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In this issue

- Latest news from the REC
- The ANET Conference a success
- African Olive Control in the Hunter
- Protecting and Restoration of Roadside Vegetation project
- Applying safe and sustainable initiatives to managing roadsides
- Illegal activity on travelling stock reserves under the spotlight
- Efforts to protect the Earless Dragon in the Country Rail Network
- Roadside Land Offers Huge Carbon Storage Potential
- Australia's street tree canopy cover is declining
- NSW biodiversity legislation review
- ACT and Southern Tablelands Weed Spotter website
- Red Guide Posts – a weed awareness tool!

Latest news from the REC

- Five REC member representatives recently attended the Australasian Network for Ecology and Transport (ANET) Conference in Coffs Harbour. The REC manned a booth at the Conference – see more details in the following article.
- The REC now has a presence on social media. Like the REC on Facebook at <https://www.facebook.com/nswrec> or follow it on Twitter @NSWREC.

The ANET Conference a success



Martin Driver and Kirsty McIntyre man the REC booth at the ANET Conference

ANET is a professional network for all people involved in the planning, design, construction, maintenance and research of linear infrastructure and the environment.

The inaugural ANET conference was held recently at Coffs Harbour from 20 to 23 July. The conference had over 140 registered participants from eight countries, with 50 presentations and 17 poster displays and a field trip on the final day.

The main thrust of the conference was in 'sharing and learning' about the many impacts of roads, railways and other linear utility infrastructures on natural ecologies and the methods devised in mitigating these impacts.

The REC was represented in the trade and poster displays and was a silver sponsor of the conference. This provided a great networking opportunity with several requests for REC newsletter subscriptions and the linking with other partners and the opportunity of reinvigorating sister bodies in other states in the near future.

The conference presentations emphasised that roads and other linear infrastructure were "...where human society meets nature..." and that as the demands of built infrastructure extends further throughout the world it is increasingly important to mitigate the negative effects of these corridors on the natural ecology.

ANET brought together a breadth of disciplines, though was heavily weighted towards mitigating fauna mortality through engineering solutions. There were however some flora and vegetation habitat management related papers and an underlying inference on the need for minimising flora/ habitat impacts and subsequent rehabilitation and management. The need for resourcing on-going targeted monitoring was universal.

The field trip to the Roads and Maritime Services Pacific Highway reconstruction works was a hands-on highlight for most participants. It is the single longest roads infrastructure project currently in Australia and demonstrates some of the habitat and flora issues of construction through listed Endangered Ecological Communities (EECs), significant habitats, plant communities and cultural/ heritage areas and associated protection, rehabilitation and enhancement works.

This first national ANET conference brought a multidisciplinary approach to the very important and complex issues of potential conflict in linear infrastructure design, construction and operation and highlights that "... the future is not somewhere we are going, but something we are making...". As a process that the REC wholeheartedly endorses, the future depends on Assessment, Planning, Implementation and the resolution of priorities and active choices.

For more information on ANET- www.ecoltrans.net

(Report by the REC Chairperson, Martin Driver)

African Olive Control in the Hunter

There was a time when wild African Olive (*Olea europaea* ssp. *cuspidata*) was used extensively as farm windbreaks. This practice has left its legacy in African Olive weed proliferation across many landscapes.

The Hunter Central Coast Regional Environment Management Strategy (HCCREMS) team recently completed two one-year control programs to control African Olive at 19 roadside sites. African Olive is listed as a Key Threatening Process under the *Threatened Species Conservation Act 1995* and the project, funded by the NSW Environmental Trust, is helping to protect over 80 hectares of high quality vegetation in the Maitland and Port Stephens LGAs.

The African Olive infestations targeted were predominantly scattered to dense and threatened the resilience of two remnant Endangered Ecological Communities (Lower Hunter Spotted Gum Forest Community and Hunter Lowland Redgum Forest Woodland). Also, many of the sites are important wildlife corridors, providing foraging and nesting habitat for threatened species such as Koalas, Squirrel Gliders, Phascogales and Grey-crowned Babblers.

To improve the condition of the native vegetation, African Olive trees and shrubs were removed and 60 colour-coded V1 (Threatened Vegetation Communities) marker posts installed. These clearly mark the presence of the EECs on the roadsides and provide assistance in managing the sites appropriately.

Additionally, local council roadside maintenance staff were trained in understanding and applying the V1 Field Guides and marker category. These projects fostered partnerships and are now being complemented and supported by:

- Port Stephens and Maitland Council through both grant funded and regular weed control programs
- Hunter Local Land Services, which is currently coordinating a two-year NSW Environmental Trust funded African Olive control program within biodiversity hotspot areas on road reserves and private land in the neighbouring Dungog LGA.

The next stage in the battle against African Olive will be to develop a regional Strategy for the species. HCCREMS will be working collaboratively with project partners, the Hunter Local Land Services and other key stakeholders to build on our successes and expand the works undertaken across the region.



Butterwick Rd Port Stephens prior to African Olive Control



Butterwick Rd, Port Stephens after African Olive Control

More details from Eva Twarkowski, HCCREMS on (02) 4978 2029

Protecting and Restoration of Roadside Vegetation project

The *Protecting and Restoration of Roadside Vegetation* project is designed around utilising the data collected from a comprehensive roadside survey within Glen Innes Severn Council (GISC) of the conservation values to guide where funds are best directed to achieve the project outcomes.

The survey was carried out by Peter Croft and the Glen Innes branch of the Australian Native Plant Society. As part of this survey, all roadside corridors were classified according to their conservation value and mapped accordingly. The high- and medium-conservation value data was used as the decision making tool to determine where funds would be best invested to link areas of high- and medium-conservation value in the landscape through revegetation and what areas of high- and medium-conservation value would be targeted for the control of environmental and noxious weeds.

This project is to be funded from the project Sustainable Environment-Northern Tablelands program in relation to our Caring for our Country (CfoC) 'Conserving & Protecting Species & Ecosystems (matters of national environmental significance)'. Objectives specific to this proposal include:

- The reduction of the impact of environmental (primary) and noxious (secondary) weeds targeting High Conservation Value (HCV) and Medium Conservation Value (MCV) communities along roadside areas and boundary areas between TSR and roadside lands within the Glen Innes Severn Council (GISC) Local Government Area (LGA).
- The promotion of clean roadside boundary environments between HCV and MCV areas within the GISC LGA.
- Protection and restoration of vegetation communities with endemic species.
- Site preparation of 50ha of direct seeding revegetation sites.
- A community partnership approach in the protection and restoration of roadside environments.
- Prevention of further invasion of environmental and noxious weeds into the HCV and MCV communities.
- Mapping of all chemically treated areas.
- Mapping of the revegetated sites.



Aerial photograph showing high- and medium-conservation roadsides in the Glen Innes Severn LGA

For more details contact Andrew Davidson, Northern Tablelands Local Land Services on (02) 6736 1355

Applying safe and sustainable initiatives to managing roadsides



Collection of roadside litter by Technigro

For nearly 30 years customers have trusted Technigro to deliver programmed vegetation management of infrastructure assets, road networks, natural areas, and sports turf throughout Queensland and northern New South Wales.

Construction companies, utilities providers, natural resource providers, infrastructure managers and government sector clients rely on Technigro to deliver efficient, safe and sustainable outcomes.

Since 2013, the Queensland State Government divided the asset management of the M1 into three regions. The South Coast Road Network is managed by Leighton Contractors, Boral and Amey (LBAJV). Technigro has been subcontracted by this consortium to manage the vegetation throughout this corridor and are performing works both day and night.

Maintaining this particular road network involves a combination of challenging and highly sensitive vegetation management practices including clearing, mowing, herbicide application, declared weed management and other specialist activities such as management of roadside trees and collection of roadside litter.

Technigro successfully developed and implemented a comprehensive Safety and Environmental Management Plan (EMP) for this project. The EMP promotes safe systems of work with a strong dedication to environmental sustainability.

Technigro continuously works with LBA on a range of social and environmental issues. These include developing socially acceptable methodologies for maintaining the road verge in areas adjacent to National Parks and vegetation reserves with high community value.

More details from Helen Baker, Technigro on 1800 678 611

(Source: Technigro media release)

Illegal activity on travelling stock reserves under the spotlight

People illegally dumping rubbish, removing firewood, riding motorbikes and otherwise damaging travelling stock reserves (TSRs) are warned that penalties will apply when caught.

Local Land Services is giving notice to people illegally using TSRs and is closely monitoring a number of sites across the region. People using TSRs legally for such things as bushwalking and birdwatching are also being encouraged to report any suspicious activity.

Local Land Services is responsible for maintaining these public assets and are acting to protect them from illegal activities, according to Central West Local Land Services Team Leader Peta Holcombe.

"We are closely watching a number of TSRs in our region and will be taking legal action against anyone found dumping rubbish, removing firewood and dirt bike riding," said Peta.

Local Land Services is using surveillance cameras, staff inspections and public reports to identify and fine offenders.

"TSRs have social, grazing, ecological and cultural heritage value and can be easily damaged through these activities."

Fines of up to \$5500 can apply to people caught carrying out illegal activity in TSRs under the *Local Land Services Act 2013*. People can report any illegal activity to Local Land Services on 1300 795 299 or their local police station.

"We encourage everyone to report suspicious behaviour on TSRs and to record as much detail as possible. Information such as registration numbers, descriptions, locations and dates will help us fine those responsible. We encourage all users of TSRs to take steps to protect these valuable public assets."

Special use permits are available from Local Land Services Offices for a range of non-destructive recreational activities. Camping on TSRs is prohibited at all times unless people are with travelling stock. People can collect firewood from selected state forests with a firewood permit. For more information on TSRs visit www.lls.nsw.gov.au or call 1300 795 299.



LLS Field Officers Ian Mulcahy and Bob Stanley with some of the illegally dumped rubbish on a travelling stock route

(Source: Central West LLS media release)

Efforts to protect the Earless Dragon in the Country Rail Network

John Holland Rail (JHR) Pty Ltd, manager of the Country Regional Network, has had a promising initial meeting with an expert on the highly endangered Earless Dragon (*Tympanocryptis pinguicolla*). The Earless Dragon has critical habitat in the Country Regional Network.

On 26 June, Mark Buckley, Chris Weston and Amber Gibbins of JHR met with Professor Stephen Sarre at the Bruce Campus of the University of Canberra. Due to the recent mapping, JHR identified potential habitat for the Earless Dragon in (amongst other places) the closed rail corridor beside HMAS Harman, Queanbeyan.

Professor Sarre is leading the research into the genetics and vulnerability of the Earless Dragon. JHR will work with Professor Sarre to ensure the corridor remains suitable habitat for the Earless Dragon, which Professor Sarre says is Australia's rarest reptile.



Earless Dragon - they grow (head to tail) generally no longer than 150mm

More details from Amber Gibbins, Environment Manager, Country Regional Network (02) 4028 9409



(Source: John Holland Rail media release)

Roadside Land Offers Huge Carbon Storage Potential

By Marianne Lavelle, [The Daily Climate](#) 27 July 2014

As you watch the miles roll by on family road trips this summer, look just behind the guard rails to see what some scientists believe is a significant untapped resource in the battle against climate change.

The land alongside the 4 million miles of U.S. public roadways, already being maintained by federal, state, and local governments, could be planted with vegetation that helps transfer carbon from the atmosphere into the soil, they say. Road banks and berms, in other words, could be managed as valuable "banks" for carbon sequestration.

"We're talking millions of acres," says biologist Rob Ament, of the Western Transportation Institute at Montana State University, who led a recent study to gauge carbon storage potential on just a fraction of that real estate – roadsides on federal lands.

Shrubs, grasses, and other plants already along roads in U.S. National Parks, wildlife refuges, and other public lands currently are capturing about 7 million metric tons of carbon each year, Ament said in a report on his findings at this month's North American Congress for Conservation Biology in Missoula. That's equivalent to the annual carbon emissions of 5 million cars—without any effort made to optimize the mix of plantings and soil management practices for carbon storage.

Add to that the strips of shrubbery and grass along U.S. highways outside federal lands. A previous study by the Federal Highway Administration concluded such roadside greenery stores enough carbon to counter the annual emissions of 2.6 million passenger cars.

Together, the roadside soils and vegetation on federal lands and along U.S. highways, comprising 10.5 percent of all public roads in the nation, are already capturing nearly 2 percent of total U.S. transportation carbon emissions, said Ament, whose team conducted the research for the Highway Administration's federal lands office.

Mowing less frequently – letting grass grow 8 inches instead of the normal 6 inches – saves fuel, labor and stores more carbon.

"There is a significant amount of [carbon capture and sequestration] going on right now, passively," Ament said in an interview. "So the next step is to research active management techniques and take a good hard look at what's possible."

The plants that best capture carbon – trees – would not be a good choice for the areas closest to roads, because of the obvious safety hazard. But plenty of low woody shrubs and other planting and soil management steps would boost carbon storage, said Ament.

Roadside management today often involves little more than keeping grass mowed and dousing it with weedkillers. Clear sight lines are important, but in some places vegetation is managed beyond what's necessary, said Ament. "There are certain places where roadsides have more of a golf course aesthetic" said Ament, showing one photo he took of a close-cropped lawn along a U.S. highway in New York. "I'd love to calculate what you could get with trees set back from the

roadside, and woody shrubs and understory. There's a lot of potential there for a multi-story forested area."

Australia's street tree canopy cover is declining



Australia is losing its trees, according to new research conducted by University of Technology, Sydney on behalf of a collaboration of community groups, businesses and governments.

The report, called *Where Are All The Trees*, analysed tree canopy cover in Australia's most urban, dense, local government areas (LGAs) and found that urban green space throughout Australia was in decline.

It showed, however, Hobart, Brisbane and Darwin councils were the leading cities in urban greening, with the highest percentage of tree canopy cover compared to Australia's two largest cities – Sydney and Melbourne.

The report was commissioned by 2020 Vision – a collaborative initiative between business, governments and community groups to increase green space in urban areas by 20 per cent by 2020.

The report said that complexities and barriers in addressing increased greenery were wide-ranging, but did not mitigate the urgency and importance to achieve more tree canopy in many of Australia's key urban areas.

Research and Market Development Manager, National Urban Forest Alliance (NUFA), Anthony Kachenko, said the research represented the first national analysis tracking and measuring the number of trees in Australia's most dense urban areas.

"Why should we care how many trees there are? Because trees and urban green space have the unique ability to improve our environment, save lives, mitigate the risks of climate change, and provide significant cost savings across our economy," Dr Kachenko said.

"Currently businesses and governments across all levels are looking to mitigate the critical effects and costs of significant changes to the climate, lowered productivity, environmental degradation and ill-health, such as obesity and mental illness.

"There is not a single Australian who would not be touched by one of these factors, and while it appears simple and perhaps unimportant, urban greening is a crucial tool in the kit we need to find long-term solutions.

"Extensive global research shows maintaining and increasing high-quality green space in cities has a wide range of improvements to our environment, productivity and society.

"Benefits such as reduced pollution, improved air quality, decreased utility costs, more efficient water management, increased commercial productivity, better health and wellbeing outcomes, and more cohesive community spaces.

"This report tells a story of hugely complex planning, geographical and climate-related factors that challenge councils, business and communities in this sector every day," Dr Kachenko said.

The research used a software program called i-Tree Canopy to analyse the amount of tree canopy cover in 139 of Australia's most urban LGAs, which are home to 68 per cent of the population. It found that beyond Australia's CBD council areas, the areas which demonstrated the highest amount of tree canopy cover were Cairns, Launceston and Townsville. Conversely the report looked at grass and bare ground coverage such as lawns, industrial estates and sporting grounds, and hard surfaces such as buildings, asphalt, water and coastlines.

"These findings show where there are possibly significant opportunities for councils to turn older industrial areas into community parklands, and or green rooftops of buildings," Dr Kachenko said. For a copy of the full report, go to http://2020vision.com.au/media/7145/where_are_all_the_trees.pdf (Source *Enviroinfo*, 17 June 2014)

NSW biodiversity legislation review

The review of biodiversity legislation has been established to look at the legislative and policy framework for the management of native vegetation, threatened species and other protected native animals and plants in NSW. The scope of the review will include the *Native Vegetation Act 2003*, *Threatened Species Conservation Act 1995*, *Nature Conservation Trust Act 2001* and legislation that relates to native plants and animals and private land conservation.

The Minister for the Environment has appointed an independent panel to undertake a comprehensive review of the legislation. The independent panel has been asked to prepare and maintain an active program of stakeholder engagement throughout the review process. The panel will provide details of its engagement approach as soon as possible. The Terms of Reference set out the matters the panel will examine in its review and provide further detail on the rationale for the review and how it will take place.

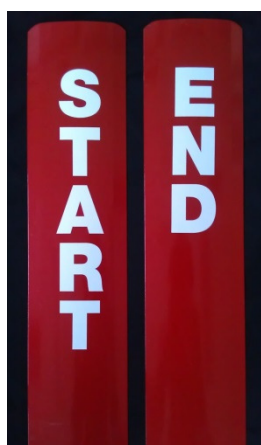
Submissions should be made by Friday 5 September 2014. For more details go to <http://www.environment.nsw.gov.au/biodiversitylegislation/review.htm>

ACT and Southern Tablelands Weed Spotter website

The plants shown at <http://root.ala.org.au/bdrs-core/act-esdd/home.htm> offer a sample of the priority weeds to watch out for in the ACT and Southern Tablelands region. If you see these weeds, or others identified on this website, then spot, snap and send. Just follow these easy steps:

1. Learn about the priority weeds to watch for in your local area.
2. Use the Weed Identification Tool to help identify unknown plants.
3. Create an account so you can report weed sightings online.
4. Report a weed sighting using your mobile device or desktop computer.
5. Map and track your weed control efforts.
6. Contact a local expert for further help with weed management.

Red Guide Posts – a weed awareness tool!



Eastern Riverina Noxious Weeds Advisory Group (ERNWAG), Western Riverina Noxious Weeds Advisory Group (WRNWAG), Lachlan Valley Weeds Advisory Committee (LVWAC), Macquarie Valley Weeds Advisory Committee (MVWAC), Riverina & Central Western Local Control Authorities (LCAs), Local Land Services (LLS) and Roads and Maritime Services (RMS) have collaborated to develop a simple system to assist in reducing the spread of high risk species along roadsides. It involves the installation of red guide posts at the 'start' and 'end' of each infestation. The red guide posts identify the site and an extensive awareness campaign will advise that there is to be no works between the posts without the local weed officer's permission.

This project has been funded through the NSW Weeds Action Program (WAP) New Innovative project for weeds 2013-2015 and Murray Local Land Services Integrated Pest and Weed Management Projects. Over 2,000 red guide posts have been distributed to 33 participating councils across the Riverina & Central Western NSW to be installed next to existing white guide posts. More details from <http://www.riverinaweeds.org.au/WhatsNew/201484100196.asp>

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 on the REC, including how to develop roadside vegetation management plans, go to:

<http://www.rms.nsw.gov.au/environment/roadsideenvironcommittee/>

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



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