



Biodiversity Protection

FBA Mining Forum, 18th October 2006

What is Biodiversity?

- The plants, animals, and other living organisms that are the building blocks of the world we live in

OR

- the ecological services provided to humans through interactions with nature

OR

Qld Nature Conservation Act:

- The natural diversity of native wildlife, together with the environmental conditions necessary for their survival
 - Consists of:
 - Genetic diversity - genetic variation amongst individuals of the same species that make up a population
 - Species diversity - the diversity of species within a defined area
 - Ecosystem diversity – variation between communities and relationships between them, and
 - Regional diversity - variation between the landscape components of a region

Species diversity is generally the main focus area

Significance of Biodiversity in CQ

- Approx 56% of the Bowen Basin has been cleared of native vegetation, or it has been modified to the extent where biodiversity values may be lost
 - When white settlement began, brigalow communities in the Brigalow Belt bioregion occupied more than 7 million hectares between Charters Towers and Newcastle
 - Brigalow lands are inherently fertile, making them a target for development
 - By WWII about one third of the area had been cleared
 - This accelerated after the war due to increased mechanisation
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Bowen Basin Threatened EPBC Communities

Pre-clearing:

- Brigalow represented 25% of vegetation communities in the Bowen Basin (2.7 million hectares)
- Around 30% of the Brigalow Belt in Queensland is in the Bowen Basin

Now:

- Only 0.25 million hectares (9%) of brigalow communities remain
 - In some subregions, this is below critical levels for conservation of component species

Other threatened EPBC communities in the Bowen Basin:

- Bluegrass 32% of pre-clearing extent
 - Semi Evergreen Vine Thicket 18% of pre-clearing extent
 - 9 other ecosystems in the Bowen Basin are endangered
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What are miners required to do to protect Biodiversity?

- Commonwealth
 - Environmental Protection and Biodiversity Conservation Act
 - Queensland
 - outside mining tenures - Vegetation Management Act
 - within mining tenures - Environmental Protection Act (and associated Regulations)
 - Commonwealth on-line database with maps showing 'matters of national environmental significance', also lists endangered species / ecosystems
 - EPA has separately mapped Regional Ecosystems (RE's) using different criteria
 - Commonwealth and EPA maps are similar, but not identical
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Mining Perspective on Biodiversity in CQ

- Miners do not seek broad scale land clearing
 - Vegetation is only cleared above open cut coal reserves, or to establish infrastructure
 - Due to the relatively low percentage of clearing, miners have become ‘accidental’ holders of land with relatively high concentrations of remnant vegetation
 - Mining Leases and Mineral Development Licenses in the Bowen Basin currently include 0.02 million hectares of remnant brigalow
 - 0.007 million hectares mapped as high conservation value
(ref. ‘Biodiversity Values of Coal Mining Areas in the Bowen Basin’ - draft)
 - Miners are aware of the importance of biodiversity
 - A considerable amount of our knowledge about biodiversity comes from studies funded by mining companies
 - Many miners go beyond legislative requirements to report on the existence of listed threatened species and communities
 - Endangered, vulnerable or rare species / communities e.g brigalow are given greater protection by legislation, BUT
 - regardless of how rare an animal or plant or veg type is, biological communities provide useful ecological services
 - some have voluntarily dedicated land as Nature Conservation Reserves (registered on title)
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What can miners do to protect Biodiversity?

- Assess the significance of biodiversity within current land holdings, particularly where mining is not planned
 - Identify threatening processes and identify controls that will reduce risks
 - Where possible, restrict infrastructure development to areas where biodiversity values are low
 - Manage existing RE's to protection them from damage by threatening processes e.g. fire, weed invasion
 - Identify opportunities to enhance biodiversity values and plan accordingly
 - Manage threatened ecological communities regrowth areas (particularly brigalow and bluegrass) to achieve biodiversity outcomes
 - In addition to meeting regulatory requirements, plan to conserve vegetation that is not protected by legislation
 - Link high conservation value remnant vegetation areas together, to enhance wildlife corridors
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**ANGLO
COAL**

End

What are miners required to do to protect Biodiversity?

- EPA requires an Environmental Authority to authorise 'harm' to an environmental value
 - In general, no activities permitted within Environmentally Sensitive Areas
 - Cat 'A' e.g. National Parks, or
 - Cat 'B' e.g. Endangered Regional Ecosystems, cultural heritage areas
 - Mapped RE's do not prohibit mining, but indicate areas that are likely to contain, or lie adjacent to, important environmental values
 - EPA requires miners to follow the hierarchy:
 1. Avoid impacts to the RE
 2. Minimise impacts to the ERE and rehabilitate the ERE
 3. Permanent loss of the ERE
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What are miners required to do to protect Biodiversity?

General

- No machinery within specified distances of category 'A' or 'B' areas (EPA discretion allowed under s.151 of EP Act)
- Prevention of the spread of "declared plants"

Standard

- EPA 'Codes of Environmental Compliance' in place for use where low levels of disturbance (<10ha) are planned - impose 'standard' conditions

Non-standard

- Environmental Management Plan (EMP) required, detailing how impacts on RE's will be managed.
 - EPA determines whether harm will be authorised under a non-standard EA on a case by case basis
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