

OEH response to the Independent Review of the Biodiversity Assessment Method

Recommendation 12 of the biodiversity legislation review called for “a single, scientifically-based, transparent, publicly-available and independently reviewed method for assessing the biodiversity and other environmental impacts of all development in NSW.” The Government is addressing this recommendation with the development of the new biodiversity assessment method (the BAM).

Development of the BAM

The Office of Environment and Heritage (OEH) has led the development of the BAM. The approach has drawn on significant operational and technical experience administering biodiversity assessment and offsets programs, a review of scientific literature and the approaches in other jurisdictions, and independent analysis commissioned on previously developed methods including the draft Framework for Biodiversity Assessment (FBA) and Biobanking Assessment Methodology.

Independent peer review process

OEH sought an independent expert review of the BAM, which was conducted by Dr Philip Gibbons of the ANU, and Dr Teresa Eyre of the Queensland Government. The reviewers considered different elements of the BAM as they were developed, and provided advice in four parts:

1. DRAFT Independent review of the Biodiversity Assessment Method, October 2015
2. Review of “Offset multipliers and defining impacts that may cause ‘serious or irreversible damage’ to biodiversity”, November 2015
3. Review of “Proposed approach to scoring gain in biodiversity values at an offset site”, November 2015
4. Independent review of the Biodiversity Assessment Method (v0.5 Dec 2015), January 2015

These reports and pieces of advice are attached. OEH’s response to the recommendations and advice provided has been organised under the headings below relating to key aspects of the BAM.

Assessment of landscape features and site context

The independent reviewers identified potential complexity and duplicate weighting in the way that landscape features and site context were assessed (e.g. recommendation 6, draft review). This is because a significant majority of development sites and offset sites are too small a scale to quantify the change.

This issue has been addressed by removing the need for the assessor to quantify the landscape scale change after considering the impacts of development or the improvement from management actions.

Site context is still used in BAM to consider the likely habitat suitability of a site based on the connectedness of vegetation on the site to surrounding vegetation, and also the size of patches of native vegetation on the site.

Native vegetation integrity

The new approach to assessing vegetation integrity in the BAM received support from the reviewers (p. 13, draft review) and suggestions for further refinement. OEH further refined the approach to vegetation integrity assessment on the advice provided by the reviewers by:

- reducing the number of the growth form groups and attributes used to assess function down to 6

- clarifying that the requirement for floristic data is only required to identify a Plant Community Type (PCT) when undertaking a full BAM assessment. The BAM does not require assessors to collect floristic data for streamlined assessments or at condition plots (recommendation 12, draft review).
- Refining the approach to assessing hollow bearing trees (recommendation 13, draft review), by requiring assessors to count the *number of large trees* to reduce assessor variability. This means that the number of large trees will be used in the BAM as a surrogate for the presence of hollow bearing trees.

OEH plans to conduct a more detailed sensitivity analysis on the vegetation integrity component of the BAM once new assessment benchmarks are finalised and available.

The way that native vegetation integrity is scored has been refined in response to remove the opportunity for substitution across the different components of the assessment and incorporate 'over-scores' of the growth form groups used to assess structure (recommendations 17 and 18, draft review).

Plot and transect surveys

Recommendations 23 and 24 of the draft review were for the development of a companion field data collection manual as a means of improving a standardised approach to collection of plot and transect data. The draft BAM includes some additional survey requirements and guidance for assessors regarding the field methods for assessing vegetation integrity, and further work has commenced to prepare a companion document.

Threatened species and populations

The draft review commented on the assessment of threatened species and populations.

In response, consideration is being given to improving the way information in the Threatened Species Profile Database is displayed to assist assessors performing assessments. This will include new information fields to simplify assessment of habitat suitability of flora species.

The notion of spatially predicting the occurrence of threatened species (recommendation 26) has merit in being able to streamline that part of the BAM. However, the time required to fully develop this approach means that this recommendation is not adopted at this stage.

Avoiding and minimising impacts on biodiversity values

Recommendations 30-32 in the draft review deal with avoiding and minimising impacts.

OEH has responded to the recommendations set out in this section of the review report, including providing further information on the requirements for inclusion in a Biodiversity Assessment Report (BAR) and the criteria for identifying species and communities where development is likely to trigger a serious or irreversible impacts.

Section 8 of the draft BAM has been revised to provide clarity on the guidelines to avoiding and minimising the impacts of development, including guidelines for assessing indirect impacts.

Serious and irreversible impacts

The reviewers found the rationale underpinning the reason for, and the definition of 'serious or irreversible' to be "excellent" (Review of offset multipliers document).

The BAM also includes the criteria used to identify species and populations with a very high level of biodiversity concern and are therefore at risk of serious or irreversible impacts (section 6.5.2). The BAM uses threat status and replaceability (i.e. the sensitivity of a threatened species or population to sustain losses while offsets accrue elsewhere) as the rationale for identifying the level of biodiversity concern. The reviewers supported this approach in their advice provided in November 2015 and made suggestions for the consideration of additional criteria.

OEH has continued to refine the approach for assessing the level of biodiversity concern for communities, species and populations. This includes identifying whether it is appropriate to set a condition or area threshold for different entities. The rationale and criteria used to assign the level of biodiversity concern will also be available for broader comment during public exhibition.

Offset rules for biodiversity

In their review of this section of the BAM (pp. 26-28 of the draft review), the reviewers highlighted a number of offset rules that may allow undesirable substitution between biodiversity values.

The offset rules in the BAM require securing and retiring biodiversity credits that are like for like. The rules highlighted by the reviewers are where a proponent or the proposed Biodiversity Conservation Trust has sought approval to vary the offset rules because of an inability to find a matching credit. OEH accepts that these variation rules allow some level of substitution across biodiversity values. They have been retained in the draft BAM as OEH contends that it is necessary to allow some level of flexibility to the offset rules rather than just the strict application of like for like.

Through the BAM information management system, OEH will have the ability to monitor and track the application of variation rules. This will allow OEH to identify and report on any entities that are repeatedly being offset with non like for like entities.

Use of an offset multiplier versus net present biodiversity value

During the development of the BAM, OEH sought advice from the reviewer on the application of *Net present biodiversity value* (NPBV) as an approach for assessing gain at an offset site. The approach would discount the number of credits that could be created on an offset site as a means of managing risks in achieving an offset outcome, and explicitly account for time-lags in replacing lost habitat. Applying the NPBV concept on the offset site has a similar influence in determining an offset ratio to using an offset multiplier on a development site.

Although there is merit in this approach and it is used in the EPBC Act offsets calculator, OEH has preferred to retain the use of an offset multiplier in the BAM. One of the main reasons for this decision is because offsets occur in a credit trading context and the influence of the NPBV concept in this context is not known. It is also thought that aligning the offset multiplier to the level of biodiversity concern for a threatened entity would reinforce the notion of avoiding and minimising impacts before the calculating an offset.

Approach to scoring gain in biodiversity values at an offset site

OEH has continued to refine the approach to scoring gain in biodiversity values at an offset site based on the final version that was provided to the reviewers for their comment. This component of their review includes advice and suggestions that OEH is continuing to develop in or to present the proposed approach in a streamlined and transparent way. This includes the use of a demonstration tool for public exhibition which will assist assessors apply the BAM in a way that is logical and transparent in

demonstrating how risks and time lags are accounted for in assessing the gain in biodiversity value for different species and communities.

OEH also recognises the need for further field testing to assess different outcomes in a variety of ecosystems, combined with a sensitivity analysis of each component to evaluate the level of influence the component has on the overall outcome.

Ongoing work and refinements

The reviews recommended ongoing testing of the BAM. Work will continue on supporting products and policies (e.g. BAM tools, assessor accreditation scheme) and ongoing refinement to the BAM during the exhibition period and beyond.

Policy issues

The final review made strong comment about what it perceived as excessive flexibility in the offset policy (general comment 7, final review; also recommendation 36 draft review), and the lack of a clear standard to judge the BAM against with the removal of the “Improve or Maintain” standard (general comment 8, final review).

It noted that the proposed flexibility in the BAM “will undermine the intent of offsetting to create a price signal for biodiversity...[and] a reduced incentive to avoid impacts that are costly to offset.”

The final review also proposed including an explicit standard in the BAM or policy to guide development of the BAM and provide an explicit target for monitoring and evaluation.

OEH is cognisant of this feedback and will ensure its consideration in further BAM development.

Simulation, sensitivity testing and pilot exercises

The final review provided in January 2016 called for simulation and sensitivity analysis and pilot exercises, and made recommendations for the ongoing refinement of the BAM (e.g. general comments 2-6, final review; also recommendation 16, draft review). OEH is committed to ongoing testing and refining of the BAM in the period before commencement to ensure that different components of the BAM interact logically and contribute proportionally to the assessment outcome. OEH will also consider all feedback provided through targeted and public consultation, and ongoing user feedback to incorporate adaptive revisions and improvements.

Assessor accreditation

The assessor accreditation scheme under development will cover all aspects of the BAM and seek to reduce variability among assessors during all stages of the development process (recommendation 41, draft review).

Assessment report templates

As part of the BAM tools development, OEH will produce standard templates for biodiversity assessment reports produced by applying the BAM (recommendation 4, draft review; recommendation 5, final review). This will aid the task of assessors and consent authorities by clarifying and simplifying the form and content of what must be provided and considered.

Other support

The reviews also made numerous suggestions about other areas in which support for the offsets scheme, BAM, consent authorities and assessors might be provided. These included by producing manuals, engaging with consent authorities, and improving clarity and guidance. OEH intends to engage with stakeholders, including

proposed consent authorities and assessors, during and after the exhibition period, and will consult about proposed and requested support.