
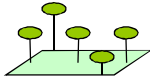


Introduction

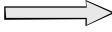
- **Outline of presentation**
 - Overview of concept of BioBanking
 - Scope of BioBanking
 - Overview of the BioBanking Assessment Methodology
 - Benefits of the methodology
 - Key issues with the methodology




Overview of concept of BioBanking

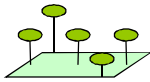


Development site –
Current biodiversity value = **50** credits




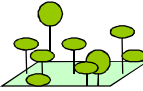


Loss in biodiversity values
Future biodiversity value = **0** credits
Credits required to offset = **50** credits
= **biobanking statement**




Biobank (offset) site –
Current biodiversity value = **50** credits







Gain in biodiversity values
Future biodiversity value = **60** credits
Credits created = **10** credits
= **biobanking agreement**



Scope of BioBanking



- BioBanking is a **voluntary** alternative to 7 part test, SIS, concurrence.
- **Biobanking statements** (development site) available for:
 - Development under Part 3A, Part 4, Part 5 EP&A Act.
 - Not available for land subject to NV Act.
- **Biobanking agreements** (biobank site) available for:
 - Most land in NSW, including land subject to NV Act.
 - Not available for land reserved under NPW Act (eg. national parks) or Forestry Act (eg. flora reserve) or subject to existing offsets.






Overview of BioBanking Assessment Methodology

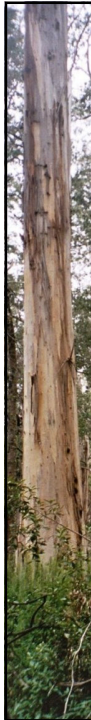
- **Legal test** – for a biobanking statement to be issued, a development must **‘improve or maintain biodiversity values’**.
- Must apply the **BioBanking Assessment Methodology**.
- If IoM test not met, D-G cannot issue biobanking statement.
- Key components of the methodology:
 - 1) Defines ‘improve or maintain biodiversity values’.
 - 2) Biodiversity databases.
 - 3) Survey and assessment of biodiversity values.
 - 4) Calculation of biodiversity credits.
 - 5) Offset rules.

Meaning of improve or maintain biodiversity values

- **Two components to ‘improve or maintain’ test –**
- **1) Controls on clearing –**
 - a) Development must avoid direct impacts on ‘red flag areas’, OR
 - b) If a development impacts on red flag areas, the Director-General must determine that the impacts are acceptable.
- **2) Offset requirements –**
 - If clearing allowed, the direct and indirect impacts of the development must be offset by the purchase/retirement of biodiversity credits in accordance with the methodology.





Meaning of improve or maintain biodiversity values

- **Two components to controls on clearing –**
- **1) Red flag areas – vegetation NOT in low condition and is:**
 - 1) An endangered or critically endangered ecological community, OR
 - 2) A vegetation type > 70% cleared compared to pre-1750 extent, OR
 - 3) A threatened species that cannot withstand further loss.
- Low condition vegetation has same meaning as under NV Act.
- **2) Decision-making discretion –**
 - The Director-General can override a red flag if satisfied that certain criteria, as set out in the methodology, are met.
 - Consultants to prepare red flag variation reports.
 - D-G must publish reasons for decision to vary red flag.



Meaning of improve or maintain biodiversity values

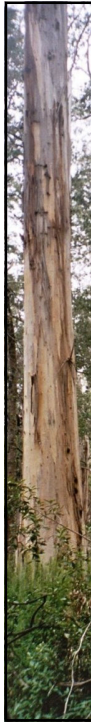
- **Examples of moderate-good condition vegetation –**



1) Overstorey does not meet definition of low.

2) Overstorey does meet definition of low, but groundcover does not (>50% native cover).





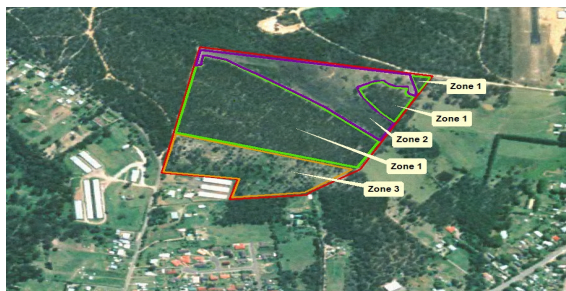
Biodiversity databases

- Methodology supported by biodiversity databases.
- Two key databases are:
 - **1) Vegetation Types Database –**
 - Describes each of 1,600 vegetation types in NSW. Used to ID –
 - Vegetation types that occur at a site.
 - Red flags for vegetation types.
 - **2) Threatened Species Profile Database –**
 - Describes all threatened species - TSC Act and EPBC Act. Used to ID –
 - What threatened species occur at a site.
 - Red flags for threatened species.
 - Ability of threatened species to respond to management actions.



Survey and assessment of biodiversity values

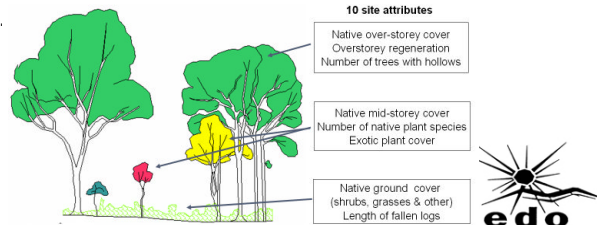
- Current biodiversity values of a site assessed using:
 - **1) Vegetation** (vegetation types).
 - **2) Threatened species** (those predicted to occur).
- Surveys required in accordance with **Operational Manual**.
- Site split into **zones** based on vegetation type and condition.





Survey and assessment of biodiversity values


- **1) Vegetation** – value of site assessed by:
 - **Site Value** – a measure of the condition of each vegetation type at a site compared to its undisturbed (benchmark) condition.
 - **Landscape Value** –
 - 1) % native vegetation cover surrounding the site.
 - 2) Connectivity of the site with surrounding vegetation.
 - 3) Size of the patch of vegetation at the site.
 - **Area (in ha).**



Survey and assessment of biodiversity values



- **2) Threatened species** – value of site assessed differently depending on type of threatened species predicted to occur.
 - **a) Species predictable by vegetation types** (fauna only).
 - Predict species at site by applying 5 filters.
 - If species predicted to occur, then presence assumed within suitable vegetation types.
 - No targeted species surveys required.
 - Assessed by area/quality of habitat.
 - **b) Species not predictable by vegetation types** (all flora + some fauna).
 - Predict species at site by applying 7 filters and checking for habitat features.
 - If species predicted to occur, then must do either:
 - Targeted species survey, OR
 - Expert report (habitat assessment).
 - Assessed by area of habitat (fauna) or number of individuals (flora).






Calculate biodiversity credits


- Biodiversity credits = **change** in biodiversity values at site.
 - Change = difference between current values and future values.
- Methodology provides rules/methods to predict future values.
- Use **Credit Calculator** to calculate credits on basis of change.
- **1) Ecosystem credits =**
 - a) Vegetation (vegetation types)
 - b) Species predictable by vegetation types.
- **2) Species credits =**
 - Species not predictable by vegetation types.

Calculate biodiversity credits



- **1) Ecosystem credits**
 - Δ in vegetation condition (Site Value).
 - Δ in Landscape Value (connectivity, etc) .
 - Area (ha).
 - Threatened species response to management actions.
- **2) Species credits**
 - Δ area of habitat (fauna) or number of individuals (flora).
 - Threatened species response to management actions.
- **Offset ratios** – determined by methodology case by case.






Offset rules

- Offset (biobank) site for a development may be located anywhere in NSW subject to the Regulations and offset rules.
- **Offset rules** – to offset impacts, a biobank site must contain:
 - **1) Ecosystem credits**
 - Same vegetation type to that impacted, OR
 - Another vegetation type that is more scarce (>% cleared) that is within the same vegetation formation to that impacted, AND
 - Suitable habitat for all threatened species impacted.
 - **2) Species credits**
 - Known/likely habitat (fauna) or individuals (flora) for all threatened species impacted.

Benefits of methodology

- Improved objectivity, consistency, transparency, and reduced decision-making discretion.
- Red flags protective of biodiversity.
 - But controls on clearing subject to some discretion.
- Better addresses cumulative impacts.
- Better ensures offsets are adequate.
 - Like for like.
 - Must improve not just protect.
 - Strategic offsetting.
 - Long-term management.





Key issues with methodology

- Variation of red flags by Director-General.
 - Key criteria =
 - 1) Measures to avoid impacts on red flag areas must be considered.
 - 2) The development must not impact on a vegetation type that is > 90% cleared in a CMA and that is in a patch > 4 ha in size.
 - 3) The site's contribution to regional biodiversity values must be low.
 - 4) The site's long term viability must be low or not viable.
- Accuracy of biodiversity databases.
- Species assessment – habitat assessment v targeted surveys.

