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Latest news from the REC

The NSW Roadside Environment Committee (REC) sponsored the NSW Roadside Environmental Management Award as part of the 2021 Local Government Excellence in the Environment Awards (see details below).

The REC is organising a forum highlighting good practices in linear reserve environmental management.

The REC forum will be held on Tuesday 17 May 2022 at the NSW Teachers Federation Conference Centre, Surry Hills, Sydney (see details below).

REC Forum – Save the Date 17 May 2022

The NSW REC is hosting a forum highlighting new research and good practices in linear reserve environmental management. The main audience for the forum will be:

- land managers of linear reserves (e.g. local councils, state government agencies, private companies)
- researchers
- NGOs including environment groups
- other interested people.

The forum will be held at the New South Wales Teachers Federation Conference Centre (Surry Hills, Sydney) on **Tuesday 17 May 2022**.

The REC has run previous forums in 2012 and 2019. These were very popular, and participants' feedback from them will help inform the 2022 forum. The 2022 forum program and registration site will be available at the end of February.

For more information and to register your interest in attending the forum please contact: Neil Dufty, REC Executive Officer, ndufty@molinostewart.com.au



NSW Roadside Environment Committee Forum

Can Do Corridors

***Highlighting Good Practices in Linear Reserve
Environmental Management***

Tuesday 17 May 2022

New South Wales Teachers Federation Conference Centre
23-33 Mary Street Surry Hills NSW 2010

*Taking expressions of interest for presenters
(deadline 11 February 2022)*

*For more information contact Neil Dufty, Executive Officer
Phone: (02) 9354 0300 | ndufty@molinstewart.com.au*

SAVE
the
DATE

2021 NSW Roadside Environmental Management Award winner announced

Celebrating 24 years of inspiration from NSW councils in programs, projects and people working together to manage and protect the environment, the 2021 LGNSW Excellence in the Environment Awards saw an amazing 127 entries across 14 categories. One of the award categories is the Roadside Environmental Management Award, which is sponsored by the NSW Roadside Environment Committee (REC).

The Roadside Environmental Management Award recognises on-ground achievements in roadside environmental management, as well as strategic initiatives that build capacity to deliver these achievements over time and across tenures.

The 2021 Roadside Environmental Management Award winner (Overall, Division C) was Penrith City Council for its Roadside Vegetation Management Project, which was established to create a framework for Council to better manage its roadside vegetation and to assess and identify areas within the local government

area that had been identified as having significant value in Council's Roadside Vegetation Management Plan. This was achieved through reviewing the Roadside Vegetation Management Plan, creating a Review of Environmental Factors (REF) and Test of Significance template, implementation of procedures to undertake REFs, employment of a dedicated REF staff member, installation of roadside markers, and the education of Council staff.

Award winners were announced at an on-line ceremony on 16 November 2021. LGNSW also hosted a Finalists Forum showcasing council environmental projects on 9 November 2021.

More details about the winner: https://www.lgnsw.org.au/Public/Public/Members-Services/Environment-Awards/2021-winners/REM_award.aspx



Roadside marker - Penrith LGA

Reducing wombat mortality on Snowy Mountains roads

For the Snowy Monaro region roadkill remains a serious threat to wildlife and road users alike. The Snowy Mountains is known for its rugged terrain and alpine mountains, and is home to kangaroos, wombats, brumbies, echidnas, foxes, deer and many birds. Unfortunately, having such a diverse array of farmland and national parks means that infrastructure such as roads sit amongst the homes of many animals.

Although all these animals remain a concern, it is the bare-nosed wombat (*Vombatus ursinus*) that is particularly vulnerable due to its preference to reside within roadside environments. Given the size, weight and speed of wombats, collisions can often cause serious damage to vehicles, drivers, as well as the wombats themselves.

Currently, there is diverse research on best practice around discouraging animal and vehicle collisions. One method of interest is virtual fencing, consisting of light and sound-based devices which deter animals from coming onto the road.

Snowy Monaro Regional Council, Transport for NSW, Western Sydney University, Charles Sturt University, Humane Society International and the Jarake Wildlife Sanctuary Ltd were all interested in how these virtual fences could be tested locally. Thus, in March 2020, funding was obtained to install a 1.5 km stretch of fencing along Old Bega Road, to see if this would reduce the number of wombats killed.

The study found that that within the fenced area 23 wombats were killed pre-installation and 6 post-installation. Similarly, outside the fenced area 64 wombats were killed pre-installation and 17 post-installation.

Although the research suggested a decline in wombat deaths with virtual fencing installation, there were variables that may have impacted this study and thus it was suggested that more research be undertaken to see if virtual fencing can be a roadkill mitigation strategy for a variety of species and within varying habitats.

The study can be accessed at: Stannard, H., Wynan, M., Wynan, R., Dixon, B., Mayadunnage, S. & Old, J. (2021). Can virtual fences reduce wombat road mortalities? *Journal of Ecological Engineering*. School of Animal and Veterinary Sciences, Charles Sturt University; Jarake Wildlife Sanctuary Ltd; School of Science, Western Sydney University.



Ray Wynan installing the virtual fence (photo: Marie Wynan)

Protecting *Asterolasia elegans* and *Zieria involucreta* in Sydney's North

Members of Hornsby Shire Council's Natural Resources team are taking action to protect endangered native shrub species in Sydney's northern suburbs.

Laughtondale Gully Road in the suburb of Maroota supports populations of the shrubs *Asterolasia elegans* and *Zieria involucreta*. Both species are listed as endangered under the NSW *Biodiversity Conservation Act 2016*. This road forms the boundary between the Marramarra National Park and Maroota Historical Site, and links Old Northern Road with Singleton Road. A watercourse aligns with the southern boundary of the road flowing into the Hawkesbury River.

Populations of *Asterolasia elegans* and *Zieria involucreta* are found along the road edge and along the watercourse and gullies. Herbaceous weeds, noted as key threats to these species, have been well represented along the road edge and watercourse.

The NSW Department of Planning, Industry and Environment has partnered with Hornsby Shire Council, through the 'Saving our Species' program, to undertake weed management along these linear pathways.

Weeds of concern have included Privet, Lantana and typical roadside grasses such as African lovegrass, Whiskey grass and Paspalum.

Weed management along the road has been occurring since 2017 and has reduced the number and extent of weed species present to the point that most weed species populations are either stable or in decline.

Several other weeds of concern have been identified for ongoing management across the site including Crofton weed, which thrives in habitats supporting the *Asterolasia elegans* and *Zieria involucreta*, and Blackberry, which can quickly spread in similar habitats.

The National Parks and Wildlife Service is also supporting these works through ongoing weed management on adjacent lands.

The long-term weed management along this road is a key element in protecting key threatened species populations, and the unique and diverse riparian vegetation found along Laughtondale Gully Road.



Laughtondale Gully Road

Roadside eLearning resource wins award

Congratulations to LGNSW's Council Roadside Reserves team and Savv-e on winning the 2021 LearnX Gold Award for Best eLearning Design - Free eLearning Resource, for the Council Roadside Reserve (CRR) training modules!

The CRR program was developed to build the capacity of NSW councils to improve the management of roadside environmental values and to integrate their management into existing council plans and operations, with the training package providing ongoing support to councils.

Developed specifically for councils to guide them through the complexities of roadside reserve management, the four e-learning modules were designed to raise learners' awareness of their responsibilities when it comes to managing and working in the road reserve and ensuring roadside environmental management best practice.

Collaborating with Savv-e to develop the training resource resulted in an interactive, easy-to-navigate and engaging learning resource. Each module is structured into distinct, short micro-topics, 3-6 minutes in length, providing easily digestible information, ending with a series of mandatory multiple-choice questions which challenge the understanding of key concepts.

The CRR program also funded 19 council projects which conducted 1,000 conservation value assessments on roadsides, trained more than 300 council staff, and produced environmental management plans and policies to manage roadside reserve environmental values.

To access this award-winning resource, visit https://lgnsw.org.au/Public/Public/Policy/REM-pages/CRR_training.aspx

Proudly funded by the NSW Environmental Trust

BEST EARNING DESIGN
FREE EARNING RESOURCE



Council Roadside Reserves



Without urgent action, these are the street trees unlikely to survive climate change

Cities across the world are on the front line of climate change, and calls are growing for more urban cooling. Many governments are spending big on new trees in public places – but which species are most likely to thrive in a warmer world?

Researchers from Western Sydney University assessed the effects of extreme heat and drought on urban tree species. Some much-loved tree species, widely planted across cities, did not handle the conditions well. The research shows how important decisions must be made today for urban greening programs to succeed in a warmer world.

In January 2020, following several years of drought, Penrith in Western Sydney hit 48.9°C – the hottest temperature ever recorded in Greater Sydney. Researchers later assessed about 5,500 street trees and found more than 10% displayed canopy damage. Exotic deciduous species fared the worst.

The event showed how simultaneous intense heat and drought can damage urban trees.

Trees cool down in hot temperatures by losing water through microscopic openings in their leaves called stomata. Sufficiently watered trees can often tolerate extreme hot temperatures, while drought-stressed trees may struggle to survive.

The research highlights how access to water is crucial for the survival of urban trees during hotter and drier summers.

That means urban greening programs must also incorporate elements of so-called “blue” infrastructure – retaining water in urban landscapes via engineered solutions and making it available for plant uptake. Such infrastructure comes together under the umbrella of “water sensitive urban design”.

Read the full article at: <https://theconversation.com/without-urgent-action-these-are-the-street-trees-unlikely-to-survive-climate-change-172758>



Heat and drought damage to street trees (photo: David Ellsworth)

Serrated tussock becoming tolerant to herbicides on NSW Central Tablelands

A highly invasive introduced grass, which can become a nightmare for farmers, is building resistance to herbicides on the NSW Central Tablelands. A single plant of serrated tussock can produce up to 140,000 seeds and can take over a paddock in as little as four years. Stock do not like to eat it, and if they do, they can become malnourished.

The plant typically reacts to a slow-acting chemical called flupropanate designed to kill it over a six to 12-month period. However, some landowners near Bathurst and Oberon have raised the alarm because the herbicide has stopped working. Lab tests have unearthed some populations which have started building tolerance towards it.

Local weed authority, the Upper Macquarie County Council, said there was a clear link between the long-term use of the herbicide over a 10 to 15 year period and the resistance.

Resistant populations have also been found in Victoria and on the Southern and Northern Tablelands in NSW.

Central Tablelands Local Land Services said if people knew how to limit the chances of the weed becoming tolerant, the possibility of widespread resistance across the region could be minimised.

However, a company that manufactures the herbicide, Taskforce, said it had found no correlation between repeated use of the product and an increase in tolerance.

Excerpt from an ABC news article. Read more at:

<https://www.abc.net.au/news/2022-01-25/serrated-tussock-building-herbicide-resistance/100777146>



Serrated tussock (photo: Local Land Services - Marita Sydes)

Turtles on the move on NSW roads

Often Australian road users are busy dodging kangaroos, sleepy lizards, emus and galahs. One creature you might not expect to see crossing a road is a turtle.

Senior research fellow at Charles Sturt University Albury, Damian Michael, said there were three different types of turtles in the country's south east, but the eastern long-necked turtle enjoyed travelling the most.

The turtles have been spotted on roads around the Riverina and Central West in NSW after significant downpours and flooding.

But why are these shelled reptiles so frequently seen on the road lately?

Dr Michael said their journeys were usually triggered by rain, and put simply, one of the reasons they set off was to find a sexual partner.

He said another reason why eastern long-necked turtles moved around was due to a lack of resources. "It might be because one pond is drying down, the resources in that pond have been depleted and they're moving to find another pond," Dr Michael said.

Dr Michael advised motorists to slow down to avoid hitting the turtle and, if safe to do so, pull over to the side of the road to offer assistance. "It's hard to know which direction they are actually going. They could have been spun around by a car, [so moving them to] either side of the road is fine," he said.

Read the full article at <https://www.abc.net.au/news/2021-12-16/why-did-the-turtle-cross-the-road-to-mate-or-see-refuge/100568008>



Eastern long-necked turtle crossing a road (photo: ABC News: Shannon Corvo)

2022 NSW & VIC Weeds Conference



The combined NSW & VIC Weeds Conference showcases the latest research and ideas for managing the establishment, impact and spread of weeds.

Due to the coronavirus pandemic the 2021 conference was postponed from August 2021 to 21-24 March 2022.

The NSW & VIC Weeds Conference is regarded as the premier event to discuss weeds, and related vegetation and production issues. The conference is a biennial event conducted in partnership with a host council attracting up to 350 attendees from NSW and interstate.

Three awards are announced at the conference, acknowledging the work of NSW Government, NSW local government and community weeds professionals for their outstanding contribution towards protecting NSW from the impacts of weeds.

More details at <https://www.nswweedsconf.org.au/>

Conservation In Action 2022 Conference



Conservation in Action is a unique conference that brings together industry leaders in the conservation field. From scientists to policy makers, program managers through to specialists in implementing works in the field, this event will bring together all disciplines of natural resource management to facilitate the transition of cutting-edge environmental research into on-ground action.

The Orange Ex-Services Club (OESC) incorporating the Greenhouse of Orange is one of the premier conference venues in regional New South Wales. Boasting a large capacity theatre, break-out rooms, extensive dining facilities and stunning outdoor areas, we look forward to showcasing what a high class regional facility has to offer.

Conference abstracts are being sought that:

- detail research that can lead to positive outcomes for Australian ecosystems, their fauna and flora;
- policy and planning frameworks and instruments from Landcare groups to Government, that provide a positive direction for current and future land management; and
- on-ground success stories that are leading to positive environmental outcomes.

All abstracts should relate to the overarching themes of Climate, Bushfires, or Wildlife. Abstract submission period closes on Friday 25 February, 2022 at 4:30pm.

For more details about the conference: <http://www.cwcewa.com.au/conservation-in-action>

Effects of road fencing on population persistence

Roads act as barriers to the movement of wildlife (reduced landscape connectivity), increase mortality due to collisions with vehicles, and reduce the amount of habitat.

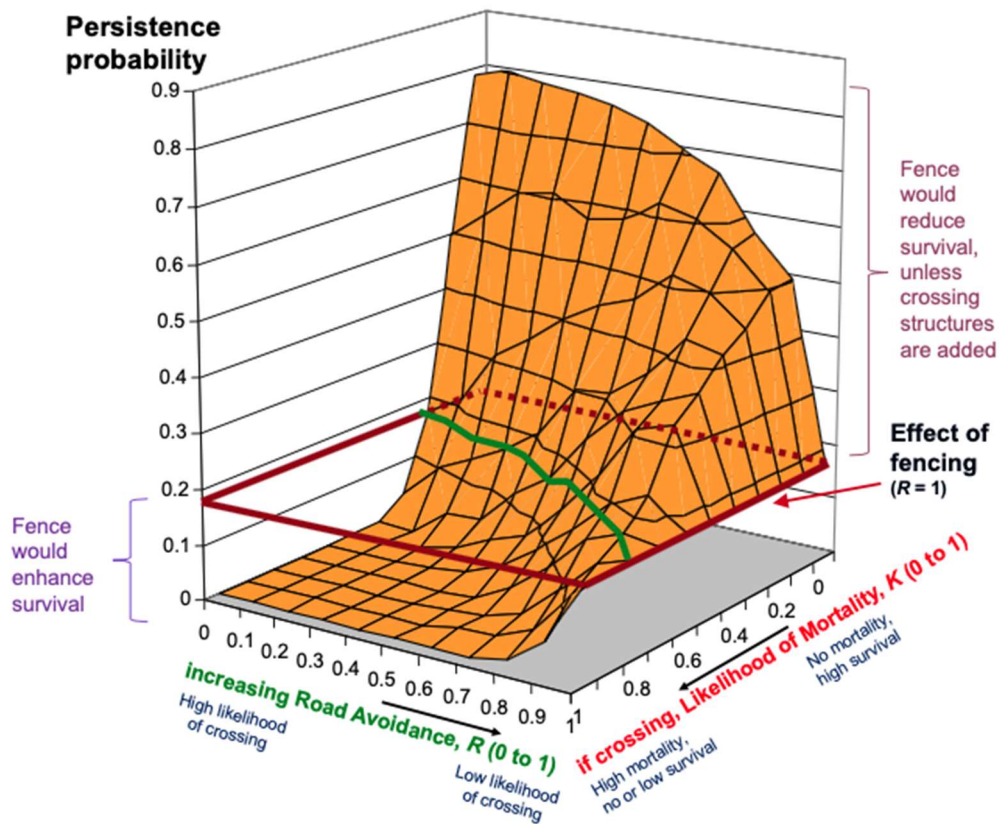
Fences can be used to reduce roadkill, but their use is sometimes controversial because fences also create a barrier to animal movement. They may separate a wildlife population into smaller subpopulations, each of which will have a higher extinction risk. Recolonization of habitats to compensate for local extinctions will then not be possible, unless wildlife passages are installed as well.

Research from Jochen A. G. Jaeger of Carleton University, Canada, recommended the use of fences in five cases:

1. when populations of the species of interest are declining and animal mortality on roads is a relevant contributor to the decline
2. when traffic volume is so high that animals rarely succeed in their attempts to cross the road
3. in road sections that are roadkill hotspots
4. when populations have already been reduced due to roadkill (to allow for the recovery of these populations)
5. when animals use wildlife passages or other existing crossing structures (e.g. water culverts) to cross the road.

In contrast, if population size is stable or increasing, adding fences could be harmful, unless wildlife passages are included, according to the research.

Read more at: <https://transportecology.info/research/road-fencing-population-persistence>



Modelling used in the research

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.



For more information contact:
Neil Dufty - Executive Officer - (02) 9354 0300
ndufty@molinstewart.com.au