NSW ROADSIDE ENVIRONMENT COMMITTEE

NSW REC
Newsletter

MAY 2023 • EDITION 54

Roadside vegetation management training for Council works crews

In March 2023, Mid-Western Regional Council hosted training on Roadside Vegetation Management for over 100 Roads Crew, Supervisors, Engineers, Contractors and other council employees who have an active role in managing roadside reserves.

Training was delivered by Neil Dufty from Water Technology Pty Ltd and funded by Local Land Services. It supplements Council's recent Roadside Vegetation Revision Project which mapped Threatened Ecological Communities and Threatened Plant species present along the roadsides within the Mid-Western LGA.

The revised Roadside Vegetation Management Plan includes Twelve Standard Operating Procedures (SOPs), as well as vegetation mapping to assist roadside crews in protecting high value conservation roadsides and ensure the protection of roadside vegetation communities well into the future.

The Roadside Vegetation Training was well received, with participants enjoying activities using the revised Field Guide, lively group discussions with real life scenarios and hands-on activities using the newly devised SOPs.

Overall, participants felt they had a better understanding of their role in managing roadside vegetation, as well as the importance of protecting roadside vegetation as seedbank and wildlife corridors in a predominantly grazed and cleared rural landscape.

For more information contact Katie Larimar at Mid-Western Regional Council Katie.Larimar@midwestern.nsw.gov.au

Contents

NCC's 13th biennial Bushfire Conference

Keynote speakers have been announced for Nature Conservation Council of NSW (NCC)'s 13th biennial Bushfire Conference, taking place on 24 and 25 May 2023.

The conference will take place at the NSW Teachers Federation Conference Centre in Surry Hills, Sydney, with an additional field day going ahead on the 26 May in Ku-ring-gai Wildflower Garden.

Keynote speakers will include:

- Oliver Costello (Jagun Alliance Aboriginal Corporation)
- Dr Sarah Harris (Country Fire Authority)
- Prof. David Lindenmayer (the Australian National University)
- A/Prof. Lauren Bennett (The University of Melbourne)
- Prof. Euan Ritchie (Deakin University).

In addition, the NSW Rural Fire Service Commissioner, Rob Rogers AFSM, will be delivering an opening address at this year's conference. The conference panel will be chaired by former Fire and Rescue NSW Commissioner, former AFAC President and founder of Emergency Leaders for Climate Action, Greg Mullins AO AFSM.

The conference field day location is now also confirmed and is a great opportunity to see first-hand collaborative and sustainable bushfire management that protects both the community and the environment.

More information, including more on speakers, and further information about the field day, conference dinner, and poster session, is available on the NCC website: https://www.nature.org.au/bushfire_conference_2023.

2023 ANET Conference to be held in New Zealand

EIANZ and ANET are thrilled to bring you ANET 2023 which will be held at the Te Pae Christchurch Convention Centre on 27 - 29 November 2023.

ANET is the premier event for ecologists, transport planners, regulators, construction and operation professionals, and the local community to engage on the interactions between transportation and ecology. The conference will include two days of technical presentations, posters, panels, workshops and trade displays, and a one-day field trip to Kaikoura.

Linear infrastructure and transportation networks – roads, railways, transmission lines, and pipelines – are integral to local economies and community health and well-being. While their construction, maintenance and operation can impact biodiversity and ecosystems in numerous ways, linear infrastructure corridors can also provide important ecological functions.

Both linear infrastructure and biodiversity are vulnerable to natural disasters and extreme weather events, which are predicted to increase in frequency and intensity in the years ahead. Impacts on natural ecosystems can be further exacerbated by emergency works after disasters, such as earthworks, drainage, and vegetation clearing. Importantly, many of these impacts can be avoided or mitigated by enhancing landscape connectivity, reducing wildlife-vehicle collisions, and minimising artificial light at night, among other measures.

Important questions to be discussed at ANET 2023 include:

- How do linear infrastructure and transport networks affect the resilience of natural ecosystems to future shocks and stressors?
- How can existing and future infrastructure support and enhance ecosystem health and biodiversity conservation?
- How can transport planning, design, construction and operation assist in the recovery and restoration of endangered species, populations, and ecosystems after natural disasters?
- What role does the community play in the planning and design of ecologically-sensitive linear infrastructure, as well as restoration and recovery after shocks and disasters?

More information and registration details here:
https://www.eianz.org/events/event/ANET2023

Ecological Thinning on Travelling Stock Reserves in the South East

South East Local Land Services is working to preserve a Critically Endangered Ecological Community (CEEC) found within a highly fragmented landscape.

Ecological thinning will be carried out on select Travelling Stock Reserves (TSRs) across the region to improve the function and secure the protection of patches of Box Gum Grassy Woodland.

A combination of reduced canopy density from previous clearing, reduced domestic stock grazing, and high rainfall events following the millennium drought has resulted in significant regeneration events. While some level of regeneration is positive, the creation of dense thickets with stems as close as 0.5 m apart is detrimental to ground-layer diversity through shading, moisture competition, and allelopathic effects. The project aims to re-balance these different structural elements at relevant scales, which will ensure optimal ecosystem function at each reserve.

Three TSRs within the region have had ecological thinning undertaken by a mulcher in 2022/2023.

Approvals were sourced through multiple agencies with agreeance that the project outcomes would have a positive effect on ecological function as the project is occurring in the Box Gum Grassy Woodland CEEC on TSRs under the guidelines of the Environmental Protection Works – Ecological Thinning Allowable Activity.

The existing species and their current distribution at each site will be used to guide appropriate interventions, such as controlling exotic perennial grasses and forbs using methods sympathetic to existing conservation values, and infill planting of native grasses and forbs where required.

Ongoing works will include monitoring the population and diversity of regenerating overstorey species to maintain appropriate densities to allow a balanced recovery.

Other potential options include infill planting of species to improve diversity when the resulting recovery is missing key species or using mechanical or spray control measures to maintain a balanced population of species.

For more information on managing native vegetation please contact Local Land Services on 1300 795 299, or for questions about the project, please contact Yass Local Land Services on (02) 6118 7700.

Pre-thinning

Post-thinning

African Boxthorn in the crosshairs for Riverina Local Land Services

African Boxthorn (*Lyceum ferocissimum*) is a weed of national significance and is a major environmental issue for land managers across large parts of the country.

The weed competes with native vegetation, provides shelter and food for pest animals, reduces available shade areas for livestock, restricts vehicle access, and its thorns can injure livestock.

Riverina Local Land Services aims to control new incursions of African Boxthorn over large areas of the region to prevent it from colonising large roadside areas and travelling stock reserves (TSRs), where it undermines the grazing value of the land.

Riverina Local Land Services manages 85,000 hectares of TSRs and a significant proportion of them have adjacent roadway frontages. These roadside frontages can harbour large infestations of weeds.

Recent coordinated control programs have been occurring in the north-west of the Riverina, in the Hillston and Carrathool areas. This work has been enabled by use of funding assistance from the NSW Crown Reserves Improvement Fund (CRIF).

A variety of control measures are deployed, relevant to site and infestation level. These include mechanical removal, chemical application and optimising pasture growth to complete with the weed.

African Boxthorn control has also been critical in assisting joint-agency and landholder programs to enhance habitat for the critically endangered Plains Wanderer bird.

Team Leader for TSRs at Riverina Local Land Services, Peter Beal, said roadside verges are an important place to focus on African Boxthorn control.

"Attacking an infestation when it first emerges can help prevent it spreading further and impacting not just TSRs, but farms and other public land too," Mr Beal said.

More details can be obtained from Peter Beal (Local Land Services) at peter.beal@lls.nsw.gov.au

Reducing koala vehicle strike in the Lismore LGA

Lismore City Council is committed to making local roads safer for endangered koalas, with a key strategy in Council's community strategic plan aiming to protect and improve Lismore's koala population.

In 2004, a koala exclusion fence was constructed by Lismore City Council as part of a project to realign and seal Skyline Road in Goonellabah. The 2.4km long fence was built in the road reserve on both sides of the road as a mitigation strategy to protect a key koala population from the expected increase in both vehicle speeds and volume of traffic.

Seven culverts were constructed under the road to allow koalas, and other wildlife, to move throughout the environment safely. The fence has been very successful in limiting instances of vehicle strike along this road. However, the fence is nearing 20 years old, and maintenance was overdue as breaches to the fence had increased.

An audit of the fence in February 2022 found there were many potential breach locations that required attention. This was made worse by all the rain experienced during the Feb-Mar floods last year.

The NSW Department of Planning and Environment has been collaborating with Lismore City Council to ensure the fence is repaired and keeping koalas off the road. Design issues around the height of the metal flashing still need addressing but were beyond the available current budget.

Repair work on this exclusion fence has recently been completed. The fence line has been sprayed to remove both viny and woody weeds, with overhanging vegetation also trimmed and removed. Holes and gaps have been patched up, and areas where the fence was beginning to slump have been removed and the fence straightened back up and concreted into place.

Both koala and driver safety have been improved by this crucial repair work.

For more details, contact Jack Herington at Lismore City Council:
jack.herington@lismore.nsw.gov.au

Before After

Restored roadside grasslands provide an exciting template for road network conservation

The Djabwurung peoples are the Traditional Owners and Custodians of the lands on which this project occurred.

In 2004, VicRoads (the Victorian Government road authority) commissioned Ballarat University to develop flora management recommendations for the Glenelg Highway (B160) between Wickliffe and Glenthompson in Western Victoria. Among its recommendations were those aiming to preserve the integrity of existing remnant grasslands by removing historic mature woody plantings composed of non-endemic native trees and shrubs and their restoration by tube stock using grassland species.

This innovative roadside restoration project aimed to replace two historic non-endemic block tree plantings with diverse native grassland. A secondary goal was to reintroduce populations of threatened species as part of the restorations such as Button Wrinklewort (*Rutidosis leptorhynchoides*); Clover Glycine (*Glycine latrobeana*); Hoary Sunray (*Leucochrysum albicans* subsp. *tricolor*); and the Yam Daisy (*Microseris* sp.).

The project applied what were at the time newly developed site preparation, direct-seeding and seed production approaches designed to facilitate these outcomes.

The long-term success of these restorations (13 years) provides compelling evidence that it is feasible to restore high-quality, low-biomass, species-rich native grasslands on previously exotic-dominated roadsides. By doing so, they demonstrate that road networks offer broad canvases for restoration action and should in the future be used to create extensive native linear corridors, displaying high native biodiversity, visual and functional attributes.

Access the full paper at https://onlinelibrary.wiley.com/doi/abs/10.1111/emr.12571

Seeder with modified seed box depositing seed mix onto a lightly cultivated surface then covering and pressing

Enriching biodiversity in the NSW Riverina Bioregion by managing the TSR Network for nature conservation

Riverina Travelling Stock Reserves (TSRs) are valuable environmental assets that provide the main habitat corridors and blocks left in these agricultural areas and protect many threatened species and vegetation communities.

The *Enriching biodiversity in the NSW Riverina project* was a five year project funded by the Federal Government and managed by Murray Local Land Services (LLS).

The project aimed to maintain the condition of the highest quality TSRs and improve the condition of 10% of all other TSRs.

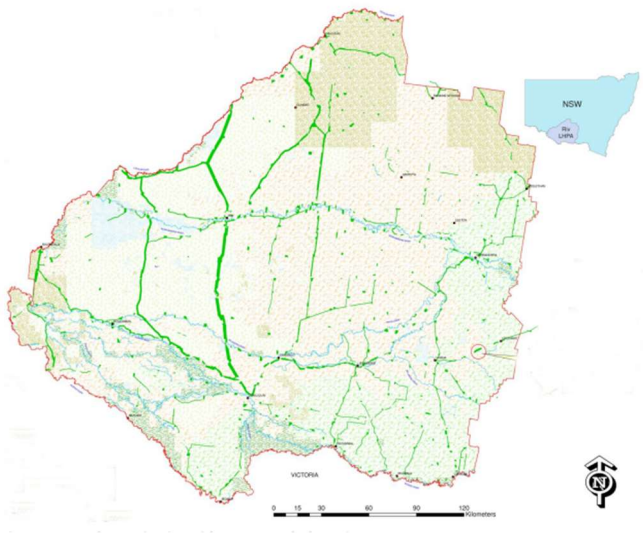
Given the NSW Riverina TSR network contains over 600 reserves, a sample was first selected for inspection to identify reserves with the potential for active management.

Following the implementation of recommended land management and works, 109 reserves covering 13,558 ha were subsequently monitored, with results indicating that of these reserves, 70 had improved in vegetation condition.

A new rapid assessment and monitoring method was developed and trialled in this project for use by land managers with basic botanical and scientific skills and limited time. This method proved useful and has the potential for broader adoption across NSW.

The current LLS model of TSR rangers managing multiple reserves across a geographic area as part of their duties was well suited to the nature of this project. The TSR network offers value for money opportunities for those interested in investing in large scale biodiversity conservation restoration, whilst maintaining the basic historic use of travelling stock.

For more details and access to the project report, please contact author Ian Davidson (Regeneration Solutions P/L) ian@regenerationsolutions.com.au



Map of NSW Riverina with TSR network shown in green

Biological Control Workshop

Local Land Services Greater Sydney

Biological control is an environmentally friendly and cost-effective weed management tool and is playing an increasingly important role in managing weeds in Australia today.

This workshop is suitable for everyone from council weed officers, bush regenerators, landcare volunteers, landholders to anyone with an interest in local weed biocontrol options.

Topics covered during the workshop include:
• an introduction to biocontrol theory
• current research and availability of local biocontrol agents
• best practice with regards to rearing and releasing biocontrol agents
• assisting with the monitoring of your local biocontrol agents in the field.

PRESENTERS:
Dr Andrew McConnachie (NSW Department of Primary Industries) and Dr Gavin Hunter (CSIRO).

EVENT DETAILS:
Date: **Tuesday 13 June 2023**
Time: Please arrive at 9:45am for a 10:00am start
Location: Bungarribee Community Resource Hub - Main Hall
20 Sir Hercules Pde, Bungarribee

The cost is free, but registration is essential. Registration closes on Wednesday 7 June 2023.

PLEASE NOTE:
Please do not attend this event if you are unwell, are COVID positive or are a COVID close contact.

FUNDING STATEMENT
This workshop is jointly funded by the NSW Government and the Australian Government.

Register at https://gslls.wufoo.com/forms/q108jgjj0gbt8up/

CHECK OUT THE REC'S NEW WEBPAGE
https://www.transport.nsw.gov.au/operations/roads-and-waterways/committees-communities-and-groups/committees-and-groups/roadside