the project sites, in between the detention basins and Putta Bucca. This dam is a large open water body with very little fringing vegetation. It is envisaged that this project will provide important connectivity between these sites as well as shallow water foraging areas for wetland dependent bird species.

The Value of Wetlands

Wetlands are often referred to as the 'kidneys' of a catchment as they act to filter contaminants out of water systems. This is achieved by slowing water flows which allows for sediments to drop out of suspension, as well as to facilitate

the uptake of excess nutrients by specialised wetland vegetation - sedges and rushes - known as macrophytes.

Wetlands also provide critical habitat for a range of fauna species and particularly birds. Species such as the Yellow-billed Spoonbill, Australian Painted Snipe and Black-winged Stilt have adapted specialised beaks for foraging in these environments.

Urbanisation and agricultural production has resulted in many wetlands being drained to enable construction, grazing or cropping with negative effects on many of our native fauna species.

Projects such as this one that create urban wetlands are not only valuable for wildlife, but also as an educational tool to allow residents to appreciate the biodiversity values of these complex systems.



Australian Painted Snipe - Male



More Information

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Local Government Taking Action to Protect Ecosystems

The Central Tablelands Local Land Services incentive funding supports land managers and communities working together to build resilient communities in productive healthy landscapes.

The Local Government Taking Action to Protect Ecosystems project aims to assist Councils throughout the Central Tablelands to protect and enhance our natural environment through the delivery of projects that exhibit best management practice and innovative solutions to existing

issues.

This will be achieved by targeting funding towards Member Councils of the Environment & Waterways Alliance that can demonstrate appropriate planning, project management and community engagement skills .

ACKNOWLEDGEMENTS

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