



Biodiversity
Conservation
Trust

Biodiversity Conservation Trust

Total Fund Deposit Guideline

for biodiversity stewardship agreements | February 2021

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Acronyms

ARMA	Active Restoration Management Actions
BAM	Biodiversity Assessment Method
BAM-C	Biodiversity Assessment Method Calculator
BCT	Biodiversity Conservation Trust
BOS	Biodiversity Offsets Scheme
BSA	Biodiversity stewardship agreement
BSSAR	Biodiversity Stewardship Site Assessment Report
CPI	Consumer Price Index
DPI	Department of Primary Industries
DPIE	Department of Planning, Infrastructure and Environment
EPA	Environment Protection Authority
EES	Energy, Environment and Science (former Office of Environment and Heritage)
LLS	Local Land Services
NPWS	National Parks and Wildlife Service
PCT	Plant Community Type
TBDC	Threatened Biodiversity Data Collection
TFD	Total Fund Deposit

1 Introduction

1.1 Background

Biodiversity stewardship agreements (BSAs) are a key component of the New South Wales Biodiversity Offsets Scheme (BOS) and are administered by the NSW Biodiversity Conservation Trust (BCT). BSAs are in-perpetuity agreements registered on the land title. This means that current and future landholders are required to carry out management actions and other obligations in accordance with the BSA. Management of a BSA aims to achieve an improvement in biodiversity values of the land under the agreement. This improvement is the basis for generating biodiversity credits that can be sold and/or retired to offset the residual impacts of approved developments that trigger the BOS.

The amount that is set aside to manage the BSA in accordance with the management plan and in-perpetuity, is called the total fund deposit (TFD). The TFD is calculated using the [Total Fund Deposit \(TFD\) calculator](#) and is the **total present value of all costs associated with managing the biodiversity stewardship site in-perpetuity**. Each management action, the timing of the action and the cost of the action are to be outlined within the TFD calculator. The TFD calculator is to be prepared by an appropriately experienced person. Landholders may choose to manage the preparation of the TFD and engage people with relevant expertise to provide costs for management action implementation. Alternatively, landholders could engage an ecological consultant to undertake this role.

The TFD includes the costs for implementing required management actions and, if applicable, active restoration management actions as specified in the management plan. Proceeds of credit sales are used to fulfill the TFD. Once enough credits have been sold to fulfil 100% of the TFD (or in some cases, self-contributed in order to directly retire credits), the BCT will release annual payments as per the payment schedule in the BSA, to the landholder. The annual payments are used by the landholder to fund the management actions and meet the relevant performance measures. Once the TFD is fulfilled, the proceeds of any future credit sales are retained by the credit owner.

Determining the amount of money associated with managing the biodiversity stewardship site in-perpetuity is a critical step in planning the management of a biodiversity stewardship site. If the TFD does not adequately cover the cost of the management actions, current and future landholders are still required to implement all management actions and meet relevant performance measures. The costing of management actions can be complex, and challenges include:

- Identifying adequate funding for the specific site in-perpetuity.
- Identifying future possible threats and appropriate risk contingencies.
- Risk contingency for decline in site condition if site is in passive management for an extended period.
- Identifying adequate market rates for delivery of management actions.

Guidance for costing the management actions at biodiversity stewardship sites will support a consistent approach to costing, so that the BCT is satisfied that the TFD is sufficient to meet the BSA performance measures. Guidance also helps to minimise the risk of inadequate funding of management actions over the life of a BSA, and to achieve predicted biodiversity gain.

More information about the Biodiversity Offset Scheme can be found on the [Department of Planning, Industry and Environment website](#).

1.2 About this Guide

The overall objective of this guide is to ensure that the long-term management of stewardship sites is appropriately funded by:

- supporting landholders and people preparing the TFD calculator with clear information about the steps to identify costs, timing, and when to seek specialist advice,
- ensuring planning and costing of management actions is determined consistently across BSAs,
- promoting greater quality and transparency in the drafting and costing of management actions for stewardship sites.

The guide has been designed to complement and be used in conjunction with:

- Stage 1 and Stage 3 of the Biodiversity Assessment Method (BAM),
- Biodiversity stewardship agreement template,
- Biodiversity stewardship agreement management plan template,
- Total Fund Deposit Calculator,
- Biodiversity Assessment Method (BAM) Operational Manual Stage 1 and Stage 3.

The guide is expected to be used by appropriately experienced persons and landholders who are responsible for costing management plans for biodiversity stewardship sites.

2 Total Fund Deposit Principles

Preparation of the TFD and supporting justification should be guided by the following principles:

1. The TFD is to be prepared specifically for the management plan developed for the biodiversity stewardship agreement.
2. All management actions and recurring costs are to be based on contractor and consultant rates (see [section 3.3](#)).
3. All management actions are to be itemised into management activities within the TFD.
4. The rate, unit and quantity for each line item is to be included within the TFD (see [section 5](#)).
5. Justification and a description of the cost allocated to each activity is to be itemised within an appendix to the BSSAR (see [section 5](#)).
6. Input or quotes from an appropriate practitioner or specialist may be needed to inform costing, duration and frequency of management actions (see [section 4](#)).
7. The funding for recurring and in-perpetuity management actions must form part of the TFD.
8. Appropriately justified contingency costs are to be provided for higher risk management actions ([see section 3.5](#)).

3 Biodiversity stewardship site funding

3.1 Overview

The level of funding set aside for a BSA is determined at the BSA application phase. It is therefore crucial that all costs associated with the ongoing management of a BSA are included in the TFD Calculator. Landholders are expected to be involved in the development of the TFD to ensure they are aware of the costs allocated to undertake relevant management actions and can fulfil their obligations under the agreement.

The types of costs associated with a BSA can be separated into four broad categories:

- Establishment costs,
- Management costs,
- Recurring costs, and
- Contingency costs.

These costs are detailed in the following sections.

3.2 Establishment costs

The establishment costs are likely to be one-off costs incurred during planning for and setting up a BSA.

These costs are not included in the TFD and the landholder is required to cover these costs. The landholder may choose to recover these costs through pricing and sale of biodiversity credits. The credit pricing worksheet tab in the TFD Calculator can be used to assist landholders consider establishment costs in biodiversity credit pricing.

Establishment costs could include, but aren't limited to:

- [BSA application fee](#),
- Preparation of the BSSAR (including biodiversity survey) and management plan by an accredited assessor,
- Confirmation of eligibility and obtaining relevant supporting documents in accordance with the BSA Supporting Document Guide,
- Preparation of the TFD calculator by an appropriately qualified person/s,
- Engaging specialist practitioners to scope and price management actions (see section 4), and
- Legal and taxation advice.

3.3 Management costs

Management costs are those that are required to implement the management actions described in the management plan. Costs must be identified for each required management action and if applicable, each active restoration management action (ARMA) (required and active restoration management actions are outlined in [Table 6](#) and [Table 7](#) of the BAM and are included in Appendix 1). The amount

that is set aside to implement management actions in accordance with the management plan and in-perpetuity, is called the total fund deposit (TFD).

The person preparing the TFD, in consultation with the landholder and other appropriately qualified persons (such as bush regenerators) needs to identify the appropriate method, scope and frequency of management actions to achieve the predicted gain in biodiversity values identified in the Biodiversity Assessment Method Calculator (BAM-C).

Management costs include:

- one-off costs associated with establishing the biodiversity stewardship site (such as installation of stock proof fencing),
- short-medium term management costs that occur for part of the initial 20-year period (such as primary and secondary weed control), and
- costs which are ongoing in-perpetuity (such as maintenance of fences and monitoring).

The costs identified for each management action must be priced for a suitably qualified and experienced contractor or consultant (as applicable) to undertake the relevant management action in accordance with the conditions of the agreement. This ensures the landholder, or a future owner, will always be able to manage the biodiversity values on the site even if they are unable to complete the management actions themselves. The landholder can implement management actions where they have expertise and experience to do so. Where this occurs, costs allocated to contractor/consultant fees can be retained by the landholder.

More information on management costs are outlined in [section 6](#) of this guideline.

3.4 Recurring costs

Recurring costs are those that are associated with the ongoing project management or administration of a BSA. They usually occur at regular intervals and enough funds need to be set aside for landholders to administer the BSA in-perpetuity.

More information on recurring costs are outlined in [section 8](#) of this guideline.

3.5 Contingency costs

Contingency funding is an important factor in cost planning of management actions which are at greater risk of not achieving predicted biodiversity gain. Additional funding may be required to address less than optimal responses to management and/or the emergence of unforeseen new threats.

Contingency costs do not include costs associated with mitigating known risks of specific management actions, such as replacement plantings which must be costed as a standard line item.

If contingency payments are not required in any given year, the payments can be held by the landholder for implementation in the future.

Examples of situations where contingency funding may be needed include:

- High risk activities or innovative management activities associated with active restoration management actions (if management activities don't achieve the required outcome and alternative management actions need to be implemented),
- Fence vandalism,
- Rubbish dumping, or
- Persistent or newly recorded feral pest/weed species.

The contingency funding may be provided as a regular and occurring amount or as a larger payment at longer intervals. A description of the contingency cost can be included in the BSSAR and a combined contingency included as one-line item in the TFD Calculator. Alternatively, the contingency can be separated into different line items in the TFD Calculator.

Contingency costs are not expected to cover force majeure events such as natural disasters. Where force majeure events occur, the BCT will work with the landholder to adaptively manage the site and where necessary, vary the biodiversity stewardship agreement.

4 Professional expertise and relevant agency input

A suitably qualified person is to prepare the TFD calculator in consultation with the landholder and, where necessary, with input or review from specialist practitioners, local councils and relevant government agencies.

Specialist practitioners should be used to provide specific advice on the management action scope, implementation, timeframes and costs, for items such as:

- suitable control methods for pests,
- extent of current and ongoing threats,
- native vegetation response to management actions,
- site resilience,
- suitable control methods for weeds,
- ecology of high threat weeds,
- advice on management activities including frequency and effective treatment methodologies,
- assistance with scoping and costing management activities over a 20-year period and then in-perpetuity, and
- fire history and a suitable fire regime for the site.

Specialist practitioners may include, but aren't limited to:

- fire practitioners,
- environmental weed contractors,
- native vegetation restoration practitioners including bush regenerators,
- engineers,
- regenerative agricultural specialists,
- hydrologists, and
- soil conservationists.

Government agencies may provide important input and costing considerations. Government agencies which may need to be approached include:

- Rural Fire Service,
- Department of Planning, Industry and Environment,
- Department of Primary Industries,
- Local Land Services, and
- the relevant local council.

In cases where there are complex management actions (such as large-scale restoration, weed control in highly degraded sites or in a threatened ecological community), ongoing input and/or contracted services from specialist practitioners to implement the management plan may be required. Where this is required, specific line items must be included in the TFD Calculator and the cost of engaging a

suitably qualified person is to be included in the TFD. Where the BCT considers the proposed costs are below that expected for a suitably qualified contractor or consultant to undertake a management activity or action, the BCT may request a recent quote to be provided (see section 5).

5 Justification

Justification for management plan costings and a description of the costs outlined in the TFD must be documented in the BSSAR (see table 1, BAM Operational Manual – Stage 3). The description should include the management activity components which have been costed into the price and how the breakdown of materials and labour has been allocated (see example in Appendix 3). The justification is expected to break down the activity into the key components and the source of this costing is to be provided. Generally, where the cost or rate varies between activities, separate justification is required.

The justification is expected to provide a detailed breakdown of:

- management activities to be undertaken for each management action,
- the relevant cost or rate,
- how the cost or rates were determined, and
- a description and timing of the management activity.

Where the actions and activities have multiple components, large material costs and/or are required to be implemented by a specialist, detailed justification will ensure all relevant components of the management action are considered, practically feasible and adequately costed. It will also provide the landholder with records of management action costs sources and assist landholders to scope a plan of works to engage contractors or consultants.

The cost for each management activity must be provided, including the itemised cost of the unit and/or rate for each management activity within the TFD Calculator. The itemised cost must also include materials required to implement the management activity. This information must be presented in a way which assists both the BCT and the landholder to understand how the costs have been determined.

Appendix 2 of this guide provides an example of a management activity justification and shows how cost should be outlined in the TFD Calculator. Note: Appendix 2 is not an exhaustive list and is intended to be an example only.

Where the person preparing the TFD does not have the relevant expertise or experience to provide the management activity cost (see section 4), a quote from a specialist practitioner is expected to be provided as an attachment to the BSSAR. Examples of management actions where a quote for components of management action implementation is generally required include:

- Restoration of highly disturbed vegetation to a threatened ecological community
- Track establishment and ongoing maintenance on a large and very steep site
- Planning and implementation of a prescribed burn to manage a fire dependent threatened species

6 Biodiversity stewardship site management costs

Management actions and related management activities must have an allocated cost within the TFD Calculator and be justified in accordance with section 5 of this guide. Required management actions and active restoration management actions are prescribed in table 6, section 11.3.1 and table 7, section 11.3.2 of the BAM, respectively, and provided in Appendix 1 of this guide. The TFD Calculator must allocate costs for the required management actions and if applicable, active restoration actions which will occur:

- following the establishing the biodiversity stewardship site,
- in the short-medium term, over an initial 20-year period, and
- in-perpetuity.

Table 1 provides an overview of cost considerations for each management action and should be read in conjunction with the BAM, BAM Operational Manual - Stage 3, relevant BCT guidelines and Appendix 2 of this guide. Table 1 provides common cost considerations for each management action and is not intended to be exhaustive or prescriptive.

When establishing the BSA management plan and the associated TFD, the individual requirements of the site will need to be considered.

Table 1: BSA management action cost considerations

Management action	Key considerations	Items to be costed in the TFD	Relevant documents
Grazing management	<p>Fence (temporary and permanent) materials, installation and maintenance to exclude livestock or to undertake strategic grazing of livestock must be priced in the TFD Calculator at contractor rates. In some circumstances, installation of fencing may not be costed in the TFD Calculator, where this is proposed appropriate justification must be provided.</p> <p>Entire fence replacement is expected to occur at a frequency of around 20 years, or otherwise justified. The materials and installation funds may be distributed over 20 years so there is annual funding for fence maintenance (e.g. 1/20th of the total fencing replacement cost is to be provided annually for fencing that is expected to last 20 years).</p>	<ul style="list-style-type: none"> • Stock proof fencing at all site boundaries where there is a current or future risk of stock incursion from adjoining land. • Fence maintenance and replacement costs. • If applicable, removal of barbed wire on top and bottom strands of external fences. • If applicable, temporary fence supply and installation, for strategic grazing. • Regular monitoring to ensure maintenance of ground cover in healthy condition as defined in the BCT <i>Livestock grazing guidelines for private land conservation</i>. 	<p>Livestock grazing guidelines for private land conservation,</p> <p>Managing overabundant kangaroo guidelines</p> <p>Essential conservation fencing infrastructure</p> <p>Biodiversity Assessment Method</p> <p>BAM Operational Manual - Stage 3</p>
Human disturbance	<p>Management actions relating to human disturbance include maintenance, deterrence and public awareness actions.</p> <p>Where the required human disturbance actions are high cost and/or resource intensive, or may work against conservation management objectives, a staged approach</p>	<p>Purchase, installation, maintenance and regular replacement of:</p> <ul style="list-style-type: none"> • BSA signs (\$42 each) • Gates • Access restriction measures including but not limited to fencing and bollards. • If applicable, interpretative signage 	<p>Biodiversity Assessment Method</p> <p>BAM Operational Manual - Stage 3</p>

Management action	Key considerations	Items to be costed in the TFD	Relevant documents
	<p>to their commencement may be proposed and costed accordingly.</p> <p>Consideration of the impact of human activities is of increased importance at biodiversity stewardship sites located on public lands or within urban and peri-urban areas where human population, usage and site access tends to be extensive relative to privately owned and more remote sites.</p>	<p>Removal and disposal of:</p> <ul style="list-style-type: none"> • Redundant internal fences and gates, • Waste present on site, • If applicable, hazardous waste, and • If applicable, ongoing waste removal and disposal. <p>Establishment, materials, labour, equipment and maintenance costs for tracks and trails.</p> <p>If applicable, installation and maintenance of cables, barriers and heavy-duty gates to prevent unauthorised vehicle entry to BSA.</p> <p>Prevention, control and remediation of erosion.</p>	
Fire for conservation	<p>The fire for conservation management plan must detail the burn timing and frequency that is appropriate for the fire history of the site, site conditions, the relevant PCT, threatened species and relevant performance measures. The TFD must have funds allocated to undertake the burns in each burn unit as per the frequency outlined in the fire for conservation management plan.</p> <p>The fire for conservation management plan must be submitted with the BSSAR and unless there is sufficient justification is provided, the fire for conservation</p>	<p>The planning and approval considerations for the TFD include:</p> <ul style="list-style-type: none"> • The preparation of a 'burn plan' for each specific burn event. This includes a safety plan to ensure safe conditions and escape routes, • Preparation of ecological burn plan maps including identifying areas of permanent fire exclusion, • Pre-burn inspections, • Relevant Rural Fire Service (RFS) and/or environmental approvals to undertake the burn, and • Relevant insurances for third parties carrying out ecological burns on the property. 	<p>Biodiversity Assessment Method</p> <p>BAM Operational Manual - Stage 3</p>

Management action	Key considerations	Items to be costed in the TFD	Relevant documents
	<p>management plan cannot be prepared post BSA approval.</p> <p>Costs associated with risk minimisation and prevention of fire in consultation with relevant agencies (such as RFS), should be considered when establishing a BSA.</p>	<p>Undertaking ecological burning activities may incur costs associated with:</p> <ul style="list-style-type: none"> • Engaging an Indigenous fire practitioner, contractor and/or RFS to undertake the burn, • Supervision by an ecologist during the burn (if required), • Installation and/or maintenance of fire control lines for each burn, • Notification and communication with neighbours and relevant authorities, • Pre-burn vegetation preparation, and • Funding for unforeseen delays when a team has mobilised, such as change in weather conditions. <p>Prevention of fire costs may include but are not limited to installation and maintenance of:</p> <ul style="list-style-type: none"> • Fire breaks • Fire trails, and • Asset protection zones. 	
Native vegetation management	BSA applications that involve large scale restoration or restoration projects that are at higher risk require completion of the BCT <i>Best practice revegetation plan</i>	<p>The total fund deposit needs to cover whole of BSA revegetation activities including:</p> <ul style="list-style-type: none"> • Planning and management, • Seed supply and services, 	<u>BCT's Restoring Native Vegetation Guidelines.</u>

Management action	Key considerations	Items to be costed in the TFD	Relevant documents
	<p><i>template</i> as part of the native vegetation management plan</p> <p>Changed hydrological flows proposed activities must be based on specialist advice and supported by scientific evidence and hydrological modelling with a detailed description included in the BSSAR.</p>	<ul style="list-style-type: none"> • Plant supply, • Monitoring, and • Adaptive management. <p>Supply, transport and placement of relevant length of fallen logs.</p> <p>The TFD will also need to cost on ground works and consider specific requirements for each phase of a revegetation project and for each separate management zone including:</p> <ul style="list-style-type: none"> • Site preparation, • Supplementary planting, • Predator proofing, • Site maintenance including weed control, and • Risk contingency. <p>Changed hydrological flows items costed in the TFD should include but is not limited to:</p> <ul style="list-style-type: none"> • Bulk earthworks and use of contractors, • Erosion and sedimentation controls may be needed during earthworks, • Stormwater treatment measures, such as gross pollution traps or bioretention and infiltration systems may be required, • Ongoing maintenance costs for any infrastructure (e.g. pumps) and ongoing weed control (this may require contractors), and 	<p>BCT Best Practice Revegetation Plan Template.</p> <p>Biodiversity Assessment Method</p> <p>BAM Operational Manual - Stage 3</p>

Management action	Key considerations	Items to be costed in the TFD	Relevant documents
Threatened species habitat management	<p>The TFD must itemise and cost any relevant management actions in Threatened Biodiversity Data Collection (TBDC) for threatened species relevant to the site and any action that specifically relates to protecting breeding habitat.</p> <p>Hydrology management may be implemented as part of the Threatened Species Habitat management plan. Activities undertaken as part of hydrology management may include:</p> <ul style="list-style-type: none"> • Creating artificial frog ponds or wetlands, • Managing drainage or installing sediment traps, • Managing debris, or • Undertaking sediment and nutrient control. 	<ul style="list-style-type: none"> • Any specific monitoring requirements related to water quality. <p>Where habitat enhancement measures include the installation of habitat structures, the following should be costed in the TFD:</p> <ul style="list-style-type: none"> • Cost to apply for and obtain relevant permits and approvals, • Type of and number of habitat structures to be installed, • The design and construction of habitat structures, • Transportation to the site, • Installation or placement costs, • Ongoing management, replacement and maintenance of the installed habitat structures, and • Ongoing monitoring of the installed habitat structures and measures of success. <p>Where hydrology management is part of the BSA, the following costs must be considered and where appropriate included as part of the TFD:</p> <ul style="list-style-type: none"> • Preparation and applying for permits and approvals, • Specialist (e.g. engineer) cost to oversee/project manage construction, implementation, • Construction, materials and materials transport (contractors and earthworks may be required), • Dewatering, 	<p>BCT Guideline for Artificial Hollows</p> <p>Biodiversity Assessment Method</p> <p>BAM Operational Manual - Stage 3</p>

Management action	Key considerations	Items to be costed in the TFD	Relevant documents
Integrated feral pest management	<p>The accredited assessor in consultation with the landholder is responsible for identifying pest species affecting the site and determining the type and frequency of control to be undertaken based on:</p> <ul style="list-style-type: none"> the current and likely future pest animal threats, and the likely effectiveness of control considering the landscape context of the site. <p>Any pest species control should be in line with Regional Strategic Pest Animal management plans.</p>	<p>The justification in the TFD or BSSAR must itemise and cost all pest management activities and include:</p> <ul style="list-style-type: none"> Planning to undertake a targeted approach to pest animal control so that it where feasible it complements a regional control program already in place (i.e. by agencies such as DPIE, LLS or NPWS), Timing and frequency of pest control should consider other management activities on the site that may leave native flora and fauna vulnerable to browsing, erosion and/or or predation (e.g. prescribed burns, weed removal), and Adaptive management funding such as remote monitoring cameras and funding to allow for adaptive management of emerging pests. <p>The cost justification should itemise:</p> <ul style="list-style-type: none"> Each pest animal species, Control activity and frequency, 	<p>Biodiversity Assessment Method</p> <p>BAM Operational Manual - Stage 3</p>

Management action	Key considerations	Items to be costed in the TFD	Relevant documents
Integrated weed management	<p>The planning and costing of weed management on stewardship sites can be a complex task. The management of weeds must be carefully planned, costed and implemented to ensure that the resulting improvements in biodiversity values are sustained over the long term.</p> <p>Integrated weed management as an active restoration management action generally requires more intensive management intervention and is therefore likely to have a higher cost than weed management as a required action.</p> <p>Accredited assessors must consider the weed control effort required for the site conditions.</p> <p>Weed control activities should also consider the timing of other management actions such as supplementary planting or ecological burns.</p>	<ul style="list-style-type: none"> • Engagement of specialists or contractors e.g. shooters, • Cost of material e.g. baits, traps, fencing, and • Soft methods for integrated pest animal control could include the installation of plant guards and exclusion fencing to prevent the browsing of plantings by pest animals and macropods. <p>For most sites weed control should be structured and costed in three phases:</p> <ul style="list-style-type: none"> • Primary weed control, • Secondary weed control, and • Maintenance weed control. <p>Management action costs in the TFD must be staged appropriately between the three weed control phases and include for each management zone:</p> <ul style="list-style-type: none"> • all materials, • labour, • equipment hire, • subcontracted services, • stages of weed management for each zone, • green waste removal, • frequency, and 	<p>Biodiversity Assessment Method</p> <p>BAM Operational Manual - Stage 3</p>

Management action	Key considerations	Items to be costed in the TFD	Relevant documents
		<ul style="list-style-type: none"> where applicable, weed control to be undertaken by or under direct supervision of a bush regenerator or an environmental weed contractor using the methods identified in the management plan. 	

7 Monitoring

Monitoring is an essential part of the BSA management plan as it tracks progress to achieving predicted gain in biodiversity values and allows for objective audit of site management and outcomes. An appropriately qualified person must undertake monitoring and reporting in accordance with the Monitoring Plan (Section 7 of the BSA management plan template), the BAM Operational Manual - Stage 3, the BCT Ecological Monitoring Module (EMM) and the BCT EMM Operational Manual.

The cost applied to the monitoring tasks should reflect the level of expertise required to undertake the tasks. For example, many monitoring tasks can be completed by a bush regenerator while others (e.g. plot surveys) will require engagement of an ecological consultant.

All monitoring data will be utilised to review the effectiveness of management plan and the potential for amendment during the five-year management plan review period as part of adaptive management.

7.1 Annual performance measure monitoring

As per the biodiversity stewardship site management plan template, monitoring costing in the TFD must include:

- Effort to undertake permanent photo points and inspections in accordance with the management plan.
- Materials (including camera traps, star pickets, permanent steel posts).
- Effort to undertake all monitoring activities identified in the monitoring plan, with outputs sufficient to clearly reflect management plan performance measures.
- Completion and submission of monitoring templates to BCT.

7.2 Ecological response target monitoring

The ecological response target monitoring of plots by an ecological consultant is to occur in accordance with the BCT [EMM and the BCT EMM Operational Manual](#). The scope of ecological outcome monitoring is to be in accordance with the EMM and cost of monitoring in accordance with the EMM as part of the TFD to year 20. Where the EMM budget exceeds 5% of the TFD, the person preparing the TFD is encouraged to contact the BCT for further advice.

Ongoing monitoring from year 20 in-perpetuity is to be included within the TFD at 25% the cost of the EMM monitoring budget.

8 Recurring costs

Recurring costs must be included in the TFD to ensure the landholder has funds to manage the implementation and project management of the BSA. Recurring costs are expected to be itemised in the TFD calculator, under the heading 'Recurring costs'.

Key recurring costs that are outlined in more detail below include:

- Project management and record keeping,
- Annual report preparation, and
- Five-yearly management plan reviews and update of the BSA management plan.

Examples of additional recurring costs include (but are not limited to):

- Business management expenses (such as administration and accounting),
- Council rates (pro-rata),
- Crown Land fees (only applicable for crown lands),
- Insurance (such as public liability),
- Legal fees, and
- Accountancy fees.

8.1 Project management and record keeping

For sites that require specialist contractors, project management and administration costs associated with the implementation of management actions and record-keeping are recommended for inclusion in the TFD.

The landholder is required to maintain a diary to record the management actions undertaken on the site in accordance with templates in the BSA management plan. This includes, but is not limited to:

- Grazing management records,
- Human disturbance records, and
- Fire management records.

Reporting and record keeping

Reporting obligations including record-keeping requirements are as per Attachment 3 of the BSA. It is recommended that the landholder include the cost of record-keeping within the TFD. The landholder must provide any records required to be kept by the BSA to the BCT.

Record-keeping costs should include documenting the information and storage (for at least 10 years after the event to which they relate took place) of the following:

- diaries recording management activities undertaken,
- details of any inspection undertaken,
- the results of monitoring or surveys,
- site conditions that may have changed over the year,
- a copy of each annual report,

- tax invoices and quotations for management activities, and
- records of consultation with DPIE, BCT, NPWS, RFS, LLS or local council including emails, time and date and nature of discussions associated with any site visits or phone calls.

Keep all records required by the BSA in a legible form (including any photographs).

8.2 Annual reporting

Each year the landholder is required to submit an annual report using the template provided in the management plan. This report is to demonstrate compliance with the management obligations of the BSA. The TFD must allocate a cost for the components of annual report preparation at contractor rates including:

- Preparation of annual report,
- Photos taken at relevant points in accordance with the management plan,
- Monitoring and inspections (covered in section 7),
- Preparation of relevant records (covered in section 8.1), and
- If applicable, attendance at the yearly BCT annual report visit by site manager.

8.3 Five-year review and update of the BSA management plan

A review of the management plan occurs on a five-yearly basis in consultation with the BCT.

The purpose of the review is to determine if delivery of the existing management plan is successfully achieving the forecast improvement in site condition and/or gain in biodiversity values on the biodiversity stewardship site. This is determined by performance targets described in the management plan. The review also provides an opportunity for adaptive management.

The five-yearly management plan review is undertaken by the BCT in collaboration with the landholder.

As determined by the review, and depending on the type of changes required, updates to the management plan, via a variation to the BSA may be undertaken by the BCT, the landholder, or a third-party consultant.

The TFD must allocate a cost every 5 years to the:

- update of the management plan, and
- the variation fee payable to the BCT.

Variation fee costs are outlined on the DPIE [Biodiversity Offset Scheme fee website](#).

9 Total Fund Deposit (TFD) Calculator

9.1 Overview

The TFD calculator for biodiversity stewardship agreements (BSAs) can be found on the [DPIE website](#):

- Tab 1 contains instructions and a worked example.
- Tab 2 contains the TFD calculator.
- Tab 3 contains the Biodiversity Credit Pricing Worksheet.

The TFD calculator is updated each financial year. The TFD calculator submitted must be the current version.

9.2 Use of TFD Calculator

It is important that costs are itemised with clear identification of the management action and unit cost either within the TFD or an appendix to the BSSAR. Itemised costing will assist to engage contractors as needed.

Timing and frequency of actions

The timing and frequency of management action payments must align with the timing and frequency of the management actions in the management plan. The staging of management actions must be appropriately reflected in the TFD to ensure landholders receive payments at the correct time.

Annual reporting fee

Each TFD calculator has a standard annual reporting fee. This fee is automatically paid to the BCT upon release of the annual management payment to the landholder.

Discount rate

The TFD is adjusted by the discount rate. Application of the discount rate is used to ensure that sufficient funds are available to make all future management payments.

Glossary of Terms

Accredited Assessor: in relation to the preparation of biodiversity assessment reports, means a person accredited under section 6.10 (of the BC Act) to prepare those reports in accordance with the biodiversity assessment method

Active management: the phase of management that starts upon the release of the first annual management payment. When a site is active management, landholders must undertake actions which are 'ongoing from the agreement date' and those which are 'ongoing from first payment date'.

Assisted regeneration: a restoration approach where the natural processes that lead to the re-establishment of native plant species needs to be 'triggered' by active intervention (e.g. weed removal, prescribed burns; erosion control).

Biodiversity Assessment Method Calculator (BAM-C): the online computer program that provides decision support to assessors and proponents by applying the BAM. The BAM-C contains biodiversity data from the BioNet Vegetation Classification and the Threatened Biodiversity Data Collection that the assessor is required to use in a BAM assessment. The BAM-C applies the equations used in the BAM, including those to determine the number and class of biodiversity credits required to offset the impacts of a development, or created at a biodiversity stewardship site.

Burn frequency: is the frequency at which prescribed ecological burns are expected to occur on a stewardship site.

Direct seeding: sowing seed directly into prepared ground via hand planting, mechanical planting and brush mulching.

Force majeure events: An event that is beyond the reasonable control of the Owner, including any natural disaster, fire, flood, accident, war, riot, act of terrorism, biohazard, a serious epidemic, or a change in legislation, but only to the extent that such events were beyond the Owner's reasonable control.

High Threat Weed: vascular plants that, if not controlled, will invade and outcompete native plant species. Also referred to as high threat weeds or high threat exotic vegetation. Plants considered to be high threat weeds are listed on the high threat weeds list published in the BAM-C.

Maximum fire interval: the maximum recommended length of time between burns that will avoid local species extinctions due to fire exclusion. It is based on the predicted senescence time of species requiring fire to re-establish.

Minimum fire interval: the minimum recommended length of time between burns that will avoid local species extinctions due to frequent fire. It is based on the minimum maturity requirements of species sensitive to extinction under frequent fire regimes.

Natural regeneration: a restoration approach that relies on natural processes with little or no management intervention (e.g. stock exclusion; wildfire).

Passive management: the phase of management that starts from the date of the agreement and finishes upon the release of the first annual management payment. Management actions undertaken during passive management are those which are 'ongoing from the agreement date'.

Primary weed control: the first comprehensive treatment of weeds in a management zone.

Resilience: the capacity of an area of native vegetation to recover following disturbance.

Restoration: the broad category of treatment applied to facilitate the recovery of an area of native vegetation that has been degraded, damaged or destroyed i.e. natural regeneration, assisted regeneration and reconstruction.

Secondary weed control: the treatment of weed regrowth immediately following primary weed control. Depending on initial site condition, frequent visits can be required to effectively treat high levels of weed regrowth.

Supplementary planting: all activities associated with the planting of native seedlings or direct seeding to assist the restoration of native vegetation. It includes both reconstruction and enhancement planting.

Appendix 1: Required and Active Restoration Management actions

Table 6 from Section 11.3.1 of the BAM 2020 includes the required management actions and types of management activities for improving vegetation integrity and threatened species habitat at a biodiversity stewardship site.

Table 2: Required management actions and types of management activities for improving vegetation integrity and threatened species habitat at a biodiversity stewardship site (Table 6, BAM 2020)

Management action	Activities that create ecosystem credits and species credits
Preparation of a management plan	Preparation of a management plan for the biodiversity stewardship agreement for the subject land
Fire management	Undertake ecological burning activities, as appropriate for the PCT or threatened species Prevention of wildfire
Grazing management	Fencing to exclude stock Strategic grazing of stock
Native vegetation management	Retain and manage regrowth Prevent/restrict non-natural nutrient inputs Threatened species habitat management activities related to native vegetation
Threatened species habitat management	Protection of breeding habitat features or sites Undertake any other required management action identified in the <i>Saving our Species</i> database required for the management of that threatened species
Integrated pest animal control	Undertake feral pest management including control of foxes, cats, pigs, goats, avian pests, horses, deer and any other species as required
Integrated weed management and control of high threat weeds	Undertake weed management and activities to limit or reduce the spread of high threat weeds and other exotic vegetation Fine-scale intensive removal non high threat weeds
Management of human disturbance	Exclude development and clearing activities except those listed as permissible in the biodiversity stewardship agreement Identify sensitive locations and protect from disturbance Undertake rubbish removal Implement measures to restrict access to the subject land where necessary (vehicles, etc.)
Monitoring	Monitoring for evidence of disease Monitoring to adequately assess outcomes against all performance measures. Measures should be described for monitoring outcomes in relation to threat control as well as biodiversity response Establishment of permanent plots to provide a baseline for assessing and monitoring biodiversity outcomes Establishment of 360° photo points Monitoring of indicators to specifically assess change in threatened species abundance, occupancy or habitat Review of the management plan and management activities Monitoring must be designed and implemented in accordance with Biodiversity Conservation Trust guidance documents

Table 7 from Section 11.3.2 of the BAM 2020 includes the active restoration management actions and types of management activities for improving and managing vegetation integrity and threatened species habitat at a biodiversity stewardship site.

Table 3: Active restoration management actions that may be undertaken to improve or manage native vegetation or threatened species habitat at a biodiversity stewardship site (Table 7, BAM 2020)

Types of active restoration management actions	Types of management activities that may be undertaken as part of the active restoration management actions for ecosystem credits and species credits
Habitat enhancement	<p>Inclusion of artificial nesting boxes or constructed hollows and the management plan specifies ongoing management, replacement and maintenance</p> <p>Relocation of fallen logs onto the biodiversity stewardship site from appropriate sources</p> <p>Relocation and securing of dead hollow bearing stag trees from appropriate sources</p>
Native vegetation and habitat management and augmentation	<p>Grazing management that promotes natural regeneration of species in the tree and shrub growth form group</p> <p>Undertake targeted supplementary planting to:</p> <ul style="list-style-type: none"> • increase native plant richness and cover above the level determined for management gain • restore the species composition of recognisable PCTs • improve habitat suitability for specific threatened species <p>Restoration of PCTs through changed hydrological flows</p> <p>Translocation of threatened flora species</p>
Integrated weed management and control of high threat exotic vegetation	<p>Removal of high threat exotic vegetation from the biodiversity stewardship site through appropriate methods (e.g. scalping) and replacement with native vegetation through natural regeneration and/or targeted supplementary planting</p> <p>Repeated application of intensive fine scale actions that control and remove manageable high threat weeds and replacement with native vegetation through natural regeneration and/or targeted supplementary planting</p>
Hydrology management	<p>Create artificial frog ponds or wetlands</p> <p>Manage drainage</p> <p>Install sediment trap(s)</p> <p>Manage woody debris to create habitat including snags</p> <p>Undertake nutrient control to reduce or remove non-natural nutrients from the site</p>
Monitoring	<p>Assessment of outcomes against all performance measures related to the active restoration components such as:</p> <ul style="list-style-type: none"> • evidence of occupation of and condition of artificial hollows or relocated logs and stags • persistence and abundance of species targeted by supplementary plantings or sowings • improvement in vegetation integrity • response of threatened species population or habitat quality/extent <p>Monitoring must be designed and implemented in accordance with Biodiversity Conservation Trust guidance documents</p>

Appendix 2: Example management activity justification

Table 4 is an example of the management actions and recurring costs, quantity/unit/rates cost justification to be provided in the TFD Calculator. The table is not an exhaustive list and is provided as an example of potential management actions and activities.

Where the management action and associated management activities are complex or have a high cost, more detailed information or a quote will be required, see section 5 for more information.

Table 4: Example list of management actions broken down into management activity components.

Example management activity justification
Supplementary planting
Provenance plant supply (seed collection and propagation) (propagules @ \$ / tube stock @ \$)
Preparatory weed control (method/rate A) (hrs @ \$)
Preparatory weed control (method/rate B) (hrs @ \$)
Soil condition testing (provide quotation)
Supply-install soil ameliorants (hrs @ \$)
Ground preparation (method) (hrs @ \$)
Supply-install site stabilisation / weed suppression (e.g. mulch, jute mesh, terracing etc) (method/rate A) (hrs @ \$)
Supply-install site stabilisation / weed suppression (e.g. mulch, jute mesh, terracing etc) (method/rate B) (hrs @ \$)
Plant installation (including plant guards where applicable) (tubes / \$)
Direct seeding installation (hrs @ \$)
Establishment weed maintenance (hrs @ \$)
Establishment water maintenance (hrs @ \$)
Contingency planting (% of original) (supply-install tube stock) (tubes @ \$)

Plant guard / herbivory exclusion fence removal (hrs @ \$)

Vegetation and waste disposal (T @ \$)

Fire for Conservation Management

Planning - Burn plan preparation (provide quotation / justification in BSSAR)

Planning - Approvals (provide quotation / justification in BSSAR)

Planning - Insurances (provide quotation / justification in BSSAR)

Implementation - Site preparation (weed control, delineation of 'no burn' areas) (hrs @ \$)

Implementation - Site preparation (control line prep) (hrs @ \$)

Implementation - Burn practitioner (provide quotation / justification in BSSAR)

Post-burn - weed control (hrs @ \$)

Post-burn - monitoring and reporting (justification in BSSAR)

Contingency

Fallen logs

Supply of fallen logs (units @ \$)

Transport (\$ / km for unit weight)

Install (units @ \$)

Weed management

Weed Zone A (primary weed control - method/rate A) (hrs / yr. @ \$)

Weed Zone A (primary weed control - method/rate B) (hrs / yr. @ \$)

Weed Zone A (secondary weed control - method/rate C) (hrs / yr. @ \$)

Weed Zone A (secondary weed control - method/rate D) (hrs / yr. @ \$)

Weed Zone A (maintenance weed control) (hrs / yr. @ \$)

Weed Zone B (primary weed control) (hrs / yr. @ \$)

Weed Zone B (secondary weed control) (hrs / yr. @ \$)

Weed Zone B (maintenance weed control) (hrs / yr. @ \$)

Green waste removal

Weed control (in-perpetuity) (hrs / yr. @ \$)

Access track

Access track maintenance - initial (provide quotation)

Access track maintenance - ongoing (provide quotation)

Human disturbance

BSA signs (\$42) purchase and installation

BSA sign replacement (\$42)

Heavy duty cable fencing (\$x/m) and installation

Heavy duty cable fencing maintenance (\$x/m)

Heavy duty gate (\$x/item) and installation

Heavy duty gate (\$x/item) replacement

Feral pest control

Monitoring (actions trigger) (justification in BSSAR)

Feral pest control (justification in BSSAR)

OTHER RECURRING COSTS

Project management (yr. 1-19)

Project management (yr. 20+)

Annual reporting (yr. 1-19)

Annual reporting (yr. 20+)

Annual works monitoring (yr. 1-19) (as per Agreement/management plan)

Annual works monitoring (yr. 20+) (as per Agreement/management plan)

Ecological outcome monitoring (yr. 1-19) (as per EMM Ops Manual)

Ecological outcome monitoring (yr. 20+) (as per EMM Ops Manual)

Management plan review (yr. 5-20) (weed, pest, fire)

Agreement variation fee (Management plan update)

Management plans review (yr. 20+)

Land management contingency

Insurance

Administration / accounting

Council rates

Legal fees

Appendix 3: BSSAR example management activity justification

Table 5 is an example of the type of information suggested to be submitted as part of the BSSAR where additional justification is required. The person preparing the TFD may choose to present the justification in a spreadsheet or a table format.

Table 5: Example table showing the management activities for a complex management action, the specific cost of the activity, how the cost was determined and a further description of the components of the costing for a revegetation management action.

Management activity	Cost/rate	Total	Source	Description
Revegetation				
Site preparation – weed spraying	\$X/day	\$	Estimate based on previous quotes	Ute mounted quick spray unit with two operators. Daily rate is based on the mean rate provided by three contractors (previous quote adjusted for CPI) at a similar site in the same locality. Three days allocated for spraying African Love Grass (two treatments) and rip lines (one treatment) in MZ3a, MZ3b and MZ3c in Year 3, prior to planting.
Site preparation - Tractor with slasher/ripper	\$X/day	\$	Estimate based on previous quotes	Daily rate is based on the mean rate provided by five contractors (adjusted for CPI) at a similar site in the same locality – includes plant, float and operator. 3 days total allocated for slashing (prior to ripping) and contour ripping in Year 3.
Supply & install hiko cells (trees & shrubs)	\$X/hiko cell	\$	Contractor estimate	Rate is an estimate for the site provided by an experienced bush regeneration contractor. Rate incorporates cost of: provenance seed collection; plant propagation; establishment and hardening-off; plant delivery to site; plant installation with tree guards, including addition of appropriate soil conditioner and immediate watering-in. 3100 trees and shrubs to be installed in Year 3; 1795 trees and shrubs to be installed in Year 4.
Supply & install hiko cells (groundcovers)	\$X/hiko cell	\$	Contractor estimate	Rate determined as above; no tree guards. 1560 groundcovers to be planted in Year 15.

Follow-up watering	\$X/day	\$	Estimate based on previous quotes	<p>Ute mounted water tank with two operators.</p> <p>Daily rate is based on the mean rate provided by three contractors (adjusted for CPI) at a similar site in the same locality. Total of 3 days p.a. of follow-up watering provided for in Years 3, 4 and 5 and of 3 days p.a. of follow-up watering provided for in Years 15 and 16.</p>
Replacement planting (if required)	Lump sum	\$	Calculation	<p>Calculated as 20% of initial planting cost (excluding ripping) to be allocated four years following the completion of the initial tree and shrub plantings. To be used if required to maintain an 80% survival rates of plantings.</p>