Using innovative methods to assess development impacts and biodiversity offset requirements in NSW

2018 AUSTRALASIAN NETWORK FOR ECOLOGY AND TRANSPORTATION CONFERENCE

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The journey so far – NSW context

OEH has been involved in negotiating offsets since 1995

Shift to method based approach -

• EOAM (2007)
• Biobanking assessment methodology (2008)
• Biodiversity certification assessment method (2012)
• Framework for Biodiversity Assessment (2014)


• Biodiversity Conservation Act (2017)
• Biodiversity Assessment Method (2017)
Biodiversity Conservation Act

Expanded biodiversity offsets scheme

Single assessment method - Biodiversity Assessment Method

Mandatory use of the BAM above set threshold

Opportunity for review
Overview of NSW Biodiversity Offset scheme

Credit system and application of BAM provides common measure of impact/gain

Comprehensive framework for offset land that includes:

- Accredited assessments
- Ongoing management of land for conservation
- Funding for implementation
- Monitoring, reporting, auditing
- Secured on title
Benefits:

- Consistent field allocation with look-up table means greater assessor repeatability
- Growth form richness can be benchmarked
- Aligns with other jurisdictions
Key changes in the BAM

Vegetation Integrity (condition)

Data-driven benchmarks (replaces expert derived)

Continuous non-linear scoring (replaces ordinal 0-3 approach)

Dynamic weighting (replaces static)

New composition (C), structure (S), function (F) attributes

C-S-F sub-index aggregation via geometric mean
Habitat suitability for threatened species

Much of the TS assessment processes have been retained

Focus on improving rigour of data and management needs

Improved habitat condition assessment

as the V.I. score

so does no. species & individuals
Impact assessment

- Greater emphasis on the mitigation hierarchy
- Biodiversity risk weighting based on threat status & response to gain
- Serious and irreversible impact category
- Less ‘substitution’ of biodiversity values within credit units
- Prescribed biodiversity impacts
Components of gain

Averted loss: attribute *annual average* rate of decline in condition

Management gain: probability of reaching benchmark over a given timeframe (from mandatory management actions for threats and pressures)

Restoration gain: additional credit from active restoration
(e.g. sowing/planting of species representative of the PCT, replacement of logs, stags, nest boxes, constructed hollows)
Estimating the rate of gain

- BAM adopts a probabilistic approach: What is the probability of reaching benchmark over a 20-year timeframe?
- Rate of gain differs among attributes
- Explicit timeframe of 20 years
Modifiers to rate of gain

The rate of gain at each site is modified based on:

- Connectedness of the site (surrounding vegetation cover)
- Site resilience (a low vegetation integrity score)
- Extent of high threat weed cover (key threat)
87 approved agreements covering over 10,200 hectares

Applications for a further 116 agreements (est. 12,000 ha)

Over 8,000 hectares are TEC representing 39 different ecological communities

234 different Plant Community Types (or about 16% of PCT’s listed in the NSW classification)

Credits created for 91 different threatened species
Area and vegetation condition

Area & condition of vegetation - approved and submitted biobank sites

Biometric condition (percentile scores)

Area of vegetation in each condition percentile (ha)
Questions

For more information on the NSW Biodiversity Offset Scheme