NSW REC NEWSLETTER

NSW Roadside Environment Committee

May 2022 Edition 50

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Latest news from the REC

The NSW Roadside Environment Committee (REC) recently organised a forum highlighting good practices in linear reserve environmental management.

The forum was held on Tuesday 17 May 2022 at the NSW Teachers Federation Conference Centre, Surry Hills, Sydney.

A recording of the forum presentations can be accessed at https://www.molinostewart.com.au/roadside-environment-committee-forum-2022/

50th edition of this newsletter

This is the fiftieth edition of the NSW Roadside Environment Committee newsletter. The newsletter highlights good practices in the environmental management of NSW linear reserves which include roadsides, travelling stock reserves, rail corridors and utility easements. Previous editions of the newsletter

can be found at https://roads-waterways.transport.nsw.gov.au/about/environment/protecting-biodiversity/index.html

To mark the occasion, this edition of the newsletter includes contributions from some of the REC member organisations about their recent environmental management initiatives.

Supporting councils to manage roadside environments

Council Roadside Reserves Project

Funded by the NSW Environmental Trust to build the capacity of councils and to assist them to integrate roadside reserve management into their systems and processes.

FIND OUT MORE →

Strategic Documents

The Council Roadside Environmental Management Framework and the Roadside Vegetation Management Plan template aim to help councils strategically manage roadside reserves.

FIND OUT MORE →

Review of Environmental Factors Templates and Resources

A range of templates and resources developed to assist councils to assess the potential impacts of their roadside activities on the environment.

FIND OUT MORE →

Rapid Assessment Methodology

Learn how to use the Rapid Assessment Methodology to assess the conservation value of roadside reserves.

FIND OUT MORE →

Asset Management

Interested in developing natural asset management plans? These templates will guide you through the process.

FIND OUT MORE →

Case Study Videos

Hear about some of the great work undertaken by two councils funded through the Council Roadside Reserves Program.

FIND OUT MORE →

Local Government NSW (LGNSW) is an independent organisation that exists to serve the interests of New South Wales general and special purpose councils. It is a member of the NSW Roadside Environment Committee.

Balancing the demands of road construction, maintenance, safety, and the needs of road users, while protecting environmental values along the roadside is a challenge faced by local councils.

LGNSW, with the assistance of the NSW Environmental Trust, delivered a four-year project to support councils to deliver better environmental outcomes in their roadsides. The Council Roadside Reserves project provided grants to councils to undertake activities including assessments of roadside values and integrating management actions into the council's strategic and operational planning systems.

Across the 19 council projects funded, 1,000 conservation value assessments were conducted on roadsides, more than 300 council staff were trained, and environmental management plans and policies were developed to improve the management of roadside reserve environmental values.

Griffith City Council and Wagga Wagga City Council were two councils that received grants, with their projects showcased in these videos - https://www.lgnsw.org.au/Public/Public/Policy/REM-pages/CRR_videos.aspx

Ongoing training is available to councils through four free on-line training modules which guide councils through the process of managing roadside reserves. This resource won the 2021 LearnX Gold Award for Best eLearning Design - Free eLearning Resource. See https://www.lgnsw.org.au/Public/Public/Policy/REM-pages/CRR_training.aspx

Encouraging councils to view their roadside environments as part of council's broader asset management approach was explored. Despite the complexities of this approach, the project has developed some guidance on this including asset management templates for roadside trees and vegetation. See https://www.lgnsw.org.au/Public/Public/Policy/REM-pages/AMP_Templates-Resources.aspx

Councils working in roadside areas must consider the Environmental Impact Assessment requirements of their works. A range of Review of Environmental Factors (REF) templates were developed to support councils depending on the scale of their activity. See https://www.lgnsw.org.au/Public/Public/Policy/REM-pages/REF_Templates-Resources.aspx

Visit the LGNSW website for access to all these resources, including detailed case studies of council activities underway across NSW. https://www.lgnsw.org.au/Public/Public/Policy/Roadside-Environmental-Management-pages/Roadside-Environmental-Management.aspx

Significant Roadside Environment Area sign erected by Parkes Shire Council

2022 NSW Roadside Environmental Management Award

The Excellence in the Environment Awards for Local Government, held annually, recognise the outstanding achievements by NSW councils in managing and protecting the environment.

The awards program includes the Roadside Environmental Management Award category to recognise councils' on-ground achievements in roadside environmental management and strategic initiatives to build their capacity to deliver these outcomes.

Councils are encouraged to share their activities in this area and are invited to submit an entry. Entries open on the **6 June 2022** and close on **27 July 2022**.

Winners will be announced at an award forum and ceremony in Sydney on 6 December.

Details about the Roadside Environmental Management Award can be found at https://www.lgnsw.org.au/Public/Public/Members-Services/Environment-Awards/REM_award.aspx

This category is sponsored by the NSW Roadside Environment Committee.

Last year's winner was Penrith City Council. More details and a case study on its project are available at https://www.lgnsw.org.au/Public/Public/Members-Services/Environment-Awards/2021-winners/REM_award.aspx

Awards open: 6 June 2022

Entries due: 27 July 2022

Visit www.lgnsw.org.au

Ausgrid bird diverter installation by drone

Ausgrid is the largest distributor of electricity on Australia's east coast, providing power to 1.8 million customers including homes, businesses, hospitals, schools and essential services. Its network spans 22,275 square kilometres throughout Sydney, the Central Coast and the Hunter Valley. Ausgrid is committed to minimising its risks to the environment and is a proud member of the NSW Roadside Environment Committee. The following case study provides an example of Ausgrid's commitment to the environment.

Ausgrid was notified about several black swan fatalities under Ausgrid powerlines at Ash Island near Newcastle. Ash Island is comprised almost entirely of sensitive wetlands and is a popular site for bird observers. Many of Ausgrid's overhead powerlines on the island have bird diverters installed to prevent bird strike.

A site inspection confirmed swan carcasses under the powerlines in a section where there were no bird diverters installed. Large water bodies were located either side of this section of powerline making it a likely flight path.

Work began immediately on developing a solution. There were a number of constraints at the site including wetlands and a rail line immediately adjacent to the powerlines. The wetlands meant that installation using a standard EWP was not possible. After consideration of alternative installation methods, it was decided to install the diverters using a drone.

The drone, while the preferred method, presented a number of constraints itself. The drone required a power outage on the powerline and it required relatively calm winds to be operated safely and efficiently (Ash Island is not known for light winds). Further, commercial drones cannot be flown within 50 metres of a person under CASA rules. This required the project to be completed during a powerline outage, rail shutdown and on a calm day.

The bird diverters were installed over three days with the drone that was modified to carry four bird diverters for each flight. In total, 244 bird diverters were installed across 18 spans at intervals of approximately 5 metres over a total of 1,325 metres. To install the 244 bird diverters, Infravision (the selected contractor) carried out 83 flights over three days.

Drone installing bird diverters on powerlines

NCC and linear reserves

As the state's leading environmental advocacy organisation, the Nature Conservation Council of NSW (NCC) aims to protect nature in NSW and create the conditions it needs to thrive. It is a member of the NSW Roadside Environment Committee.

Over the last decade the NCC has advocated for the protection of Travelling Stock Reserves (TSRs), roadsides and other linear areas of native vegetation. In representations to governments via meetings and submissions and direct liaison with government agency representatives, it has emphasised the key environmental, economic, cultural and social benefits provided by these oft-forgotten parts of the countryside. Through advocacy and submissions, NCC has argued the need for an overarching framework to provide a clear and consistent guide for managing and protecting those important values.

Through its representation on local Bush Fire Management Committees, NCC also encourages ecologically sustainable fire management practices that are underpinned by science and seek to promote biodiversity. Its representatives advocate the implementation of scientifically-based fire management activities in TSRs, roadsides, and other linear environments for both ecological enhancement and, where appropriate, safety and agricultural purposes.

NCC recognises that the use of fire in TSRs and along roadsides has short and long-term impacts on biodiversity and can also impact on their value as a livestock grazing resource. Consequently, it has lobbied for the implementation of a consistent data collection, monitoring and improvement approach across all linear environments to better understand the impacts of fire on isolated bushland corridors and to allow for effective adaptive management.

Although the role of livestock management in TSRs may be reduced, the TSR network is still used as an important source of feed during periods of drought. As a network of remnant and diminishing native vegetation, NCC has long argued that TSRs also play an important role in connecting natural areas which have been set aside for conservation, recreation or economic purposes, with fire an important component in ensuring their continued value.

For the long-term future of linear landscape features that are also recognised for their environmental values, NCC considers that regardless of economic value, TSRs and similar areas should be appropriately administered and resourced. Sound management strategies should be in place which enhance the significant environmental, cultural, heritage and social benefits they provide rural communities. NCC therefore continues to oppose any proposals to further fragment the TSR network, particularly where financial benefits are prioritised above ecological and social imperatives.

ARTC launches Environmental Principles

The Australian Rail Track Corporation (ARTC) operates one of the largest rail networks in the nation spanning 8,500 km across five states including NSW. It is a member of the NSW Roadside Environment Committee.

Environmental management at ARTC has moved into an exciting phase. In 2021, it introduced a new Environment Policy and supporting Principles - demonstrating to its people, contractors, customers, and community that caring for the environment is a high priority and it is committed to working in a safe and environmentally responsible way.

The Environment Policy goes beyond compliance and really considers how ARTC wants to operate today and into the future.

Supporting its Policy are four Environment Principles which guide ARTC's behaviour to build a strong environmental culture across the business:

1. We're accountable and proactive
2. We're environmentally conscious
3. We respect the environment
4. We manage resources and assets responsibly.

Each Principle has standards and actions the ARTC teams can easily adopt in day-to-day work, with many teams across the business exemplifying these Principles. For example, out on track, teams have found innovative ways to beneficially reuse spoil in the track formation and off-site development projects, avoiding unsightly stockpiles in the rail corridors.

The Environment Policy is available here:
https://www.artc.com.au/uploads/Environment-Policy-CEO-Signed.pdf

First Action plan - Crown land 2031

Crown land is held by the NSW Government on behalf of the public. It includes land, coastal areas, waterways, built assets, and community infrastructure. It is a unique and complex estate comprising rangelands in the west, forests, grasslands and mountain terrain, through to waterways across NSW, expansive stretches of coastline and the marine estate beyond our shores.

The use of Crown land supports agriculture, regional economies and commerce, environmental protection, amenity and community cohesion.

Crown land 2031 is a 10-year strategy to ensure that Crown land is put to its best uses to benefit communities. It will activate Crown land to grow tourism, support community groups, boost regional economies, advance Aboriginal interests, and provide more green open space.

Crown land is public land, and this plan sets the road map for the Crown estate to support activities to create social, economic, cultural and environment benefits.

Crown land 2031 will be achieved through multi-year action plans so that priorities and actions can adapt and respond to changing circumstances, emerging evidence and community expectations.

Crown land 2031 can be accessed at https://www.industry.nsw.gov.au/__data/assets/pdf_file/0005/384062/Crown-land-2031-State-Strategic-Plan-for-Crown-land.pdf

To deliver the vision and outcomes in Crown land 2031, the Department of Planning and Environment will implement three successive action plans. This staged approach will allow the department to respond to new opportunities and changing community expectations.

The first action plan lays foundations to reform how it will manage and use Crown land to make it more accessible and empower communities, Aboriginal people and businesses. It is structured around five focus areas and includes pilot programs, to test and try new ways of working.

The first action plan can be accessed at: https://www.industry.nsw.gov.au/lands/crown-land-2031-state-strategic-plan-for-crown-land/first-action-plan

Roadside trees stitch the ecosystems of our nation together

According to Dr Gregory Moore (University of Melbourne), "Roadside vegetation are often important corridors connecting wildlife to their habitats. In some cases, they are the last bastions of rare and endangered plant species. Indeed, some of the grass and smaller flowering species of Australia's once extensive grassy plains only persist on roadside refuges in parts of Victoria, New South Wales and South Australia."

"These corridors are also important habitats for smaller birds, mammals, insects and reptiles. They not only provide access to food and water sources, but allow breeding with a broader animal population."

According to Dr Moore, "Clearing roadside vegetation can occur on a monumental scale after bushfires. While burnt, dead trees may be dangerous and need to be removed or pruned, the clearing can far exceed the safety requirement."

"Local communities have been left to lament the loss of their green and leafy road reserves from fires, as well as losses to the trees themselves from unnecessary clearing – it's a double blow."

He concludes: "More of us should take stock of roadside trees: they are links to Australia's past, refuges of once more widespread natural communities, and remain an important part of cultural heritage."

Read the full article at: https://theconversation.com/roadside-trees-stitch-the-ecosystems-of-our-nation-together-heres-why-theyre-in-danger-175337

Citizen science data are crucial to understand wildlife roadkill

There are now dozens of free, easy-to-use online systems, where anyone can record wildlife collision accidents or roadkill, contributing to a fuller picture that might later be used to inform policy measures.

One such project is the Flemish Animals under wheels, where users can register the roadkill they saw, adding date, time and geolocation online or by using the apps. The data is stored in the online biodiversity database Waarnemingen.be, the Flemish version of the international platform Observation.org.

Between 2008 and 2020, the project collected almost 90,000 roadkill records from Flanders, Belgium, registered by over 4,000 citizen scientists. Roadkill recording is just a small part of their nature recording activities—the multi-purpose platform also allows the registration of living organisms. This is probably why the volunteers have remained engaged with the project for over 6 years now.

In a first for science, researchers from Natuurpunt Studie, the scientific institute linked to the largest Nature NGO in Flanders, with support from the Department of Environmental and Spatial Development, set out to analyze over 10 years of roadkill records in the region, using data provided by citizen scientists. In their study, published in the peer-reviewed journal *Nature Conservation*, they focused on 17 key species of mammals and their fate on the roads of Flanders.

The researchers analyzed data on 145,000 km of transects monitored, which resulted in records of 1,726 mammal and 2,041 bird victims. However, the majority of the data—over 60,000 bird and mammal roadkill records—were collected opportunistically, where opportunistic data sampling favors larger or more "enigmatic" species. Hedgehogs, red foxes and red squirrels were the most frequently registered mammal roadkill victims.

"Citizen scientists are a very valuable asset in investigating wildlife roadkill," the researchers conclude. "Without your contributions, roadkill in Flanders would be a black box."

More details at: https://phys.org/news/2022-03-citizen-science-crucial-wildlife-roadkill.html

Roadside verges support greater ecosystem functions than adjacent agricultural land in a grassy woodland

Vegetation clearance is the major land use change in an agricultural landscape, where woody species are removed to support agricultural production. Native woody species are now largely restricted to the thin strips along the road (roadside verges).

Despite the importance of roadside verges as refugia for native species, their impacts on ecological functions and the driving factors have been little explored over extensive areas, limiting the capacity to argue for the retention and improvement of these 'off-reserve' habitats within agroecosystems.

Researchers from the University of New South Wales (Jingyi Ding and David Eldridge) compared the magnitude of ecological functions between paired roadside verges and adjacent agricultural land at 111 sites along a vegetation condition gradient in eastern Australia to examine the ecological importance of roadside verges and the potential regulators.

According to the researchers, "Eighty-six percent of our 21 ecological attributes differed between roadsides and adjacent agricultural land, with roadside verges supporting greater carbon stocks, vegetation coverage, plant diversity, habitat complexity and tree recruitment, and were subject to less modification and erosion. These ecological effects strengthened with increasing roadside verge width, particularly for plant cover and diversity, the proportion of native plant species and habitat complexity."

The researchers found that "Management practices were major regulators of roadside functions, with roadside verge width and site modification negatively associated with tree recruitment and the soil organic carbon pool. Site modification and roadside verge width also indirectly reduced the soil organic carbon pool by either suppressing tree diversity or promoting the proportion of native plant species.

"Our study provides empirical evidence of the ecological importance of roadside verges in maintaining ecosystem functions and the sustainability of native plant communities in peri-agricultural landscapes. Our study also demonstrates the negative effects of site modification on tree recruitment and soil organic carbon pools, highlighting the importance of mitigating management activities (e.g., tree removal, fire, grazing) in the conservation of roadside verges."

Access the research at
https://www.sciencedirect.com/science/article/pii/S0301479722001980

The aim of this newsletter is to share information about the management of NSW linear reserve environments and profile the NSW Roadside Environment Committee (REC).

For more information about the REC: https://roads-waterways.transport.nsw.gov.au/about/what-we-do/committees/roadside-environment-committee.html

Please contact the REC Executive Officer if you wish to subscribe or unsubscribe.

NSW Roadside Environment Committee

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