FACT SHEET 11

Landcare Australia

BIO-BANKING & AGRICULTURE

BioBanking benchmarking creates a potential opportunity for Bundanon Trust to participate in the development offsets market, which may generate funding for on-going maintenance of land rehabilitation works. The work also provides a valuable benchmark for monitoring and evaluation of ecological change as the Living Landscape project progresses.

Image: Plantings at Bundanon, August 2014

BIO-BANKING

What is Bio-Banking?

BioBanking was established by the New South Wales Department of Environment, Climate Change and Water (DECCW) (now the Office of Environment and Heritage (OEH)) as a method to address the loss of biodiversity and threatened species. The scheme attempts to create a market framework for the conservation of biodiversity values and the offsetting of development impacts. The scheme is currently voluntary.

BioBanking is established under Part 7A of the NSW Threatened Species Conservation Act 1995 (TSC Act), which was enabled by the Threatened Species Conservation Amendment (Biodiversity Banking) Bill 2006. The Threatened Species Conservation (Biodiversity Banking) Regulation 2008 provides additional rules for specific aspects of the scheme that are important for its operation.

The BioBanking Assessment Methodology sets out how biodiversity values will be assessed, establishes rules for calculating the number and class of credits, and determines the trading rules that will apply.

Jacobs created a report based on a BioBanking assessment on portions of the Bundanon Trust properties. A review of biodiversity data and regional vegetation mapping was conducted to assess the broad-scale vegetation types and records of threatened species relative to the site. The database review was followed by field investigations to ground truth existing broad-scale vegetation.

Field investigations

Plot-based and transect assessments along with general traverses were used to document vegetation and habitat type, condition and extent across the Bundanon Trust properties. As part of the property had previously been subject to fauna surveys, it was not necessary to undertake the full range of fauna survey techniques for terrestrial fauna species for this BioBanking assessment.

The field surveys undertaken for the project focussed on the following tasks:

- Assessing the condition of the vegetation against recognised benchmarks in the DECC (2008a) database using the BioBanking condition assessment methodology (Seidel and Briggs 2008). Vegetation and habitat condition and undertake threatened species surveys. Ground-truthing broad-scale vegetation mapping (Tozer et al. 2010) and collection of rapid data points regarding vegetation attributes including distributional limits, dominant species, condition and disturbances.

- Documenting opportunistic sightings of fauna species and/or other evidence of fauna species (i.e feeding evidence, scats) and important habitats (hollow trees, fallen timber).

- Opportunistically identifying and mapping threatened flora species.

- Inspecting cleared/disturbed areas of the area and determining the suitability for habitat restoration.

Vegetation condition

The results of the condition assessment identified areas of intact remnant vegetation mainly as being in a moderate to high condition when compared with recognised benchmarks. The BioBanking condition scores for each vegetation zone obtained from the field assessments for the BioBanking site varied between 9 and 85 out of a possible benchmark score of 100. In accordance with the BioBanking methodology two general condition classes are defined for the purposes of the calculations comprising moderate-good condition and low condition.

Good condition areas comprise intact native vegetation that has been subject to limited disturbances and occur in a generally natural state with no or very low weed cover and high native flora diversity. Moderate condition areas comprise native vegetation with moderate to high weed cover (mainly Lantana camara) which has resulted in a diminished diversity and cover of native flora species. There are also several areas of dominated by Black Wattle (Acacia mearnsii) that have been identified as poor condition. Cleared paddock areas dominated exotic grasses have been identified as low condition for the assessment. These areas are currently being subject to restoration practices by Landcare Australia Ltd, including weed removal, native plantings and ongoing management.

Connectivity assessment

The BioBanking Methodology assesses connectivity through consideration of the width of the existing link in terms of the current level of habitat connectivity and the width of future connecting link in terms of the proposed revegetation activities. The southern and parts of the eastern and western boundaries of the study area comprise the Shoalhaven River which presents a barrier to many non-flying terrestrial fauna species. The northern parts of the study area are connected to large areas of habitat greater than 500 metres wide along the eastern, western and northern boundaries.

Threatened species habitat

Twenty-seven threatened fauna species have been confirmed or are considered to have a high potential to occur on the BioBanking site and could potentially generate species credits on the BioBanking site. There has been limited recent survey effort to identify threatened fauna species and suitable habitat on the study area, and so a preliminary assessment has been provided based on the existing lot data and vegetation mapping.

Credit report

The results of the credit calculations are provided below, including the credit profile information and number of credits generated on the Bundanon Trust properties.

Ecosystem credits

A total of 7,796 ecosystem credits have been generated by the BioBanking site and the proposed revegetation and management actions as specified by the BioBanking credit calculator and specified input variables. The final credit report specifies 16 credit groups. Management zone which comprise crown land leases will mean some discounting of credits will be required, which will need to be negotiated with OEH depending on the particular lease arrangements.

Species credits

A total of 74,574 species credits have been generated by the BioBanking site and the proposed revegetation activities for the 27 threatened fauna species identified as potentially occurring on the site. The default gain in site value of 60% was used for all species.

Image; Large area of new plantings at Bundanon planted by Mountain Echo, 2014