

Questions and Answers

Topic: BAM gain model

Should the large tree category be looked at more closely in the BAM gain model? Sometimes measured trees are only 1cm below the large tree category (and will be within it in 20 years) but are not included.

At present the BAM does not assume that trees will move into the large tree category in 20 years (due to the slow growth rate of large trees). With the upcoming revisions to BAM however, a small increase will be included for the number of large trees over the 20-year management period.

For proposed biodiversity stewardship sites, can you increase the 'future value with active restoration gain' to the benchmark value for that PCT?

Yes, you can use active restoration management actions to increase a vegetation attribute score to the benchmark condition for that PCT. It is applicable only to those attributes where active restoration is permitted (e.g. does not apply to large trees). This will require justification and supporting evidence in the BSSAR to demonstrate it is feasible, as well as identification of interim performance targets in the management plan, and costing for the management actions in the TFD calculator.

The BAM-C applies a 30% risk weighting to the 'future value with active restoration gain' target (accounting for the uncertainty of active restoration success) to calculate the maximum allowable gain for each vegetation attribute that is subject to active restoration management actions. This is referred to as the 'Future value with offset (After Restoration)'. Biodiversity credits generated at the site are calculated from this value (e.g. the site is not generating credits from the predicted benchmark value) and represents the minimum performance target for the site over 20-years of management.

At the end of the 20-year management period, what gain is audited by the BCT to determine if management actions attained their goal?

The BCT audits against interim performance targets (e.g. 5-year, 10-year etc.) to determine if the site will achieve the predicted 20-year gain (with risk weighting applied). Adaptive management may be required to facilitate the achievement of this target. If the predicted 20-year gain (with risk weighting applied) is exceeded within or at the end of the 20-year management period, the BAM may be reapplied. The expected gain over the second 20-year management period will generate further biodiversity credits.

One of the advantages of the current BAM over previous methods, is that it gives improved measurability, repeatability and is more finely tuned to improvements at the site. The current BAM is silent on the repeat application for further credits and it's something we would look to include in further detail in the five-year review. We are just over 2 years away from commencing that review as part of the scheme.

How does the BAM gain model apply at a biodiversity stewardship site?

How are koala food tree planting areas assessed for gains, when the intention is to increase food trees rather than achieve certain benchmarks for a PCT? For example, composition may be low, but benefit for koalas and other species is likely to be high.

This will depend on the conservation objective that you are looking to achieve. The assessment of habitat suitability is linked to the vegetation integrity metric, so it is in part tied to the benchmark. It is recommended that careful thought be given to a proposal such as this. Tree composition is only one attribute and its influence on gain will vary across PCTs, based on the dynamic weighting. Please refer to the [BAM Support Mailbox](#) for advice specific to a particular situation.

Topic: High Threat Weeds (HTW)

How does one factor weed control activities into future gains?

Integrated weed management and control is a required management action, contributing to the management of threats and pressures at a biodiversity stewardship site, and factored into the predictions of gain by the BAM-C. Integrated weed management and control is also an active restoration management action. When determining if required or active restoration management actions are needed at a site for weed control, the density or cover of HTWs and the natural resilience of the vegetation zone (vegetation integrity) should be considered. There is an expectation that with active restoration management actions, more intensive weed management activities would be undertaken (e.g. scalping, intensive and repeated treatments over a number of years).

Is there scope to incorporate adjustments to HTW future cover scores in the BAM-C? Cover can be easily reduced for some woody weeds (e.g. African Olive, Lantana), resulting in less impact to the site's ability to obtain the proposed gain through active restoration management actions.

This is an area currently under consideration as part of the revised BAM. Where there is evidence that the HTW can be managed using appropriate techniques, and these actions are included in the management plan, the HTW risk weighting would be reduced or removed. EES will provide further information once the BAM revisions are finalised.

Weeds are often located in clusters, especially in creek lines. It is unlikely that all BAM plots are located in areas where the HTWs are present; and if they were, they would overestimate the average weed cover of a site. How do we accurately represent HTW cover when assessing vegetation integrity?

Prior to conducting a vegetation integrity assessment, the plant community types (PCTs) must be identified and vegetation zones defined by the broad condition state of the PCT. In doing this, areas of HTW cover or similar weed species can be defined to a single vegetation zone and assessed according to the BAM. The HTW risk weighting is applied at the vegetation zone level. This means the predicted gain in vegetation zones where HTW are not present will not be restricted. This approach will also assist to target different management actions to particular parts of the site.

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Are vegetation cover scores that are substantially above benchmark and potentially of detriment to biodiversity (e.g. dense shrubs in a grassy woodland, regrowth of Cypress thickets in forest) factored into vegetation integrity scores in the BAM? I believe they were previously dealt with under BBAM (i.e. loss of vegetation integrity score if substantially above benchmark) but are always treated as 'benchmark' under BAM?

No. The vegetation integrity metric does not factor in a particular attribute being substantially above benchmark. However, if attributes are substantially above benchmark and are having a detrimental impact, then this should be reflected in reductions in the cover or richness of other attributes (e.g. negative competitive effects of shrub cover on grass cover). For example, in a grassy woodland where the dynamic weight for grass cover is high and shrub cover is relatively low, competitive effects of shrubs on grasses could substantially reduce VI scores, with the magnitude of the effect dependent on the relative competitive effects and dynamic benchmarks for the particular Regional Vegetation Class (RVC). This is a shift in philosophy from the Biobanking Assessment Method (BBAM) and does not require a judgement about the penalty to be applied.

For species of questionable status e.g. *Vachellia farnesiana* which is listed as both a HTW and native species in PlantNet, and included in PCT descriptions (e.g. PCT52), how should the species be treated?

The assessor should use their judgement based on the context of the land that they are assessing. Please refer to the [BAM Support Mailbox](#) for advice specific to a particular situation.

Topic: Biodiversity Stewardship Agreements (BSAs)

How can setting up a BSA be integrated into biocertification?

The revised BAM will incorporate the concept of a biocertification assessment area. This addition to the BAM provides the proponent with the ability to make landscape scale decisions when carrying out biocertification in areas identified as most useful for development, and areas that are best conserved and protected. BSAs are a good way of doing this in the context of the larger strategic biocertification proposals, rather than small scale local re-zoning.

Are any councils using BSAs to secure biodiversity values in otherwise chronically underfunded council reserves?

Local governments have been active participants under the NSW biodiversity offset schemes. Under the BioBanking scheme, 16 different local governments have actively participated and set-up one or more sites within their council areas. In other cases, local government have also agreed to take on the management of offset sites where a biobanking agreement (BSA) is established as part of a development or planning proposal.

Can a Local Government establish a BSA on land they manage but do not own (e.g. Crown land where council is the manager)?

The BCT can only enter into a BSA with the land owner. While the management of a BSA can be undertaken by third parties or land managers, such as Councils, annual management

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payments can only be made to the owner of the land. The land owner is ultimately responsible for compliance with the terms of the BSA.

Further information can be found in the [‘Biodiversity conservation agreements on Crown land’ Policy](#).

Has the impact of active restoration management actions on the TFD been investigated? Proponents looking to establish their own BSAs will want to understand the costs and benefits of active restoration management actions compared with sourcing a larger offset area for their development.

The BAM provides clear guidance on the types of management actions that are considered as active restoration. Management actions that were required under biobanking agreements, such as supplementary planting, are now considered to be active restoration under the BAM. Undertaking active restoration has the ability to increase the expected gain and therefore create additional biodiversity credits.

The costs and benefits of undertaking active restoration actions will vary from site to site depending on a range of factors such as current condition of the site, feasibility of proposed actions, site constraints, availability of ecological or habitat material and monetary value of the biodiversity credits. The cost and availability of purchasing similar credits from the credit register is another factor that assessors and proponents would normally consider here.

Replanting is an example of an active restoration management action that was commonly factored into the TFD for Biobanking agreements.