

EARLESS, LEGLESS, HOMELESS??

MITIGATION MEASURES THREATENED REPTILES AND GRASSLAND BOCO ROCK WIND FARM



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LOCATION: BOCO ROCK WIND FARM



STATS: BOCO ROCK WIND FARM



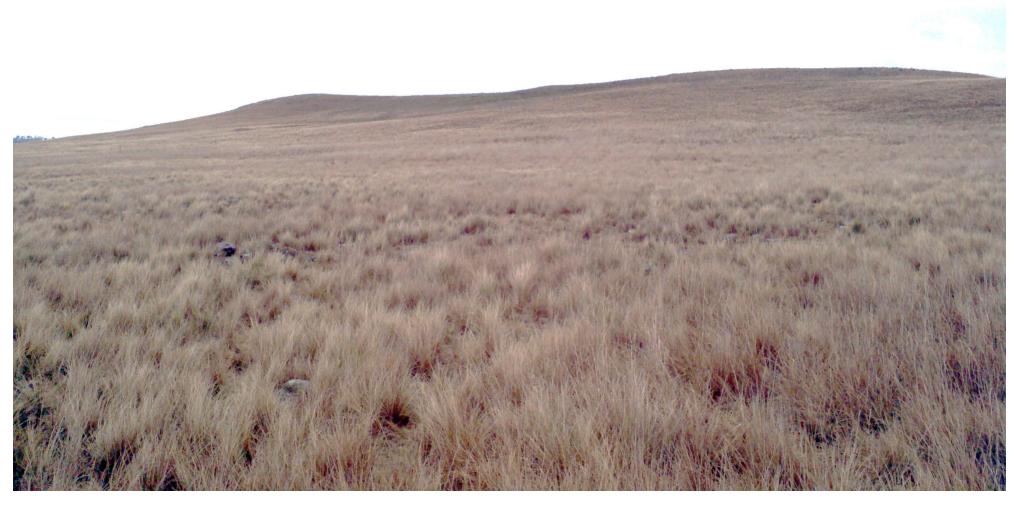
- Monaro Tablelands
- Elevation 900 to 1,100 metres
- 122 turbines, 114 MW
- Predicted capacity 350 GW hrs
- Stage 1 currently under construction comprises 67 turbines
- Boco Rock Wind Farm Pty Ltd is the developer
- GE Energy and Downer EDI consortium constructing stage 1
- Total project cost \$361m (AUD)



APPROVAL: BOCO ROCK WIND FARM

- Received approved in 2010
- Large areas of the Endangered Ecological Community -Natural Temperate Grassland
- **Provides habitat to the threatened;**
 - Grassland Earless Dragon
 - Striped Legless lizard
 - Little Whip Snake

NATURAL TEMPERATE GRASSLAND





Grassland Earless Dragon

Striped Legless Lizard



Little Whip Snake

Photos provided by Allison Brunott, Downer



APPROVAL: CONDITIONS

Conditions of approval

- Biodiversity offset package
- Pre-construction surveys
- No ground breaking works November to January
- Develop harm minimisation/relocation strategy in consultation
 with OEH

Reptile Management Plan

- Grassland reptiles required pre-construction surveys
- Scalping of the top 10-20 cm
- Release captured reptiles
- Dragons captured in colder months sent to University Canberra

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RESULTS

- Project ecologists have captured;
 - > Ten (10) Grassland Earless Dragons
 - Three (3) Little Whip Snakes
 - Two (2) Striped Legless Lizards
- 500 workdays by ecologists by completion of the Stage 1



Photo provided by Allisor Brunott, Downer

DRIVERS OF EXTINCTION



- Seven (7) of the Grassland Earless Dragons held by University of Canberra
- Australian Research Council 'drivers of extinction'
- Goal of reducing risk of extinction:
 - Captive breeding program
 - Evolutionary relationship between populations
 - Contribute to a release program?



CHALLENGES

- ngh environmental
- Scalping following preclearance survey within:
 - > 3 weeks, May and November
 - ➤ 3 days, February and May
- November to January exclusion of ground breaking works





ENVIRONMENTAL RISKS

- Large areas scalped prior exclusion period
- Resulting environmental risks:
 Erosion and sediment control
 Over-clearing
 Weed and pathogen ingress.
 Prolonged stockpiling impacting soil health.









SUCCESSFUL?

- Minimised extent of clearing
- Prescriptive mitigations measures increased risk of impact
- Reduced harm
- Success of release program
 unknown
- Providing Dragons to the UC Drivers of Extinction program is a measurable outcome







ALTERNATIVE APPROACHES

- Prescriptive mitigation measures reduced options
- Additional methods and strategies exist:
 - Alternative methods to remove habitat
 - Utilisation of grazing
 - Provide option of funding research?



LESSONS LEARNT

- Mitigation strategies can introduce risk
- Approval conditions and mitigation strategies
 - Less prescriptive
 - > Adaptive
 - > Objective-orientated

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