

Rehabilitating PAC Park Waterway

COUNCIL NAME

Parkes Shire Council

WEB ADDRESSparkes.nsw.gov.au**SIZE**5955 square
kilometres**POPULATION**

15,337

Overview

Stormwater run-off from Parkes runs through PAC Park before it enters Goobang Creek. The stormwater run-off has resulted in poor water quality, siltation and weed infestation in the catchment. Parkes Shire Council has used water sensitive urban design principles to create a functional wetland with a sediment basin to collect large sediments, water plant zones to filter out harmful nutrients and open water zones, providing a natural way to treat and remove pollutants before it enters Goobang Creek. Volunteers have helped with revegetation and rehabilitation of the riparian zone, with numerous local community, business and school groups volunteering their time to assist on the project.

Background

Parkes Shire is projected to experience an increase in the frequency and intensity of rainfall events. Such events will impact water quality within PAC Park waterway, pose harm to Council's stormwater infrastructure and the biodiversity and aesthetic qualities of the PAC Park waterway. The construction of a wetland treatment system at PAC Park has moderated harm and captured opportunities associated with climate change by:

- Significantly improving water quality within PAC Park waterway, Goobang Creek and other downstream environments.
- Slowing stormwater velocity during high flows, reducing sediments and gross pollutants within the waterway and ameliorating erosion on site.
- Revegetating significant areas of the waterway, stabilising soils, aiding stormwater filtering and evapotranspiration, providing habitat and increasing the biodiversity and aesthetic qualities of PAC Park waterway and reserve.

Implementation

Dredging and shaping of the waterway through PAC Park was undertaken to introduce hydrological complexity into the creekline and wetland. This facilitates biodiversity and improves wetland functionality.

After the earthworks and rock flume repair were completed, the Parkes community was called upon to help plant the 20,000 native sedges, rushes, reeds and grasses that populate the macrophyte zone and fringe the wetland edges. Parkes' local Landcare group was engaged, and both Landcare and Council organised two community planting days. The community was engaged through existing contacts, posters and a strong media presence leading up to the events. To show appreciation and provide further awareness, media releases were also produced following all major community group activity days. Interpretive signage has been installed on site, further engaging PAC Park users with the project.

Revegetation efforts have been very successful, with all planting conducted by volunteers. The native plant species did not establish as fast as expected and weed growth remains a problem. Council will continue to control weeds on site to ensure optimum chance of plant success.

Macrophytes within the shallow water zone have colonised these areas nicely, creating dense swathes of reeds, sedges and rushes.

Council staff incorporated water monitoring and sampling at PAC Park into their general monitoring schedule. Three monitoring points have been established in the project area: upstream of the wetland, within a macrophyte zone in the centre of the wetland, and downstream of the wetland. Council will continue to monitor water quality.



December 2015



March 2016



May 2017

Outcomes

The main outcomes of this project (to improve water quality, increase biodiversity and engage the community) have been achieved through careful planning and commitment from Council staff, and a dedicated team of community and Landcare volunteers. Stormwater running through the wetland system downstream into Goobang Creek is filtered through large swathes of macrophytes, and data illustrates the system is effective at improving water quality as stormwater passes through the system.

Biodiversity has been greatly improved on site, with weeds removed and different habitats created to cater for a wide range of water plants and animals. The natives planted on site have greatly increased the diversity of flora on site, and have increased the diversity of fauna utilising these as foraging and shelter habitat.

REFERENCES

www.parkes.nsw.gov.au/environment/sustainable-living/environmental-programs/

Engaging the wider community and eight different volunteer groups has given the project a real community focus. Involvement from local schools, in particular, has allowed Council to provide environmental education opportunities to students, and engage them in the issues affecting the Parkes environment including stormwater pollution. These partnerships will continue into the future, with PAC Park able to act as an 'outdoor classroom' for schools and community groups to use for environmental education activities and initiatives.

Key Learnings

Developing strong contacts with existing networks, such as schools, business and community groups, is important when engaging with the community. These groups allowed all planting work to be undertaken with volunteer labour. They also provided greater reach. For example, working closely with Central West Lachlan Landcare gave Council access to additional contacts to recruit for community planting days.

The dramatic change in aesthetic appeal of PAC Park has resulted in Council's commitment for ongoing investment in the park. Additional infrastructure is planned for the reserve to increase its recreational value and to make it more accessible and user friendly for a larger proportion of the community.

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