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Latest news from the REC

The REC sponsored the 2019 NSW Roadside Environmental Management Award (see article below) as part of the LGNSW Excellence in the Environment Awards.

The award judging panel consisted of Kathy Godfrey (LGNSW), Dr Kris Le Mottee (Transport for NSW) and Neil Dufty (Executive Officer, NSW REC).

All members of the judging panel attended the Excellence in the Environment Awards ceremony run by LGNSW where the award winners were announced.

2019 NSW Roadside Environmental Management Award winners

In December 2019 the Excellence in the Environment Awards celebrated 22 years of inspiration from NSW councils in programs, projects and people across 16 award categories, culminating in two prestigious Local Sustainability Awards: one for overall council performance, and one to recognise the individual achievements of a council staff member or elected councillor in the field of sustainability. Award winners were announced at the Local Government Excellence in the Environment Awards ceremony held at Bicentennial Park, Sydney.

One of the award categories was the Roadside Environmental Management Award sponsored by the NSW Roadside Environment Committee (REC). This 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 award recognises activities which:

- Improve the condition of roadside vegetation, including through the management of threats.
- Build capacity to deliver on-ground roadside environmental management initiatives.
- Promote co-operation and collaboration in roadside environmental management across tenures.
- Build and/or disseminate knowledge about roadside environmental values and management.

The winners in the 2019 Roadside Environmental Management award category were:

Winner Division A and Overall Category Winner

Griffith City Council - An innovative solution to measuring & revaluing Griffith's roadside reserves

Griffith City Council undertook a comprehensive survey of all roadside reserve vegetation communities and their condition along 1,348 km of roadside reserves. This informed the development of the Griffith Roadside Vegetation Management Plan, a Roadside Reserves Vegetation Management Guide, online tablet platform and training program. This ensures council operations do not have a detrimental impact on protected or threatened species or endangered ecological communities in roadside reserves. See the video about this project at https://www.youtube.com/watch?time_continue=12&v=WojIeV3neGI&feature=emb_title

Highly Commended Division A

Bellingen Shire Council - Bellingen Roadside Environmental Management Plan
Council assessed 20% of roadsides within the local government area, providing the foundation for conservation value mapping. A management plan and operational guideline were developed, and a number of roadside management tools were integrated into Council's asset management software. Increased communication and understanding between the operational and environment staff was also highlighted as a key outcome and ongoing aim.

Winner Division B

Wingecarribee Shire Council - Integrated Roadside Environmental Management Framework.
This project developed three tools that are integrated into Council's Roadside Management Plan including an improved mapping tool, environmental guidelines for common management activities and position statements for the community. Council focused on a collaborative approach in order to capture corporate knowledge, build staff awareness and gain consensus on management activities. The project has built Council's understanding of roadside management and developed easy to use tools as a central point of reference.

Winner Division C

Coffs Harbour City Council - Roadside vegetation as a natural asset - a pilot.
This project collated roadside vegetation data for input into Council's asset management system. Once the vegetation is recognised as an asset, it is then considered when works are being scheduled within roadside reserves in the same way traditional assets are viewed and maintained, with spatial data able to be viewed by on-ground staff. Incorporating the vegetation into the Asset Register resulted in greater protection through asset identification and management actions to ensure its on-going maintenance.

NSW REC Executive Officer Neil Dufty presents award to Coffs Harbour City Council

Driving Corridor Connectivity Project – Central Tablelands LLS

The Driving Corridor Connectivity project in the Central Tablelands Local Land Services (LLS) area worked with Local Government to identify sites of high and medium conservation Box Gum Grassy Woodland (BGGW) communities along roadsides.

"We looked at the local Roadside Management Plans and talked to council staff to identify sites that we could work on to improve connections between areas of high quality sites," said Bruce Christie, Manager of the Driving Corridor project. "We identified sites that were adjacent to these priority roadsides and contacted land managers to offer them financial incentives to do work that will enhance and build on the roadside vegetation."

The project sites were designed to buffer and extend the existing roadside vegetation and increase connectivity, building the health and resilience of these important woodlands.

"The project has funded block and corridor plantings, as well as establishing paddock trees at a density of 30 per hectare to mimic the density of an open woodland. We have used steel mesh guards to protect the plantings until they are able to withstand grazing."

Training was provided for council staff on the importance of roadside vegetation and vegetation classifications, including refreshers on their local Roadside Vegetation Management Plans. Staff discussed improving work methods to limit weed spread across the landscape along corridors and came up with some practical solutions. Sediment and erosion controls were covered, as well as some of the legal responsibilities in the workplace.

The project also worked with Local Government to manage invasive weeds on the roadsides that could impact on the health of BGGW communities.

"The weeds we targeted were invasive species rather than the usual suite of weeds that would be council's responsibility to control. We were looking for action on weeds that were having an impact on the environment and causing damage to the natural landscapes." Bruce said.

The Driving Corridor Connectivity project is funded through the Australian Government's National Landcare Program. Further details about the project from Bruce Christie, bruce.j.christie@lls.nsw.gov.au

Council staff training

‘A better, more efficient way to carry out EIAs’

Have you been looking for a better, more efficient way to carry out environmental impact assessments (EIAs) or seek out environmental data?

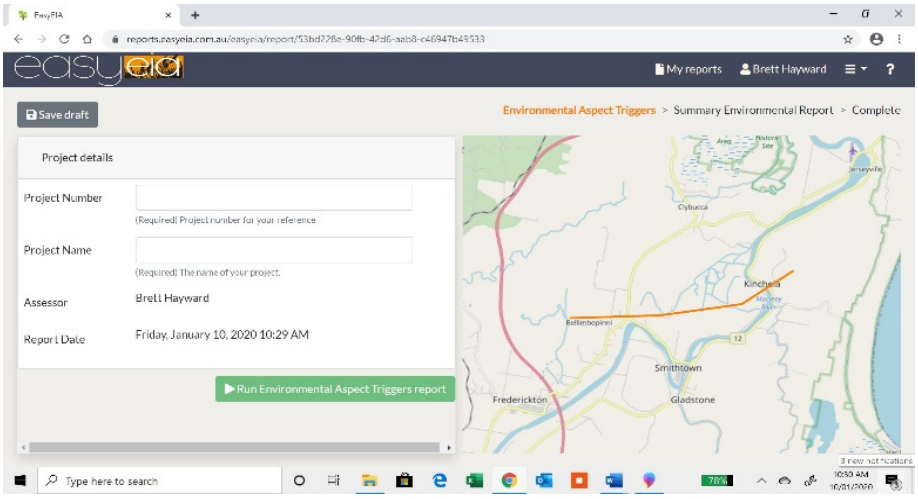
A new tool is now available to make searching environmental information easier, simplifying your EIA obligations, particularly for Part 5 assessments.

Now available in its third generation, EasyEIA is the result of environmental planning professionals striving to simplify complex tasks and increase productivity through innovation. The system explains environmental matters in simple terms and provides advice on how to manage certain environmental aspects. Ease of functionality is at the heart of the system design, making for an intuitive user experience.

You can define your search area by a line, dot, circle or polygon. A report can then be run identifying the environmental constraints within or adjacent to your query. You will get an individual map of each environmental layer, with your query, and you will also receive a table summarising the aspect, for example, a list of heritage items or threatened species. Advice is also provided to guide you in how to manage that identified constraint.

Another feature of the system is the ability to efficiently complete a report for Part 5 assessments. Other reporting options are also available making for a very flexible system. Ease of use is the focus of the report with yes/no selections and free text fields where more detail is required. Progress can be saved at any time with the ability to have multiple reports saved to your profile. Once a report is complete, you can sign off and commence works knowing that you have satisfied your compliance obligations.

If you would like to know more about the system, including a demonstration of how the system may benefit you, please contact brett.hayward@easyeia.com.au



NSW bushfires and linear reserves

Bushfires in NSW burned into February 2020 after starting in June 2019. The bushfires were fuelled by record-breaking temperatures and months of severe drought. There has been debate regarding these conditions being caused at least partially by climate change.

The bushfires have been extremely damaging across Australia with some 34 people killed - including seven firefighters - and more than 10 million hectares of bush, forest, farmland and parks burned.

NSW has been the worst hit state with bushfires affecting more than five million hectares, destroying more than 2,000 houses and forcing thousands to seek shelter elsewhere.

Linear reserves (roadsides, travelling stock reserves, rail corridors, utility easements) criss-cross the fire grounds. With approximately 6% of NSW covered by linear reserves and with denser networks across the east coast impacted areas, it is safe to say that they and their wildlife have been decimated. Images of badly burned koalas being rescued along roadsides support this claim as do estimates that one billion animals have died in the NSW bushfires (that number excludes bats, frogs and invertebrates).

Of particular concern in linear reserve recovery is that many of the older, hollow-bearing trees have been lost. Environmental consultant Shireen Baguley, whose property was impacted by fires, observes 'many of the trees that came down around here are the big, old habitat trees. They were drought stressed already, and this was just too much. So many beautiful big old trees now fallen, hollows smashed. Any critters relying on those have lost their homes and they won't be rebuilt for decades'.

Mature habitat tree toppled over in bushfire (photo: Darren Baguley)

Associate Professor Matthew Hayward from the School of Environmental and Life Sciences at The University of Newcastle quoted in an article in NITV News said many species would have had the majority of their habitat destroyed in the fires. The Parma Wallaby and the Red-Legged Pademelon are two of the many threatened species in this situation, he said.

"Once a fire goes through an area, animals that did survive need to be able to find enough food to survive and this is much harder in burnt areas...

"There is unlikely to be much food in these areas until rains come and the vegetation responds. This drought-fire-drought trifecta means the impacts on biodiversity treble," he said.

And it should not be assumed that vegetation in linear reserves will recover by itself. Although many plants from fire-prone ecosystems have evolved strategies to survive, and even thrive, with fire, the continuing drought restricts opportunities for regeneration. In linear reserves where there is only limited natural seed stock (as opposed to national parks), regeneration opportunities are further constrained.

Furthermore, many plants and ecosystems, including alpine and rainforest species, are not resilient to fire, especially if drought persists or they have been burnt too frequently. Many linear reserves on the South Coast and North Coast traverse pockets of rainforest burned by the fires, and also cut across the alpine areas of the fire-ravaged Snowy-Monaro region.

And linear reserves can be further degraded during emergency bushfire activities and as a result of bushfire post-mortems. During emergencies linear reserves can be cleared e.g. to provide access for fire trucks and other emergency vehicles. Although these activities are needed to protect people and properties, significant vegetation may be removed.

As shown by the Royal Commission into the Victorian Black Saturday bushfires, linear reserves can be a 'contributor' to the bushfire situation (e.g. by electrical wires adjacent to vegetation sparking fires) and thus demand post-fire attention which may include strategic vegetation removal. Hopefully, in the reviews of the NSW bushfires this will not be the case as most of these fires are currently attributed to lightning strikes and sadly, arson.

What can be done in this dire fire situation? For linear reserve managers some recovery activities include:

- Confirming the laws around removal of trees for emergency purposes and to ensure the safety of the public on the transport network
- Reviewing of any REFs prepared in areas impacted by fire to consider whether the area provides refugia for animals impacted by fire and, if so, revisiting the likely significance of impacts
- Checking whether any mitigation installed for fauna (nest boxes, glider poles, crossing structures etc.) have been impacted.
- Checking whether infrastructure maintenance crews are encountering injured wildlife and helping them respond

The Department of Planning, Industry and Environment (DPIE) has conducted an assessment a rapid assessment of the impact of the bushfires on NSW biodiversity and some guidance to assist in recovery. This assessment can be found at https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/fire/park-recovery-and-rehabilitation/recovering-from-2019-20-fires/understanding-the-impact-of-the-2019-20-fires

Professor Don Driscoll (Deakin University) argues that the best thing land managers can do to let nature recover after the bushfires is to pull out weeds. – see https://theconversation.com/pulling-out-weeds-is-the-best-thing-you-can-do-to-help-nature-recover-from-the-fires-130296

National Standards for the practice of Ecological Restoration in Australia are available at http://seraustralasia.com/standards/National%20Restoration%20Standards%202nd%20Edition.pdf

Fortunately, in the past few years there has been considerable ecological assessment of NSW linear reserves funded by the NSW Environmental Trust (see an example in the next article). This should enable land managers to assess ecological damage and conduct reparation activities particularly in high conservation value areas. Some NSW local councils have included roadsides in their asset management systems which should assist in calculation of overall bushfire damages and be part of recovery claims. The Morrison government's $50 million wildlife and habitat recovery package may be a funding source for linear reserve reparation.

Whatever the future initiatives, recovery will be slow for the plants and animals of linear reserves, and assistance from people will be needed.

NCC's 12th Bushfire Conference 2020 – Call for Abstracts

The Nature Conservation Council's Bushfire Program is hosting its 12th Biennial Bushfire Conference, 'Cool, Warm Hot: the burning questions', to bring together over 250 academics, agencies, practitioners and communities to explore how different fire intensities can influence ecosystems and communities in a changing climate.

Abstract submissions are now open!

Date: 19-20 May 2020, field day 21 May

Venue: Teachers Federation Conference Centre, Surry Hills, Sydney

Head to the NCC website for more details at: www.nature.org.au/cool-warm-hot-2020 or join the mailing list by contacting BushfireConf2020@nature.org.au

Catch that croak

Frogs are under siege from a range of threats including development, disease and climate change. Several citizen science projects have been set up to learn more about frogs and help to manage their future.

An example of a citizen science project is the Facebook group for Australian Amphibian/Reptile Identification. It can be accessed at https://www.facebook.com/groups/754514518284011/?ref=share

FrogID is a national citizen science project led by the Australian Museum. Launched in November 2017, people across Australia have recorded calling frogs on the FrogID app with their smartphones.

The Australian Museum has now released the first year of frog records – representing over 50,000 records of 172 species.

Learn more about FrogID at https://australianmuseum.net.au/blog/amri-news/FrogID_data_for_conservation/

Update on the Council Roadside Reserves Project

Drought and recent bushfires throughout NSW have further highlighted the importance of protecting and managing linear reserves such as roadsides. In July 2017, 21 council projects received grant funding to undertake work to assess, manage and integrate roadside reserve management into their systems and processes. Prior to undertaking the grants, many of these councils only had limited information on the existing value and conservation significance of their roadside reserves.

Wagga Wagga City Council assessed the conservation value of its roadside vegetation using the Rapid Assessment Methodology (RAM) and the EcoRoadside App with a total of 123 individual assessments undertaken across the LGA. The key works undertaken are highlighted in this video: Wagga Wagga City Council.

Griffith City Council's efforts to improve the management of roadside vegetation was rewarded at LGNSWs Excellence in the Environment Awards, where it was named the Division A and Overall Category Winner of the 2019 Roadside Environmental Management Award for its 'Roadside Reserves Project - An innovative solution to measuring and revaluing Griffith's roadside reserves'. Check out their video case study here: Griffith City Council .

Bellingen Shire Council (Highly Commended Division A), Coffs Harbour City Council (Winner Division C) and Wingecarribee Shire Council (Winner Division B) also received awards and recognition for the great work they have undertaken in managing their roadside reserves (see the lead article in this newsletter).

The key outcomes and achievements of all the Council Roadside Reserves (CRR) projects are currently being compiled along with training materials and case studies, which will all be available on LGNSW's website soon. LGNSW is also currently developing additional capacity building opportunities for councils, including e-learning modules and workshops, which will be rolled out throughout 2020.

For more information contact CRR Project Officer – Kathy Godfrey kathy.godfrey@lgnsw.org.au or 02 9242 4053

This project has been assisted by the NSW Government through its Environmental Trust

NSW GOVERNMENT

CRR Training in Albury December 2019

The 2020 Infrastructure and Ecology Network Europe Conference

The University of Évora, in the framework of the LIFE LINES project, and the Infrastructure and Ecology Network Europe welcome you to the IENE 2020 International Conference, with the main theme LIFE LINES – Linear Infrastructure Networks with Ecological Solutions.

The Conference will take place in Évora, Portugal, between 6 and 9 April 2020. It challenges researchers, engineers, landscape planners, managers, administrators, and policy makers to conciliate linear infrastructures and biodiversity while meeting the demand for a sustainable development.

The Conference will include thematic sessions, side events, workshops, training sessions, field trips, etc. Good Mediterranean food and wine are also on the menu.

The organisers hope to see you in Évora and ask you to share this invitation with your friends and other people that may be interested in attending the Conference.

More details at https://www.iene2020.info/

How citizen science is helping solve conservation problems

Excerpts from an article by Dr Elizabeth Ellwood in *Biological Conservation*:

Successful conservation projects rely on evidence collected in research: you need to understand where your target species lives, how and when it reproduces, what it eats and where it migrates before you can work out a way to protect it.

This places pressure on research teams, and means that if they have to carry out studies with no outside support, there is a limit to the number of species they can protect, and the locations and timespan they can cover.

Citizen science – the collection and analysis of scientific data by the general public – has the ability to expand research taxonomically, geographically and temporally. A well-managed citizen science project can engage people in collecting data on a wide range of species, at national and international scales, and beyond the time frames of funding cycles and grad student availability.

Although citizen science currently has a supportive role in conservation and ecology, an increasing number of researchers are recognizing its benefits and are working with citizen scientists.

For examples (including from Australia) of citizen science conservation projects, read more of Dr Ellwood's article at https://www.journals.elsevier.com/biological-conservation/article-collections/how-citizen-science-is-helping-solve-conservation-problems

Almost a quarter of eucalypt trees found to be threatened with extinction

The International Union for Conservation of Nature (IUCN) has found that of Australia's 812 eucalypt species, almost a quarter are threatened with extinction (noting that there are only 826 recorded eucalypt species in the world).

Eucalypts in their native range of Australia faced threats from human land use, especially agriculture and urbanisation, the IUCN said.

'As keystone species, [eucalypts] define the landscape of the entire Australian continent, and are culturally significant to its First Nations people,' the IUCN said.

Prof David Bowman, who studies the impacts of climate change and fire on trees at the University of Tasmania, told Guardian Australia that while eucalpyts were ubiquitous in Australia, they were also vulnerable.

He said: 'I'm not surprised by this assessment. We are talking here about old ecological systems that are being taken to the edge.

'Eucalypts are keystone species and are critical to a huge number of of ecological systems. If you start taking them out, then there will be knock on effects because so many organisms – birds and insects – depend on them. There are a lot of warning signs out there, and this is another one.'

It should be noted that the Australian government only listed 76 eucalypts as threatened, while the IUCN listed 198.

The IUCN stressed that 'critical habitat for conservation now remains in the areas between rivers and land, on roadside patches and in paddocks where lone trees often remain'.

More details at https://www.iucn.org/news/species/201912/species-recoveries-bring-hope-amidst-biodiversity-crisis-iucn-red-list

Animals on country roads

According to the NSW Centre for Road Safety (Transport for NSW), 'with most of NSW affected by drought and bushfires, increased numbers of wildlife and livestock on the roads pose an added risk to motorists'.

The severe shortage of feed has forced farmers to graze stock on the roadsides, while cattle that have escaped in search of feed can be more unpredictable and present a serious road safety danger.'

Wildlife, especially kangaroos and wallabies, are also drawn to the roadside, attracted by the feed watered by run-off from the roads.'

'Temporary warning signs in areas where cattle graze and also in native animal hotspots urge motorists to slow down and watch for animals on the roads.'

Safe driving tips and a downloadable guide are provided at https://roadsafety.transport.nsw.gov.au/stayingsafe/drivers/animalsoncountryroads/index.html

Roadside litter is a global problem

- Highways England revealed more than 150,000 sacks of litter are collected by its contractors every year - equal to 411 bags every day. [Highways England manages around 225 miles of motorway in the East Midlands].
- A 2014 report found that litter on England's motorways alone costs 'at least £6 million a year to collect and could fill an Olympic sized swimming pool four times over.
- The State of West Virginia spends more than $1 million annually to remove litter from state highways.
- The costs of litter collection to local authorities and Welsh Government exceed £3 million per year in collection alone.
- In South Africa, the Toll concessionaire N3TC [Managing the N3 Toll road between Johannesburg and Pietermaritzburg] collects and sorts all waste and recycles as much as possible. Around 4,700 bags of litter are collected every month which does not include items that cannot be bagged such as metal, rubber, vehicle parts and dropped loads.

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://www.rms.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.