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The role of linear reserves in NSW biodiversity conservation

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The role of linear reserves in NSW biodiversity conservation

Neil Dufty, Executive Officer, NSW Roadside Environment Committee
Water Technology Pty Ltd



Tena koutou, tena koutou, tena koutou katoa



NSW linear reserves

- Roads - 1 million hectares
- Travelling stock reserves – 2.5 million hectares
- Crown roads – 0.5 million hectares
- Other (e.g. rail corridors, energy easements) – 0.8 million hectares

Approximately 6% of NSW land area



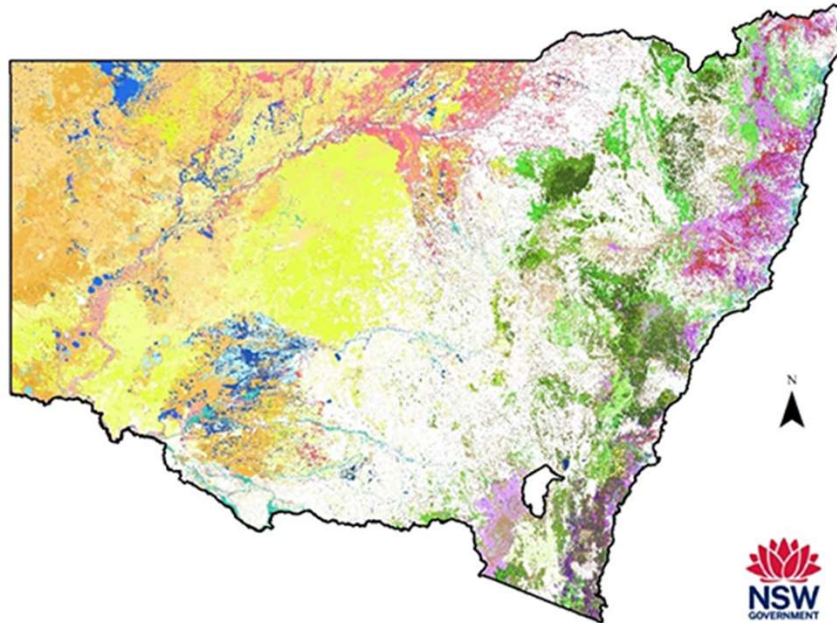
Values of linear reserves

Roadside value	Description and management considerations
Connectivity	Prime function of road for humans Wildlife collisions (links to road safety) Dispersal conduit for species
Cultural heritage	Historic bridges, aqueducts, cuttings, Location for scar trees, monuments, memorials, and other built objects of historic significance, Historic road, stock routes, drove roads, driftway, sunken roads.
Ecotourism values	Route to explore sites, localities or landscape Interpretation signage and other infrastructure
Environmental	Refuge for threatened species and ecosystems Seed source for revegetation activities Weed and pest management Fire and timber management Provision of ecosystem services e.g. pollination
Infrastructure corridor	Corridor for water supply, electricity, gas and telecommunications Vegetation clearance for utilities
Recreational	Sight-seeing, horse riding, hiking, bike riding educational values
Resources	Source of firewood/ rocks/ gravel and sand Stock grazing for fodder during drought Stockpiling of materials for road management
Roadside amenity	Aesthetic values of roadside Litter management Transport parking areas
Transport and road safety	Legal requirements/ insurance, Road upgrade, construction and maintenance requirements, Soil stability management/ landslides, Water runoff, run-on control, flooding, snow and ice.

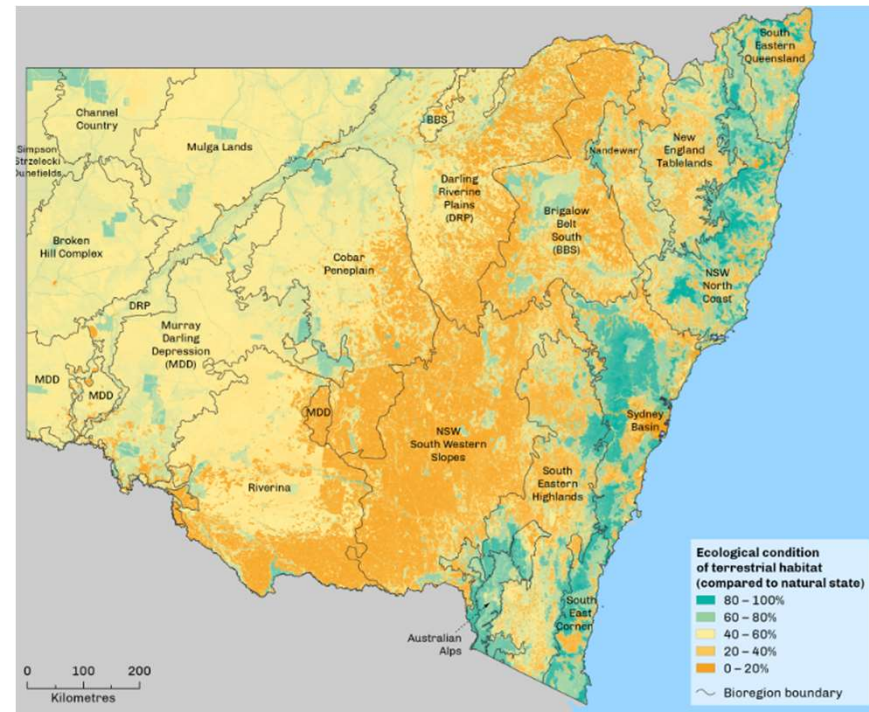
NSW vegetation

Plant community types

State Vegetation Type Map: Plant Community Types



Condition of vegetation

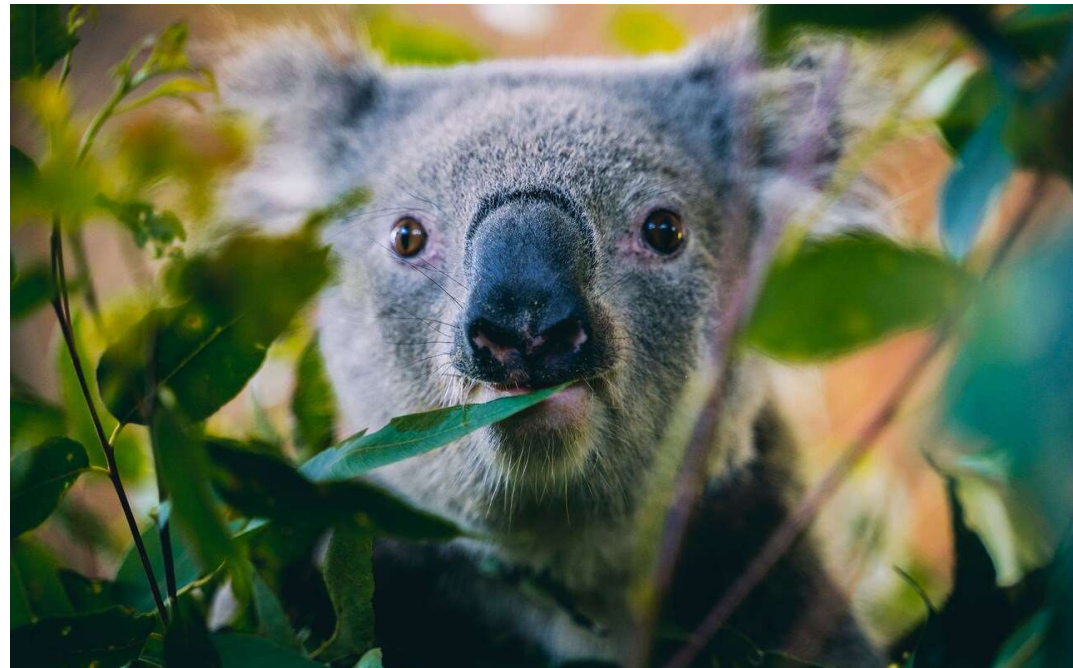
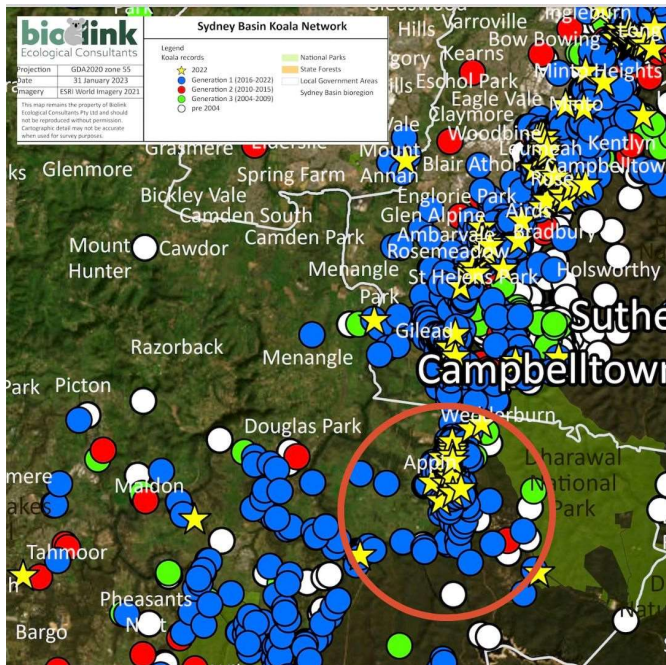


Box Gum Grassy Woodland

- Mainly located in the slopes areas of NSW
- Critically endangered ecological community (EEC)
- Less than 5% remaining in NSW
- Most of this EEC is found in linear reserves



Koalas and linear reserves



Issues with linear reserve management

- Lack of specific legislation
- Animal roadkill
- Construction (road safety vs environment)
- Maintenance
- Weeds
- Bushfires
- Illegal firewood collection
- Littering & illegal dumping
- Cultural heritage
- Recovery after natural disasters
- Economic returns (e.g. grazing)
- Landscape connectivity
- Climate change impacts



Better environmental management

- Environmental assessments
- Roadside vegetation management plans
- Wildlife crossings
- Part of asset management
- Biodiversity offsetting
- Biodiversity guidelines for staff and contractors
- Training staff
- Community education
- Citizen science
- Indigenous knowledge
- Partnerships and collaborations



This project has been funded by NSW Environmental Trust

NSW Roadside Environment Committee



- **Networking between linear reserve land managers**
- **Promotion of good practices in linear reserve environmental managers**

Activities:

- State Forums
- Regional meetings
- Quarterly newsletters
- Awards
- Social media
- Advice to stakeholders
- Input to reviews
- Support for initiatives
- Signage and education materials

Water Technology

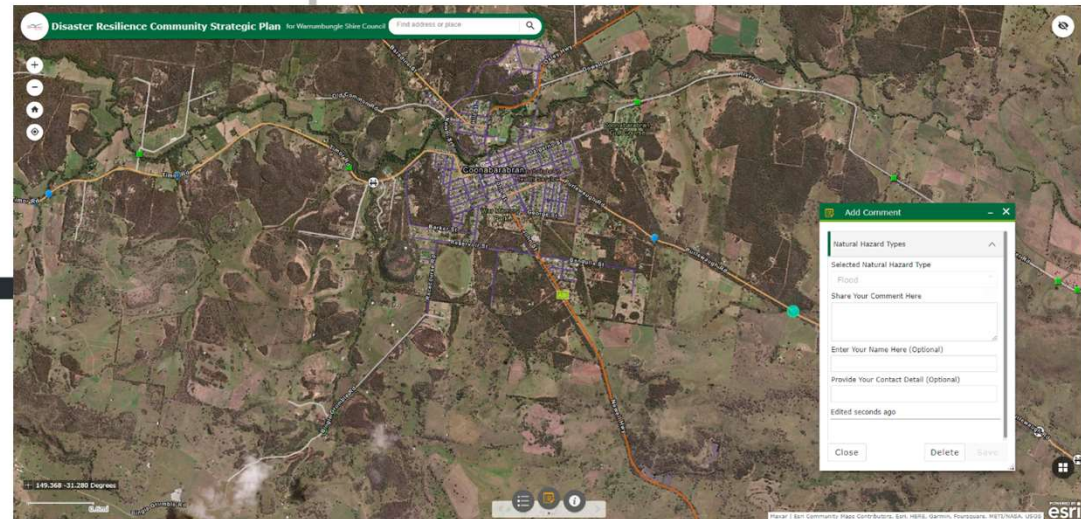
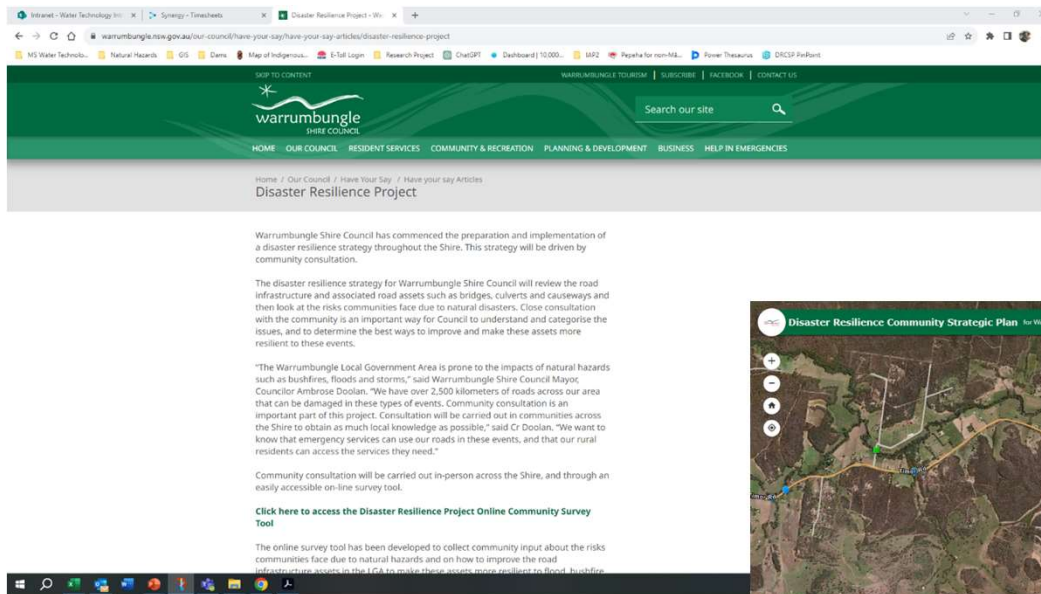
- **Australian company**
- **Offices in NSW, QLD, VIC, SA, WA and NZ**
- **Environment, Natural Hazards & Resilience**
- **About 140 employees**

Linear reserve environmental management:

- Environmental assessments (e.g. REF, EIS)
- Assessments using the RAM
- Koala and other fauna mapping
- Development of roadside vegetation management plans
- SoPs for roadside management
- Training works crews
- Tool for prioritisation of TSRs
- Road Disaster Resilience Project



Road Disaster Resilience Project



tēnā koutou

