BioBanking

Biodiversity Banking and Offsets Scheme

Scheme **Overview**

Department of **Environment & Climate Change** NSW

This information booklet has been prepared to provide an overview of the Biodiversity Banking and Offsets Scheme.

The scheme is implemented through:

- Part 7A of the *Threatened Species Conservation Act 1995*
- Threatened Species Conservation (Biodiversity Banking) Regulation
- BioBanking Assessment Methodology

The legislation can be downloaded from: www.legislation.nsw.gov.au.

More information on the scheme is available on the website of the Department of Environment and Climate Change at: www.environment.nsw.gov.au/threatspec/biobankscheme.htm

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1. Addressing biodiversity loss

The conservation of our endangered animals, plants and ecosystems is one of the greatest environmental challenges facing Australia today. The key reason for our historically high extinction rates is habitat degradation and loss, initially from over-grazing and clearing for agriculture, and more recently from the clearing of native vegetation for urban development.

Innovative approaches are needed to tackle the challenge of balancing development needs (to provide the community with new housing, jobs and amenities), while also conserving biodiversity for the future.

The Biodiversity Banking and Offsets Scheme (BioBanking) has been established by the New South Wales Department of Environment and Climate Change (DECC) to help address the loss of biodiversity and threatened species.

Creating a market in biodiversity credits gives incentives to protect biodiversity values.

BioBanking will:

- provide a transparent, consistent and robust framework for the assessment and management of biodiversity offsets
- create new opportunities for conservation on privately owned land
- provide permanent security and management for biodiversity offsets
- provide a secure mechanism for investment in biodiversity conservation.

BioBanking provides new opportunities for conservation on privately-owned land. Photo: A. Remnant/DECC

2. Biodiversity offsets

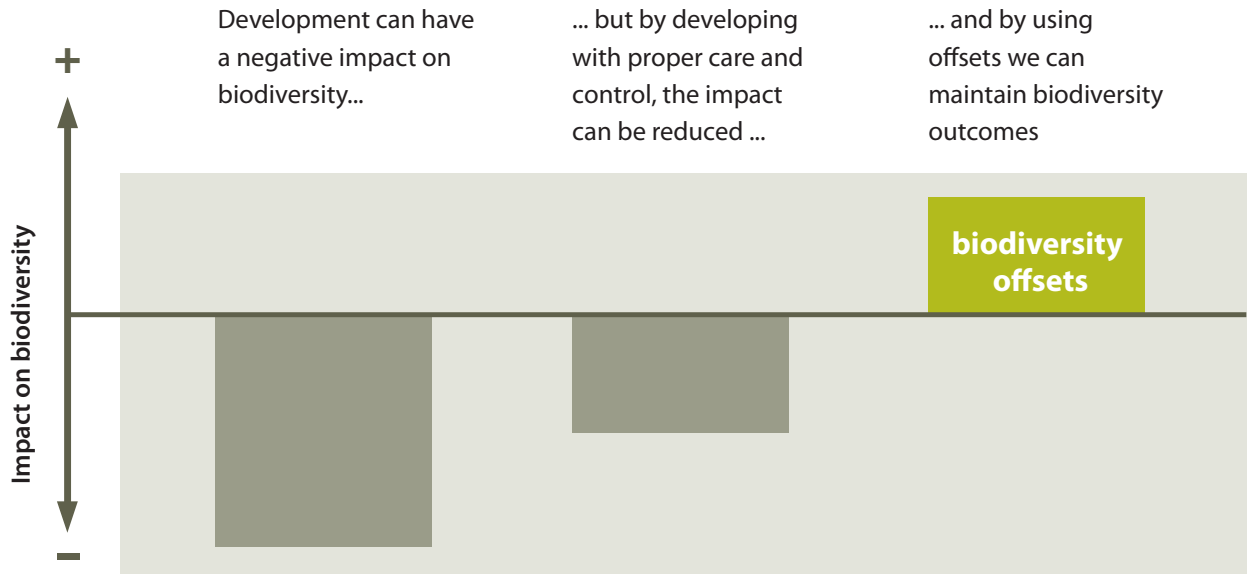
Biodiversity offsets have commonly been used to counterbalance the impact of development on biodiversity, but they have been organised on a case-by-case basis until now.

While this flexibility has resulted in some good biodiversity outcomes, there is generally no guarantee that the offset will be managed for conservation or that there will not be pressure to develop the land in the future. BioBanking provides a consistent, robust and transparent approach for offsets. Under BioBanking, offsets will be:

- Measurable. Offset requirements will be known up-front, allowing developers to minimise the impacts of development and plan for offsets.
- Consistent. A rule-based approach determines credit requirements.
- Secure. The biodiversity offset is provided by the biobank site from which the credits are generated.
- Transparent. Biobanking statements and credit transactions are on the public register.
- Strategic. Establishing a biodiversity credit market enables offsets to be more strategically located. This encourages participants to locate offsets on large parcels of land, in areas better for conservation that can compensate for a number of developments, rather than piecemeal efforts negotiated individually.

Without a market framework, offset sites must be negotiated and established separately for each development. There is no incentive for the offset area to be better than the minimum required, and there are few options for ensuring the long-term management of such areas.

Figure 1 Using offsets to help address biodiversity loss



3. How does BioBanking work?

The Biodiversity Banking and Offsets Scheme helps to address the loss of biodiversity in NSW. It achieves this by enabling landowners in NSW to establish biobank sites to secure conservation outcomes and offset impacts on biodiversity values.

BioBanking establishes an 'improve or maintain' test for biodiversity values. Improving or maintaining biodiversity values means avoiding important areas for conservation of biodiversity values, and offsetting impacts on other areas. The offsets are measured in terms of credits, using the BioBanking Assessment Methodology. The scheme requires participating developers to meet this improve or maintain test based on the impact of their proposed development.

Credits are created by the landowner, who establishes a biobank site and commits to enhancing and protecting biodiversity values. The credits represent an improvement in the condition of biodiversity values such as an improvement in the habitat or an increase in the habitat or population of a threatened species.

The scheme creates a market for the credits. Landowners can sell the credits to provide income and fund the future management of the site. Developers can buy the credits to offset impacts from their development and to meet the improve or maintain test.

Developers will need to source particular types of credits in accordance with the offset rules in the methodology:

- Ecosystem credits can only be used to offset biodiversity impacts in the same ecological community, or in another community of the same formation that has an equal or greater percentage of land cleared and the same predicted threatened species.
- Species credits can only be used to offset biodiversity impacts on the same threatened species.

There may also be demand for the credits from organisations seeking to secure conservation outcomes. Those buying credits are securing the conservation of biodiversity in perpetuity.

If participants fail to meet their commitments under the scheme, penalties can be applied. The performance of participants is monitored by DECC.

Scheme administration

BioBanking will be managed by DECC.
The core functions of DECC will be to:

- register biobank agreements
- issue biobanking statements
- manage the public registers
- audit biobank sites
- enforce biobanking agreements and statements
- prepare annual reports on the scheme.

Catchment management authorities will be able to help landowners establish biobank sites where appropriate. Local government and other NSW State Government agencies will be involved in the scheme administration in accordance with the legislation:

- Local government will incorporate biobanking statements into the development consent.
- Department of Planning will be consulted before biobanking statements are issued (where required).
- Department of Primary Industries will be consulted on biobanking agreements.
- Department of Lands will register biobanking agreements on land title.

The scope of the scheme

BioBanking will commence in 2008.

The scheme will only address biodiversity values including threatened species listed under the *Threatened Species Conservation Act 1995*.

BioBanking does not affect local government's role in land use planning and development control. It provides a systematic mechanism for assessing and offsetting impacts on biodiversity.

The scheme applies to:

- developments under Part 4 and activities under Part 5 of the *Environmental Planning and Assessment Act 1979* that are required to undertake the threatened species assessment of significance
- development projects under Part 3A of the *Environmental Planning and Assessment Act 1979* (the Minister for Planning may require that Part 3A developments offset impacts in accordance with the biobanking assessment methodology)
- the establishment of biobank sites on both private and public land including land to which the *Native Vegetation Act 2003 applies*.

A scheme review will be conducted after the first two years of operation.

4. Biobank sites

Landowners are able to generate biodiversity credits by agreeing to carry out a set of management actions which, over time, are expected to improve biodiversity values. Management actions are set out in the biobanking agreement and may include the management of grazing, fire, weeds, human disturbance and other actions, depending on the threatened species present at the site.

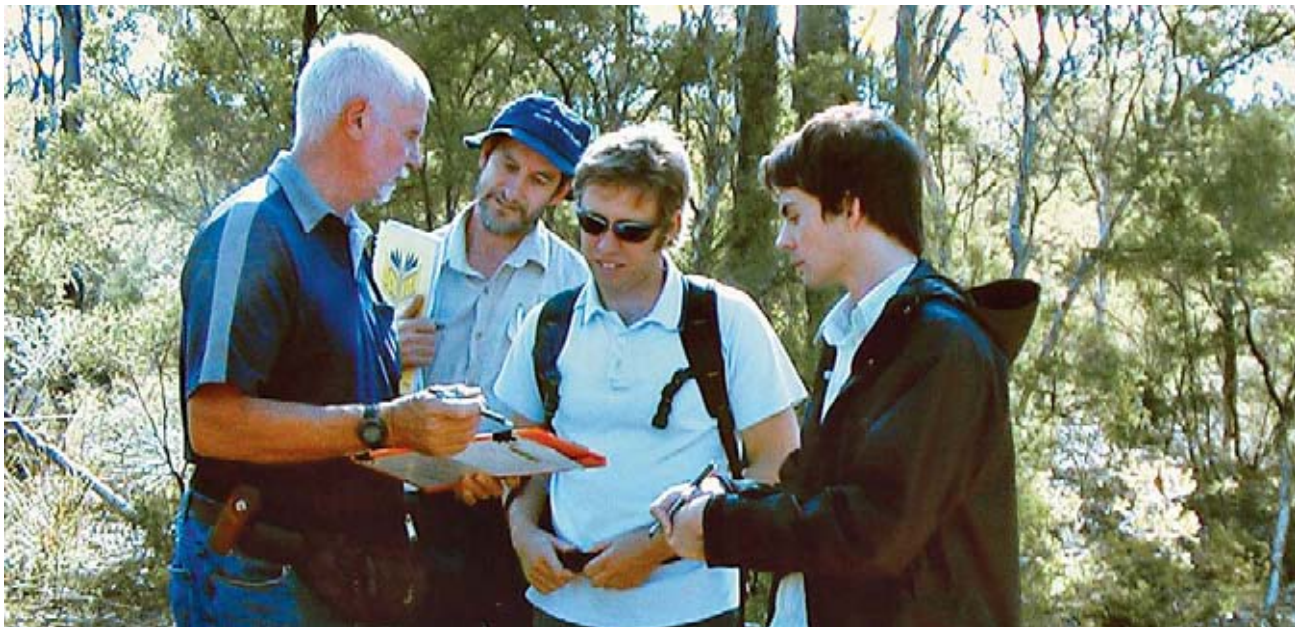
Biodiversity credits are issued once a biobanking agreement has been approved; the number and type are calculated using the BioBanking Assessment Methodology and the Credit Calculator.

These biodiversity credits can then be sold on the open market, generating an alternative income source for the landowner to help manage the land for conservation. In order to generate credits, landholders need to establish a biobank site by signing up to a biobanking agreement.

Landholders anywhere across NSW can voluntarily establish a biobank site to generate credits, except for land that is already managed or expected to be managed for biodiversity conservation. The consent of all owners and certain parties with an interest in the land is required under the legislation.

Landowners can decide which areas of their land they will include as the biobank site, allowing different economic activities (such as primary production) to continue on other parts of their land. Landowners can also decide who they will sell their credits to, the price of their credits, and the timing of the sale.

All biobanking agreements are registered on the land title. The obligation to protect and manage the land is binding on both current and future owners of the site.



DECC and Hunter–Central Rivers CMA staff and ecologists discuss the BioBanking Assessment Methodology during the pilot program. Photo: J.Stace/DECC

5. The biodiversity credit market

Once credits have been issued to a biobank site owner, they can immediately be sold to any buyer. Each biobank site may generate a number of different ecosystem or species credits, and any of these credits may be sold separately or in groups.

Biodiversity credits may be purchased to:

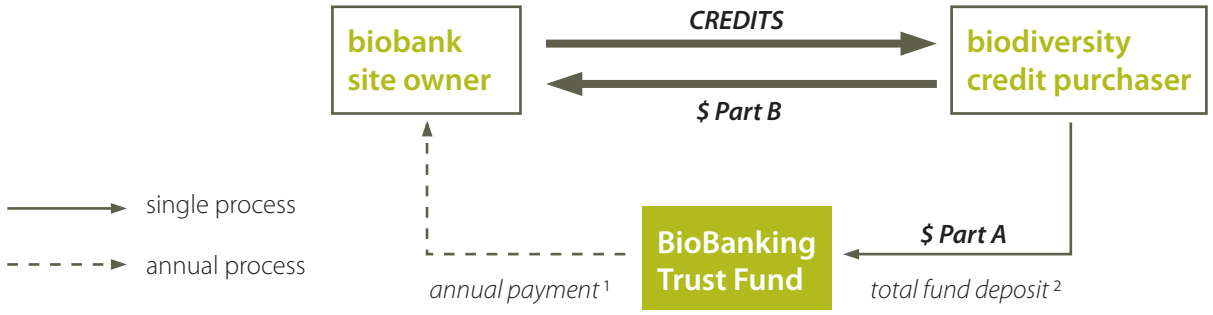
- achieve conservation goals. The sale of the credits provides funds for the ongoing management of the site.
- offset the impacts of a development on biodiversity values by purchasing credits and then retiring them in accordance with the scheme rules. Credits from one or more sites may be required to satisfy the number and type of credits needed.

In addition, credits can be:

- purchased as an investment for re-sale at a later date
- purchased in advance of project approval (which can be resold later if not used)
- acquired to build a portfolio of credits to offset future development.

Developers will seek to purchase credits available for the lowest price. Landholders will aim to get the best possible return from their credit sales.

Figure 2 Credit transactions (calculating the price of credits is detailed further on p.12)



[1] Annual payment as per schedule in biobanking agreement

[2] Based on present value of estimated management cost

6. BioBanking for developers

Developers can voluntarily use BioBanking to minimise and offset their impacts on biodiversity. The scheme provides an alternative path for developers to the current threatened species assessment of significance process.

BioBanking offers several advantages for developers:

- It can reduce costs and time associated with biodiversity assessments.
- It provides a transparent and consistent rule-based approach for determining offsets, enabling offset requirements to be assessed even in the initial stages of project design.
- It allows credit requirements to be estimated and purchased at any stage of the project proposal.
- It enables offset sites to be managed by biobank site land owners interested in conservation rather than by developers.
- It enables greater flexibility in project management and costs.

Developers must run the BioBanking Assessment Methodology to participate in the scheme. The methodology:

- determines what impacts the development will have on biodiversity values, and whether the development can meet the improve or maintain test
- assesses the number and type of credits that need to be retired in order to offset the impacts.

The types of credits that are suitable to offset a particular development will be set out in the biobanking statement, in accordance with the offset rules. Any measures that have been proposed to minimise the impact of the development onsite, or environmental contributions for conservation purposes, may be taken into consideration under the assessment.

The biobanking statement sets out the credit requirements, and is then submitted with the development application under the *Environmental Planning and Assessment Act 1979*. The statement satisfies the biodiversity assessment requirements, and exempts the developer from needing an assessment of significance or species impact statement for the proposal.

The consent authority (the council or Department of Planning) incorporates a condition in the development consent (if granted) that requires retirement of credits in accordance with the statement, before the work commences.

For Part 3A developments, the Minister for Planning may require that biodiversity credits are purchased and retired as a condition of project approvals to offset the impacts of the project. They may also require compliance with a biobanking statement that has been obtained voluntarily.

Once credits have been used to either offset development impacts or permanently secure conservation of biodiversity, they are retired so they can no longer be used for any other purpose.

7. BioBanking for conservation

The scheme aims to encourage and secure investment in conservation by providing both the legal and financial mechanisms to ensure the long-term conservation of biodiversity values at biobank sites. Organisations with conservation goals can rely on the scheme's robust nature to ensure the longevity of their investments in biodiversity outcomes.

The BioBanking legal mechanisms include the biobanking agreement, which runs with the land and is placed on title. This is backed up by the Compliance Assurance Strategy, which is DECC's commitment to ensuring participants in the scheme fulfil their obligations.

The financial mechanism is provided by the BioBanking Trust Fund. By purchasing credits, buyers are providing the upfront capital needed for the long-term funding of conservation on biobank sites. These funds are used to manage the site and improve the biodiversity values on that site, and in so doing increasing the viability of threatened species populations and improve the quality of habitat and the condition of native plant communities.

The scheme makes it easier to secure conservation outcomes. Here is an example of what those seeking to secure conservation outcomes would need to do:

1. Decide on the desired conservation outcomes. This could include conserving habitat for a particular species, conserving an endangered ecological community, or helping establish a corridor or conservation habitat within a particular area.
2. Search the public register for credits that support these outcomes. These may be credits in the ecological community or threatened species, or credits created from a biobank site in a particular area.
3. Buy those credits from the credit holder.
4. Retire the credits to ensure protection and management of the site. This means the credits cannot be sold on to a third party in the future. The retirement of credits is recorded on the public register of credits.

In addition, biobank site owners are able to choose the purchaser of their credits. This means that a biobank site owner may decide to sell their credits only to those seeking credits for conservation purposes. In this situation, the biobank site owner would need to specify this in the contract covering the sale of the credits.

8. Credit calculations using the BioBanking Assessment Methodology

The BioBanking Assessment Methodology provides a set of rules to determine the number and type of biodiversity credits that a development site will require to offset impacts, and that a biobank site can create and sell to protect biodiversity values.

The BioBanking Credit Calculator software is used to apply the methodology rules and determine credit requirements for development sites as well as the credits landowners can generate and sell.

There are two main types of biodiversity credits – species credits and ecosystem credits. It is likely that both types of credits would be required or generated for any site.

- Ecosystem credits are created for all ecological communities, as well as threatened species that can be reliably predicted as occurring on site, using the presence of vegetation that provides habitat for a given ecological community or threatened species. The number of ecosystem credits is calculated based on vegetation surveys.
- Species credits are created for threatened species that cannot be reliably predicted using habitat surrogates. The number of species credits is calculated based on targeted survey reports.

The methodology assesses all biodiversity values, including the composition, structure and function of ecosystems, and threatened species, populations and ecological communities, and their habitats (as defined in the *Threatened Species Conservation Act 1995*).

The number of credits

The number of credits calculated depends on a number of factors such as site values (e.g. the structure and function of ecosystems), and landscape context (e.g. the values for connectivity and area of vegetation). The methodology uses the scores from each of these factors to derive the change in biodiversity values as a result of either development, or protection and management over time.

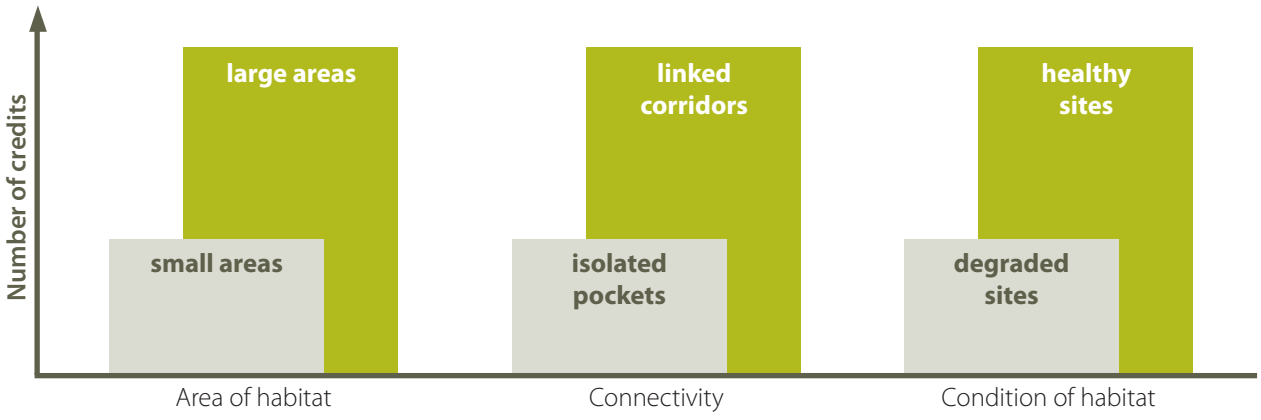
The improve or maintain test

The improve or maintain test measures the impacts of development on biodiversity values. A development is considered to improve or maintain biodiversity values if impacts on other areas are counter-balanced by the retirement of credits in accordance with the offset rules, and if red flag areas (areas that are important for biodiversity conservation and that cannot easily be replaced) are avoided, subject to the variation provisions. The development footprint may need to be modified to meet this test.

Red flag areas include over-cleared vegetation types (including endangered ecological communities) and threatened species populations or habitat which cannot withstand further loss because only a small number of populations remain and/or all viable populations are considered essential for the survival of the species.

There may be some circumstances in which developments impacting on red flag areas still meet the improve or maintain test (the variation provisions). A set of Ministerial protocols will specify the situations in which these variations could be justified. These protocols will be publicly available. The Director General of DECC must apply the protocols and must be of the opinion that avoiding red flag areas would be unnecessary and unreasonable in the particular circumstances. The Director General must publish reasons for the decision.

Figure 3 Factors important in credit calculations



9. The price of credits

The price of biodiversity credits will be based on the characteristics of the biobank site from which the credits are generated, as well as the existing supply and demand for credits by the market.

The location, condition and area of a property defined as a biobank site will affect the credit price. For example:

- Small, isolated sites may have higher management costs than larger sites adjoining other areas already managed for conservation.
- Surrounding land uses or past management behaviour may influence the presence of weeds or other biodiversity threats, which may affect the level of management required.
- The location of the property will also affect the land value, which in some cases may influence the return on credit sales expected by the landholder.

While buyers and sellers of credits are free to negotiate the price, credits will be priced to ensure the Total Fund Deposit is reached as soon as possible. Payment is made into the BioBanking Trust Fund when credits are first sold by a biobank site owner, until the Total Fund Deposit has been reached. This provides capital for future payments to the biobank site owner for the long-term management of the site. Both the Total Fund Deposit and the schedule of payments are set out in each biobanking agreement.

The price of biodiversity credits will be based on a combination of the minimum price determined by the Total Fund Deposit (Part A costs) and any additional return negotiated between the landholder and the buyer (Part B costs).

Calculating the price of credits

Total price of credits = **Part A Total Fund Deposit** + **Part B Return to landholder**

The estimated cost of management and reporting, for the life of the agreement.

Costs that landholders may seek to charge when setting the credit sale price, which may include:

- *establishment costs (e.g. application fee)*
- *field assessment*
- *preparation of management plans*
- *land value*
- *opportunity cost*
- *return or risk margin.*

Worked example

A landholder with 200 hectares establishes a biobank site and receives 1000 credits.

Part A costs for the ongoing management costs were estimated to be $394,000 (to provide payments of $100,000 in year 1, $80,000 in year 2, $40,000 in year 3, $20,000 in year 4 and $10,000 for year 5, and onwards).

Part B costs, for establishing the agreement and the expected return to the landholder, were calculated to be $80,000.

The total price of credits would be $394,000 + 80,000 = $474,000, or $474 per credit.

If the landholder sold all 1000 credits for $600,000 (or $600 per credit), $394,000 is deposited into the BioBanking Trust Fund and the balance of $206,000 is paid directly to the landholder.

Payments into the BioBanking Trust Fund only need to occur on the first sale of credits (or if retired, before the first sale). If the credits are sold a second (or subsequent) time or the Total Fund Deposit has been met, the full credit sale price is exchanged directly between buyer and seller.

If the Part B amount were to include the land value for the biobank site at $10,000 per hectare (so totalling $2,000,000), the additional cost above the Trust Fund amount would be $2.08 million. This would increase the individual credit cost to $2,394.

A $5 million development proposal that saves six months on time to obtain their approvals could save $375,000, or 15% in interest and expenses. Even at the higher credit price example, this saving would fund over 150 credits.

10. The BioBanking Trust Fund

Some of the income generated from managing the land for conservation will be paid to the landholder through the BioBanking Trust Fund. The Fund invests funds deposited through the sale of biodiversity credits on behalf of the biobank site owners. The funds plus investment earnings are used to make payments to the biobank site owner to help cover the cost of managing the site, over time.

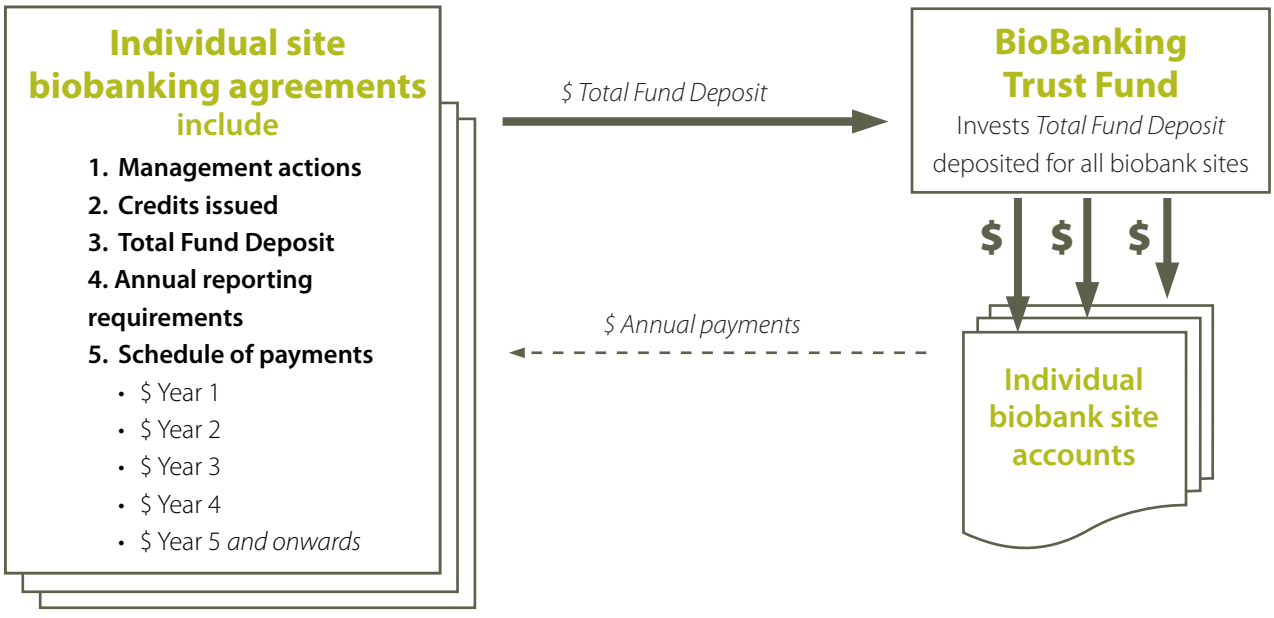
The BioBanking Trust Fund:

- provides a financial incentive to biobank site owners to continue to carry out obligations under the biobanking agreement (in addition to legal mechanisms)
- ensures that if land established as a biobank site is sold, the new owner of the site has the capacity to continue to manage the site.

The amount deposited into the BioBanking Trust Fund from credit sales is called the Total Fund Deposit, and is the estimated cost of carrying out the management actions on a biobank site. The Fund Manager will keep separate accounts for each biobank site and will publish public annual reports .

The Total Fund Deposit and future schedule of payments to the landholder are set out in each biobanking agreement. These payments are made each year after the landholder submits a report showing compliance with the agreement. If the future investment return is lower than expected for an extended period, discussions with the landholder would determine possible future payments.

Figure 4 The relationship between a biobanking agreement and the BioBanking Trust Fund



11. What will make this scheme a success?

The latest science

The BioBanking Assessment Methodology is based on ecological principles, current threatened species, and native vegetation data. This methodology will be reviewed and updated on a regular basis to ensure that it incorporates the latest scientific knowledge. The methodology is publicly available, providing full access to the rules applied in the scheme.

Public registers

The BioBanking public register will provide details of all biobanking agreements, statements and credits. It will also provide an expression of interest facility to enable interested landholders to promote their possible interest to generate credits given appropriate interest from a credit buyer.

Reporting

Biobank site annual returns

Biobank site owners are required to submit an annual return detailing their performance in fulfilling the conditions of the biobanking agreement. Failure to submit a satisfactory report could result in annual payments being withheld.

Annual reports

DECC will publicly release an annual report on the scheme's performance on its website. This report will provide the community with information about the number and type of credits issued, the biobanking agreements signed, and the biobanking statements issued. It will also report on the financial aspects of the scheme.

Compliance and enforcement

Compliance ensures that there is accountability for the commitments made under the scheme. DECC will undertake a comprehensive compliance assurance program to:

- ensure the integrity of the BioBanking Scheme
- ensure compliance with legislative requirements (to ensure biobank sites are managed properly)
- ensure that offences are detected and appropriate action is taken.