

# Queensland Environmental Offsets Policy

## Version 1.1 (Superseded)

December 2014



Prepared by: Biodiversity Integration and Offsets, Ecosystem Outcomes, Department of Environment and Heritage Protection

© State of Queensland, 2013.

The Queensland Government supports and encourages the dissemination and exchange of its information. The copyright in this publication is licensed under a Creative Commons Attribution 3.0 Australia (CC BY) licence.



Under this licence you are free, without having to seek our permission, to use this publication in accordance with the licence terms.

You must keep intact the copyright notice and attribute the State of Queensland as the source of the publication.

For more information on this licence, visit <http://creativecommons.org/licenses/by/3.0/au/deed.en>

December 2014

# Contents

Introduction .....	1
Chapter 1 .....	2
1.1 Purpose, application and scope .....	2
1.1.1 Purpose .....	2
1.1.2 Application and Scope .....	2
1.1.3 Relationship between Commonwealth, State, and local government offsets .....	2
1.1.4 Self-administered offset code of compliance .....	3
1.1.5 Transitional provisions .....	3
1.2 Prescribed environmental matters .....	4
1.2.1 Specific criteria for Matters of State Environmental Significance .....	4
1.3 Offset principles .....	4
1.4 Offset requirements .....	5
1.5 Supporting materials .....	5
Chapter 2: Prescribed environmental matters (other than protected areas) .....	6
2.1 Application of this chapter .....	6
2.2 Context .....	6
2.2.1 What all offsets must achieve under Chapter 2 .....	6
2.2.2 Size and scale of the offset .....	6
2.3 Types of Offsets .....	7
2.3.1 Proponent-driven offsets .....	7
2.3.2 Financial settlement offsets .....	11
2.4 Delivery of Offsets .....	12
2.4.1 Notification of offset delivery .....	12
2.4.2 Agreed delivery arrangement .....	13
2.4.3 Staged offset delivery .....	13
2.4.4 Impacts on legally secured offset areas .....	14
2.4.5 Strategic Offset Investment Corridors .....	14
Chapter 3 Protected areas .....	16
3.1 Application of this chapter .....	16
3.2 Impacts to be offset .....	16
3.3 Determining offset liability .....	17
3.4 Offset delivery .....	17
Chapter 4 Review and amendment .....	19
4.1 Evaluation and review .....	19
4.2 Policy amendment .....	19
Appendix 1 Self-administered Code of Compliance .....	20
Appendix 2 Bioregions of Queensland .....	21
Appendix 3 Defined distance .....	22
Appendix 4 Financial Settlement Offset Calculation Methodology .....	25
4.1 Purpose .....	25

4.2 Terms specific to the Financial Settlement Offset Calculation Methodology .....	25
4.3 Calculation methodology .....	26
4.3.1 Overview .....	26
4.3.2 Summary of calculation methodology .....	26
4.3.3 Section .....	27
4.3.4 Distinct Matter Area.....	27
4.3.5 Distinct Matter Area guiding principles.....	28
4.3.6 Multipliers .....	29
4.3.7 Calculate Total Offset Area x <i>On-ground Cost</i> per hectare .....	29
4.3.8 Calculate landholder incentive payment .....	30
4.3.9 Calculate administrative cost .....	31
4.3.10 SEQ koala habitat matters variations.....	31
4.3.11 Protected area matters variations .....	31
4.3.12 Marine and aquatic matters variations .....	32
4.3.13 Sliding scale calculation .....	32
4.4 Calculation data selection and entry process.....	1
4.5 Data tables .....	1
4.5.1 Threatened animals data table .....	1
4.5.2 Other matters data table .....	10
4.5.3 Local Government Area data table .....	12
4.5.4 Bioregion and subregion data table: on ground cost per hectare and 20-year loss .....	15
Appendix 5 Advanced offsets .....	21
Requirements for identification and registration of an advanced offset .....	21
Assessing an offset application using an advanced offset .....	21
Appendix 6 Direct Benefit Management Plans .....	22
Approval of Direct Benefit Management Plans .....	22
Examples of actions in a DBMP .....	22
Criteria for a DBMP .....	22
Indirect actions - research and education .....	23
Appendix 7 Offset account and trust fund administration.....	25
Local government offsets .....	25
Glossary .....	26
Abbreviations .....	28

## Definitions

Words in italics, other than titles of legislation and scientific names, are terms that are defined in the glossary.

## Introduction

Sometimes areas of high environmental value (for example habitat for vulnerable or endangered species) coincide with sites of particular value to industry (for example the presence of natural resources or proximity to infrastructure). Environmental offsets (offsets) provide the flexibility to approve development in one place on the basis of a requirement to make an equivalent environmental gain in another place where there is not the same value to industry.

Under a number of existing Queensland laws, offsets may be required for certain developments where there is an unavoidable impact on significant environmental values. To counterbalance this loss, offset actions, which can include improvement and protection of alternative sites and/or actions that improve environmental viability, can provide a conservation outcome that is equivalent to the value being lost.

An 'avoid, mitigate, offset' framework applies to development. This means that in designing the development, impacts on prescribed environmental matters should in the first place, be avoided wherever possible. If impacts can't be avoided in the area, then the extent of the impacts should be carefully managed and minimised (mitigated). These measures can reduce and, in some cases, remove the need for offsets. However, if there is still a significant impact to the environmental values then an offset may be applied. In cases where the affected environmental value cannot be offset, the activity might not be approved.

Once an administering agency has decided that a prescribed environmental activity is required to provide an offset, the offset will be delivered in accordance with the Queensland environmental offsets framework established under the *Environmental Offsets Act 2014*, *Environmental Offsets Regulation 2014* and *this policy*.

This policy clarifies how environmental offsets across Queensland's terrestrial and aquatic ecosystems should be delivered. However, the policy does not limit the functions or powers under the State Development Public Works Organisation Act 1971 (State Development Act) of the Coordinator-General.

Use of this policy will provide a single, streamlined framework for environment-related offsets in Queensland. This policy replaces the following offset policies:

- *Queensland Government Environmental Offsets Policy (2008)*
- *Marine Fish Habitat Offsets Policy (version FHMOP005.2)*
- *Policy for Vegetation Management Offsets (2011)*
- *Queensland Biodiversity Offset Policy (2011)*
- *Offsets for Net Gain in Koala Habitat in South East Queensland Policy (2010)*.

The policy also includes offset requirements for local government and for impacts to marine parks and protected areas (other than coordinated conservation areas).

This policy is a statutory instrument, given effect through section 12 of the *Environmental Offsets Act 2014* and prescribed under the *Environmental Offsets Regulation 2014*. It is a decision-making support tool when the relevant administering agency, including local governments, has identified that an offset is required for a *significant residual impact on a prescribed environmental matter*.

The policy is for the use by all administering agencies including local government.

# Chapter 1

## 1.1 Purpose, application and scope

### 1.1.1 Purpose

The purpose of this policy is to provide a decision-support tool to enable administering agencies to assess offsets proposals to ensure they meet the requirements of the *Environmental Offsets Act 2014*.

### 1.1.2 Application and Scope

Under section 12 of the *Environmental Offsets Act 2014*, this offsets policy is the only relevant policy unless an alternative policy is listed in the Environmental Offsets Regulation 2014. The policy can be considered for all offsets:

- where the offset proposal (notice of election) is submitted before an authority is granted or
- following granting of an authority containing a condition for an offset under the *Environmental Offsets Act 2014*

#### Significant residual impacts

Where an offset proposal is submitted before an *authority* is granted an *administering agency* must also be satisfied that all reasonable on-site avoidance and mitigation measures for the *prescribed activity* have been or will be undertaken to address impacts on *prescribed environmental matters* before approving an offset proposal. For an offset proposal submitted after an *authority* is granted an *administering agency* may only impose an offset condition if it is satisfied that all reasonable on-site mitigation measures for the prescribed activity have been, or will be undertaken.

In addition, an *environmental offset* can only be required if residual impacts from a *prescribed activity* constitute a *significant residual impact*. In identifying whether an activity will, or is likely to have, a *significant residual impact*, an *administering agency* may refer to:

- the State guideline that provides guidance on what constitutes a significant residual impact for matters of State environmental significance (MSES);
- the *Commonwealth Significant Impact Guidelines* for what constitutes a significant residual impact on Matters of National Environmental Significance (MNES); and
- any relevant local government significant impact guideline for Matters of Local Environmental Significance (MLES).

For staged offsets, the full extent of potential impacts on prescribed environmental matters from the entire proposal needs to be taken into account as part of the significant residual impact test. For offsets to be provided in stages, the authority will need to include a condition that enables the project and offsets to be staged.

Further detail on the requirements for staged offsets is provided in section 2.4.3 of this policy.

### 1.1.3 Relationship between Commonwealth, State, and local government offsets

#### State agency offsets

To avoid duplication of offset conditions between State agencies the Act requires that the *administering agency* in deciding whether to apply an offset condition, must consider any relevant offset condition that has already been imposed on an *authority* issued under another Act for the same or substantially the same *prescribed impact* and the same or substantially the same *prescribed environmental matter*. Where an applicant already has a relevant offset condition on another *authority*, this information should be provided to the *administering agency* with the application.

In the event that duplicate environmental offset conditions are imposed by different State agencies, a proponent can apply to the relevant administering agency to remove one of the conditions, in accordance with the following criteria - for an offset condition:

- in relation to a threatened plant, the application may be made to any agency other than the agency that imposed the offset condition for the threatened species on a clearing permit issued under the *Nature Conservation Act 1992*.

- for a protected area, the application may be made to any agency other than the agency that imposed the offset condition for the protected area under the *Nature Conservation Act 1992*.
- for a marine park, the application may be made to any agency other than the agency that imposed the offset for the marine park under the *Marine Parks Act 2004*.
- imposed for a koala, the application may be made to any agency other than a local government that imposed the offset under the South East Queensland Koala Conservation State Planning Regulatory Provisions.
- for any other matter, the application may be made to either administering agency that imposed the offset condition.

### Commonwealth offsets

To avoid duplication of offset conditions between jurisdictions, State and local governments can only impose an offset condition in relation to a *prescribed activity*, if the same, or substantially the same impact and the same, or substantially the same matter has not been subject to assessment under one of the following Commonwealth Acts:

- the *Environmental Protection and Biodiversity Conservation Act 1999*, to the extent the assessment relates to an activity that has been declared a 'controlled action' by the Commonwealth Minister;
- the *Great Barrier Reef Marine Park 1975*; or
- another Commonwealth Act prescribed by regulation – there are currently no listings.

This includes if the Commonwealth could have imposed an offset condition but did not do so. However, it does not apply if:

- the condition relates to a *protected area*; or
- the Commonwealth has decided that the activity itself is not a 'controlled action'. For example, an activity referred to the Commonwealth that could impact on koalas (or another MNES) that receives a 'not a controlled action' or a 'not controlled action - particular manner' notice, could still be subject to an offset condition imposed by State or local government.

If the Commonwealth imposes an offset condition for a *prescribed environmental matter* after the State or local government has already imposed an offset condition, a *proponent* can apply to the lower level of government to have the duplicating offset requirement removed provided the condition is for the same or substantially the same *prescribed impact and prescribed environmental matter*.

### Local government offsets

Local government may only impose an offset condition where there will be a significant residual impact on:

- a matter of local environmental significance (MLES); or
- a matter of state or national significance if authorised under the Environmental Offsets Regulation 2014.

A MLES for which an environmental offset is required, must be specified in a local government planning scheme and be approved by the State in accordance with Statutory Guideline for making and amending local planning instruments. Further guidance in relation to what constitutes MLES can be provided by the Department of State Development, Infrastructure and Planning – as administrators of the *Sustainable Planning Act 2009*.

#### 1.1.4 Self-administered offset code of compliance

A self-administered offset code of compliance, applying to certain *prescribed activities*, may be established under this policy with the approval of the Chief Executive administering the *Environmental Offsets Act 2014*. In this circumstance, the policy only applies to the extent identified in the relevant code of compliance. Further detail on self-administered offset codes of compliance is provided in Appendix 1.

#### 1.1.5 Transitional provisions

Transitional provisions for the following circumstances are provided in the *Environmental Offsets Act 2014*:

- consideration of the policy for an application made but not decided prior to 1 July 2014;

- to allow consideration of the policy in lieu of a superseded policy in relation to:
  - amending or removing conditions or requirements of an *authority* issued prior to 1 July 2014; or
  - an *authority* issued after 1 July 2014 for an application made before 1 July 2014;
- amending the scope of works authorised by an authority, or seeking a new authority in relation to an existing activity; and
- amending requirements of a deed of agreement executed prior to 1 July 2014 to allow consideration of the policy in lieu of a superseded policy.

## 1.2 Prescribed environmental matters

An offset condition may only be imposed on an authority for a significant residual impact on a prescribed environmental matter. They include:

- a MSES listed in schedule 2 of the Environmental Offset Regulation 2014;
- an accredited MNES, should Queensland receive accreditation in relation to environmental offsets for the purpose of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA); and
- a MLES, as described in section 10(1)(c) of the *Environmental Offset Act 2014*.

### 1.2.1 Specific criteria for Matters of State Environmental Significance

In relation to MSES the Environmental Offsets Regulation 2014 refers to the policy to provide specific criteria for defining some matters, as follows:

- Schedule 2 item 1: A bioregion is a bioregion shown in a map called Bioregions of Queensland (Appendix 2).
- Schedule 2, items 2(4) and (6): the defined distance, for a regional ecosystem, means the distance identified as the relevant distance from the defining banks of a relevant watercourse in the table included in Appendix 3.
- Schedule 2, item 3(2) in considering whether a regional ecosystem:
  - contains an area of land that is required for ecosystem functioning (a connectivity area); and
  - is of sufficient size or configured in a way that maintains ecosystem functioning; and
  - will remain despite a threatening process.

The local and regional landscape fragmentation needs to be quantified. The Landscape Fragmentation and Connectivity Tool is available as a decision support tool to quantify any significant impact on connectivity areas. This tool is available through the Queensland Government Information Service at: <http://dds.information.qld.gov.au/DDS/Search.aspx>

In relation to Schedule 2 item 4(1)(b), a wetland or watercourse in high ecological value waters is only a prescribed matter for the purposes of the following prescribed activity—a *prescribed ERA* under the *Environment Protection Act 1994*.

To remove any doubt, a *protected area* is a separate prescribed environmental matter to other *prescribed environmental matters* that may be located within the protected area. For example, wallum froglet is a *prescribed environmental matter* (as a vulnerable species), and may be located within a national park, where the national park is a separate distinct *prescribed environmental matter* from the threatened species.

## 1.3 Offset principles

All *environmental offsets* must meet the following seven offset principles:

1. Offsets will not replace or undermine existing environmental standards or regulatory requirements, or be used to allow development in areas otherwise prohibited through legislation or policy.
2. Environmental impacts must first be avoided, then minimised, before considering the use of offsets for any remaining impact.
3. Offsets must achieve a *conservation outcome* that achieves an equivalent environmental outcome.



4. Offsets must provide environmental values as similar as possible to those being lost.
5. Offset provision must minimise the time-lag between the impact and delivery of the offset.
6. Offsets must provide additional protection to environmental values at risk, or additional management actions to improve environmental values.
7. Where legal security is required, offsets must be legally secured for the duration of the impact on the *prescribed environmental matter*.

## 1.4 Offset requirements

The offset requirements under this policy are divided into two chapters. Each provides guidance on offset requirements for impacts on different matters, as follows:

- Chapter 2: Offsets for impacts on *prescribed environmental matters*, other than *protected areas*
- Chapter 3: Offsets for impacts on *protected areas*.

Where there will be an impact on a *prescribed environmental matter* within a *protected area* (for example, an endangered species that is in a national park), the requirements of both chapters are relevant. Chapter 2 will be applicable for the impacted on the matter that is not a *protected area*, and Chapter 3 is applicable for the impact on the *protected area*.

## 1.5 Supporting materials

Supporting materials such as guidelines and tools that provide advice on how to meet requirements of this policy are available on the Queensland Government website at [www.qld.gov.au/environment/pollution/management/offsets/](http://www.qld.gov.au/environment/pollution/management/offsets/)

## Chapter 2: Prescribed environmental matters (other than protected areas)

### 2.1 Application of this chapter

This chapter sets the approach for offsetting any *significant residual impact* on a *prescribed environmental matter*, other than a matter that is a *protected area*.

Offsets may be provided as a:

- proponent-driven offset, comprising a—
  - a land-based offset,
  - actions in a Direct Benefit Management Plan (DBMP), or
  - both;
- financial settlement offset; or
- a combination of a proponent-driven offset and a financial settlement offset.

Where there is also an impact on a *protected area*—the provisions in Chapter 3 are also relevant.

### 2.2 Context

#### 2.2.1 What all offsets must achieve under Chapter 2

*Environmental offsets* delivered under this framework are to achieve a *conservation outcome* for the impacted matter(s). This will require the offset to maintain the viability of the matter, relative to the status quo (i.e. what would have happened had the development and the offset not occurred). This can be achieved by:

- providing tangible benefits for the impacted matter, by providing an offset in the most strategic location to achieve a *conservation outcome* for the impacted prescribed environmental matter as follows:
  - wherever possible offsets should be delivered within a *Strategic Offset Investment Corridor* closest to the impacted site;
  - in the case of a land-based offset, the most strategic location to achieve a *conservation outcome* is generally located in the following order of preference:
    - the same local government area; or
    - the same sub-region; or
    - the same bioregion or adjacent bioregion;
- effectively accounting for and managing the risks of the offset failing to achieve a *conservation outcome*, including risks from competing land uses such as timber, quarry material or mineral extraction which may be able to occur without the landholder's consent on State land. Information on existing timber, quarry material or mineral extraction which may be able to occur without the landholder's consent on State land and mineral interests can be found on the Queensland Government Open Data Website ([www.data.qld.gov.au](http://www.data.qld.gov.au)). For proponent-driven offsets, the risk should be managed as part of the *offset delivery plan*. This risk has been factored into the financial settlement calculation;
- achieve the offset principles in section 1.3 of this policy;
- being efficient, effective, timely, transparent, and scientifically robust;
- having transparent governance arrangements—including being able to be readily measured, monitored, audited, and enforced; and
- including no more than 10% of the offset investment as research or education programs (unless a greater benefit for the impacted matter can be demonstrated).

#### 2.2.2 Size and scale of the offset

For all *prescribed environmental matters*, the size and scale of an offset is that which is necessary to achieve a

*conservation outcome.*

The offset must be of a size and scale proportionate to the *significant residual impact* on a *prescribed environmental matter*. However, the offset requirement for a *significant residual impact* on a *prescribed environmental matter* will be set at a maximum multiplier of 4 (i.e. a maximum of four times the area of the residual impact), with the exception of connectivity impacts - which is set at a multiplier of 1.

For financial settlement offsets, the size and scale of the offset is based on the financial settlement calculation methodology in Appendix 4 of the policy.

For land-based offsets, the size and scale of the offset is based on a habitat quality assessment.

The size and scale of an offset delivered through actions under a DBMP will be determined, with regard to the following, on a case-by-case basis:

- that the benefits provided by the actions are sufficient to counterbalance the impacts of the *prescribed activity*; and
- that benefits provided by the management actions are best achieved through actions in a DBMP, in particular that benefits achieve landscape-scale *conservation outcomes* for those matters, or if the matter is localised, improved outcomes compared to a traditional land-based offset.

Where an activity impacts on multiple matters, the impact for each matter will be identified and assessed. However, this does not prevent delivery of an integrated offset package that meets offset requirements for multiple matters.

## 2.3 Types of Offsets

### 2.3.1 Proponent-driven offsets

A proponent-driven offset may take the form of a traditional land-based offset, be undertaken through actions under a Direct Benefit Management Plan (DBMP) or a combination of both. Under this option, the offset delivery liability remains with the *proponent*, and the offset must be delivered in accordance with an *Offset delivery plan* approved by the administering agency.

In this case, the offset is to result in a *conservation outcome* for the impacted *prescribed environmental matters* and is to be delivered on *land*:

- owned by the proponent; or
- subject to contractual arrangement between the *proponent* and *offset provider(s)*, and any other relevant third party for delivery of the offset.

The *land* on which a proponent-driven offset is being delivered may contain remnant regional ecosystems.

Where possible the *proponent* may choose to deliver an offset package that addresses multiple jurisdictional offset requirements. For example, if a State-listed species and a Commonwealth-listed ecological community are impacted by the one *prescribed activity*, a single offset that meets offset requirements for both matters may be provided. This can also apply to offsets for local matters where agreed to by the local government.

A *proponent* delivering an offset is responsible for any costs associated with meeting the offset requirement and retains ongoing responsibility for ensuring the offset is delivered in accordance with the relevant *offset delivery plan*. The *proponent* can enter into contractual arrangements with an *offset provider*, who would then be responsible for delivering the offset under the terms of the contract.

In delivering an offset obligation, the *proponent* may use an *advanced offset* where it meets the requirements of this policy (Appendix 5) for the impacted *prescribed environmental matter* and where it is legally secured by the *proponent* or a third party for the life of the impact.

#### 2.3.1.1 Land-based offsets

For land based offsets, the suitability of the offset site relative to the impact site and the prescribed environmental matters, is measured through undertaking a habitat quality analysis. The Guide to Determining Terrestrial Habitat Quality must be used for regional ecosystems and species offsets (including advanced offsets) to undertake this analysis, unless an alternative approach is approved by EHP, as being able to measure a conservation outcome. The guideline references a web-based tool, the Land-based Offsets Multiplier Calculator that compares the habitat quality of an impact and offset site to determine environmental equivalency.

### Specific requirements for local governments where the offset delivery is a land-based offset

For land-based offsets being delivered for MLES, a local government may use their own habitat quality assessment and can determine the offset obligation to be delivered for that matter, provided any area of land for the offset does not exceed the impact site area by more than a factor of 4.

#### 2.3.1.2 Direct Benefit Management Plan offsets

Proponent-driven offsets can also be delivered through priority actions identified in a DBMP undertaken on land. DBMP priority actions are implemented through the management intent and offset actions in an *offset delivery plan*.

DBMPs are pre-approved packaged investments (refer Appendix 6) that outline priority actions to address threats to, and provide substantial benefits for, particular *prescribed environmental matters*. Substantial benefits are achieved by providing landscape-scale benefits for those matters, or if the matter is localised, improved outcomes compared to a traditional land-based offset.

Additionally, other compensatory measures (research and education) can be delivered as part of a DBMP but will only be accepted as no greater than 10% of an offset delivery, unless otherwise agreed. For example, in circumstances where it can be demonstrated that the level of investment in research and education will deliver a greater overall *conservation outcome* for the *prescribed environmental matter* than other actions that could benefit that matter.

DBMPs must be pre-approved as priority actions for the *prescribed environmental matter*:

- by EHP—where the matter is an accredited MNES or a MSES; and
- by the relevant local government—where the matter is an MLES.

In electing to provide an offset (or part of an offset) through actions in a DBMP the *proponent* will need to include as part of the notice of election:

- the pre-approved DBMP relating to an assessment of the *significant residual impacts* for the impacted *prescribed environmental matters*;
- an *offset delivery plan* outlining how the actions in the DBMP will be implemented to achieve a *conservation outcome* for the impacted *prescribed environmental matters*; and
- demonstration that the proposed actions selected from the DBMP are additional to existing activities, are cost effective and in themselves can provide a *conservation outcome* for the impacted *prescribed environmental matters*.

Examples of a *conservation outcome* can include but is not limited to the following, where these activities are additional to existing management practices or requirements, and are priority actions for the *prescribed environmental matter*:

- enhancing, restoring and establishing key habitat across multiple tenures or properties;
- threat mitigation activities such as (but not restricted to) weed or feral animal control on a landscape scale or across multiple properties;
- propagating and planting of threatened plant species or establishment and intensive management of new populations of threatened fauna in appropriate habitat;
- protecting and restoring significant freshwater, marine or estuarine ecosystems;
- landscape scale fire management activities such as patch burning or protective burns; and
- fencing or other management techniques to manage access impacts on the prescribed environmental matter including legal security where relevant to all or part of the area.

In reaching agreement about the agreed delivery arrangement the *administering agency* must ensure that delivery of the DBMP actions will achieve the principles of this policy.

#### 2.3.1.3 Offset delivery plan

When choosing to deliver a proponent-driven offset, a notice of election must include a proposed *offset delivery plan*. The *offset delivery plan* must:

- describe how an *environmental offset* will be undertaken and how the *conservation outcome* will be achieved, including how the plan will:
  - effectively account for and manage the risks of the offset failing to achieve the *conservation outcome*;
  - ensure the offset provides benefits in relation to the *prescribed environmental matter* in addition to any other benefit provided under a requirement of, or an authority under an Act;
  - have transparent governance arrangements, including being able to be readily measured, monitored, audited, and enforced; and
  - ensure the offset is of a size and scale proportionate to the *significant residual impacts* on the *prescribed environmental matter*.
- state that the *proponent*, and any other entity that owns *land* on which the *environmental offset* will be undertaken, agree to the offset being undertaken;
- be signed by the *proponent*, and any other entity that owns *land* on which the *environmental offset* will be undertaken;
- describe the *prescribed environmental matter* to which the offset condition relates;
- state whether the offset condition will be delivered, wholly or partly, on the *land* on which the *environmental offset* will be undertaken;
- include particulars of, or a description sufficient to identify, the *land* on which the *environmental offset* will be undertaken;
- identify, and contain details of, any person with an interest in the *land* on which the *environmental offset* will be undertaken;
- describe the existing land use of the *land* on which the *environmental offset* will be undertaken and any impact that land use may have on the delivery of the offset
- state:
  - the measures the *proponent* will take to secure the *land* on which the *environmental offset* will be undertaken as a legally secured offset area;
  - why the *proponent* considers the stated measures are reasonable and practicable;
  - the period during which the measures will occur; and
  - why the stated period is reasonable for the purpose of securing the *environmental offset*.

#### 2.3.1.4 Legally secured offset areas

Generally, an offset will be required to be a legally secured offset area. The exception to this approach may be where a DBMP is implemented across a number of tenures and parcels of land where legal security of all or part of the area is not required to achieve the *conservation outcome*.

An area of land will be a legally secured offset area if the area is:

- an environmental offset protection area under section 30 of the *Environmental Offsets Act 2014*;
- an area declared as an area of high nature conservation value under section 19F of the *Vegetation Management Act 1999*, where it is secured for the purposes of an environmental offset
- declared as a nature refuge under section 46 of the *Nature Conservation Act 1992*, where it is secured for the purposes of an environmental offset
- declared as a protected area under section 29(1) of the *Nature Conservation Act 1992*, where it is secured for the purposes of an environmental offset; or
- secured as a statutory covenant for environmental purposes under the *Land Act 1994* or *Land Title Act 1994*;
- declared as a fish habitat area under the *Fisheries Act 1994*; or
- declared as a highly protected area of a Marine Park under the *Marine Parks Act 2004*.

Mechanisms to legally secure these areas are prescribed under the relevant legislation.

### 2.3.1.5 When offset obligation ceases

The requirement for a legally secured offset will cease to have effect once the:

- *administering agency* is satisfied the actions and obligations of the *offset delivery plan* have been completed in full; and
- the offset has been secured for at least the same duration as the impact on the *prescribed environmental matters* arising from the *prescribed activity*.

### 2.3.1.6 Characteristics of a proponent-driven offset site

For a land-based offset, or when the State is delivering an on-ground outcome from funds received from a financial settlement payment, the *environmental offset* site must be capable of delivering a *conservation outcome* for the impacted *prescribed environmental matter*. This means that:

- in relation to endangered and of concern regional ecosystems—the offset site must be:
  - of the same *broad vegetation group* as the impacted regional ecosystem;
  - of the same regional ecosystem status; and
  - within the same bioregion.
- in relation to flora species and flora and fauna habitat under the *Nature Conservation Act 1992*—the offset site must contain, or be capable of containing, a self-sustaining population of that same impacted species.
- for vegetation intersecting a watercourse the offset site must be:
  - of the same *broad vegetation group* as the impacted regional ecosystem;
  - within the same bioregion; and
  - associated with a watercourse.
- for vegetation intersecting a wetland the offset site must be:
  - of the same *broad vegetation group* as the impacted regional ecosystem;
  - within the same bioregion; and
  - associated with a wetland.
- for wetlands the offset site must be:
  - within the same wetland habitat type as the impacted wetland; and
  - within the same bioregion.
- for connectivity the offset site must be:
  - a non-remnant ecosystem; and
  - in the same subregion. However, if the subregion is intact, the offset should be in the nearest fragmented subregion.
- with some exceptions, multiple prescribed environmental matters may be co-located on the offset site, provided the site meets the offset requirements for each matter. Exceptions include:
  - protected areas may not be co-located with other *prescribed environmental matters*; and
  - species in different species functional groups may not be co-located.

In relation to an offset site that is part of a DBMP, the site and the plan must meet the requirements specified in Appendix 6 and section 2.3.1.2 of this policy.

### Specific requirements for koala related offsets in South East Queensland

For proponent-driven offsets, this policy requires that the rehabilitation, establishment and protection of koala habitat is the only appropriate action to offset koala habitat within South East Queensland (the area identified as the South East Queensland region under the South East Queensland Regional Plan) and under the South East Queensland Koala Conservation State Planning Regulatory Provisions. A DBMP cannot be used.

In these areas the only acceptable approach to providing a proponent-driven offset is to meet all of the following

requirements:

- To establish three new koala habitat trees for every one 'non juvenile' tree removed.
- Offset plantings must be within the same local government area as the impact site except where the impact occurs on koala habitat values within:
  - the Koala Coast<sup>1</sup>, which crosses local government boundaries. In which case, the relevant assessment manager, local authority, Minister or State agency may determine an appropriate location within the Koala Coast (in consultation with the relevant local authority); or
  - the Pine Rivers area<sup>2</sup>, which is within a larger regional council boundary. In which case, the relevant assessment manager, local authority, Minister or State agency may determine an appropriate location within the Moreton Bay Regional Council area, with the priority on the Pine Rivers area and localities immediately adjacent to it.
- In an area identified as high value or medium value suitable for rehabilitation habitat. Where these are not available koala offset sites should be located within low value suitable for rehabilitation habitat or where appropriate, within bushland habitat to enhance the quality of bushland within the local government area.
- Koala habitat trees to be established as an offset must be reflective of the species that are endemic to the site and be planted at densities that will produce a mature density reflective of the regional ecosystems present on the site.

### Requirements for all other koala related offsets

For koala-related habitat outside South East Queensland, a *proponent* may choose to either:

- provide the offset through establishing three new koala habitat trees for every one 'non juvenile' koala habitat tree removed; or
- a land-based offset determined in accordance with the Guide to Determining Terrestrial Habitat Quality and the Land-based Offsets Multiplier Calculator tool.

### 2.3.2 Financial settlement offsets

A *proponent* can meet an offset requirement for impacts on marine or terrestrial environments, including koala related offsets, by providing a payment in accordance with this policy.

For financial settlement offsets required by the State, the financial settlement payment amount must be calculated in accordance with the Financial Settlement Offset Calculation Methodology in Appendix 4. The web-based Financial Settlement Offset Calculator on the Queensland Government website may be used to support this calculation.

For financial settlement offsets required by a local government, an alternative financial settlement payment amount may be determined provided that the:

- payment amount is no greater than what would have been required if calculated in accordance with the Financial Settlement Offset Calculation Methodology in Appendix 4; and
- the local government is able to achieve a *conservation outcome* for the nature, size and scale of the impact on the *prescribed environmental matter(s)* the subject of the offset payment.

In this regard, local government may use their own land or place money derived from sources other than financial settlement offset payments to ensure a conservation outcome is achieved.

Unless agreement has been reached that the impact and offset will be staged (refer section 2.4.3), the full amount of the financial settlement offset must be paid prior to commencing the activity to which the offset condition

---

<sup>1</sup>The Koala Coast includes the local government areas of Brisbane, Logan and Redland. The boundary of the Koala Coast is defined in the Koala Conservation SPRP Maps of Assessable Development Areas.

<sup>2</sup> The Pine Rivers area is the extent of the previous Pine Rivers Shire. The boundary of the Pine Rivers area is defined in the Koala Conservation SPRP Maps of Assessable Development Areas.

relates. This means that financial settlement offsets cannot be paid whilst the impacts on the *prescribed environmental matters* are occurring, or after the impacts have occurred. Once this amount has been paid the offset obligation has been met.

Payments must be made:

- to the local government's trust fund in relation to offset requirements for which the local government was the *administering agency*. The trust fund is to be administered by the local government for the delivery of *environmental offsets* to achieve a *conservation outcome*, and the requirements for the use of the trust fund are outlined in section 89 of the *Environmental Offsets Act 2014*.
- to the *offset account* administered by EHP for all other financial settlement offsets. Further information on the *offset account* and trust fund administration is provided in Appendix 7.

### **Specific requirements for local governments where the offset delivery is a financial settlement offset**

When using the Financial Settlement Offset Calculation Methodology or web-based Financial Settlement Offset Calculator for financial settlement offsets for MLES, the local government may attribute a rating and associated multiplier to each local environmental matter that does not exceed a multiplier of 4. The following ratings and associated multipliers can be used:

- MLES 1 which relates to a multiplier of 1;
- MLES 2 which relates to a multiplier of 2;
- MLES 3 which relates to a multiplier of 3; or
- MLES 4 which relates to a multiplier of 4.

These ratings and associated multipliers can be attributed for example, through the local government planning instrument or via the offset condition. For example, a locally significant riparian corridor may be attributed an offset multiplier of MLES 3. In this instance the web-based Financial Settlement Offset Calculator will calculate a financial offset based on a multiplier of 3 for that matter.

Local government has discretion to seek a financial settlement offset that is less than what is determined by the Financial Settlement Offset Calculation Methodology or web-based Financial Settlement Offset Calculator.

## **2.4 Delivery of Offsets**

### **2.4.1 Notification of offset delivery**

The *administering agency* must agree to the proposed offset delivery approach. There are two options for seeking the *administering agency's* agreement:

- the *proponent* provides a notice of election to the *administering agency* prior to the issuing of the *authority* (i.e. before or during the assessment process for the *authority*); or
- the *proponent* provides a notice of election to the *administering agency* after the *authority* has been issued.

The notification must be made on the approved form, and is to identify that the offset will be delivered as a:

- proponent-driven offset;
- financial settlement offset; or
- a combination of proponent-driven offset and financial settlement offset.

To the extent that the notification identifies the offset will be delivered as a proponent-driven offset, an *offset delivery plan* that identifies how the offset will be undertaken must accompany the notice. Section 2.3.1.3 provides further detail in relation to the requirements for an *offset delivery plan*.

The requirement to notify does not limit the potential to provide a staged offset delivery approach, provided that the condition of approval allows both the *prescribed activity* and offset to be staged. Where staging the offset delivery is reflected in the condition, the *proponent* will be required to notify the *administering agency* of:

- details about the entire proposal and its stages; and
- the intended offset delivery approach for each stage, before the activity for that stage commences.



Further detail for staging offset delivery is provided in section 2.4.3.

After receipt of the notice of election on the approved form, the administering agency has 40 business days to consider the notice of election.

## 2.4.2 Agreed delivery arrangement

Where agreement on offset delivery is reached, the *administering agency* and *proponent* must enter into an *agreed delivery arrangement* and, if a proponent-driven offset is elected, it must include the *offset delivery plan*. This agreement forms a contract about how the offset will be delivered and can be amended by agreement between the two parties.

For financial settlement offsets the *agreed delivery arrangement* must specify the agreed financial settlement amount to be paid in full and an agreed timeframe in which the payment will be made. Where there is a lengthy lag time of 18 months or more between agreement of the financial settlement amount and payment, the agreed amount will need to be recalculated using the Financial Settlement Offset Calculator to account for any changes, such as fluctuations in CPI.

Where the notice of election is provided prior to the issuing of the *authority*, and an *agreed delivery arrangement* is entered into prior to the issuing of the *authority*:

- the proponent:
  - may start to deliver a proponent-driven offset, that is the subject of the *agreed delivery arrangement*, prior to the issuing of the *authority*;
  - must not pay any amount under a financial settlement offset, that is the subject of the *agreed delivery arrangement*, until after the *authority* is granted; and
  - must not commence any works that impact on the *prescribed environmental matter* until after the *authority* is granted.
- however, the administering agency, within 10 business days of issuing the relevant authority, may give the *proponent* a notice that states the offset may be required to be delivered in a different manner to that previously agreed upon, if:
  - there is a change in the way the *prescribed activity* is proposed to be carried out that will result in a change to the impact on the prescribed environmental matter; and
  - the *administering agency* decides that the impact that is counterbalanced under the early arrangement differs from the impact likely to arise from the *prescribed activity*.

## 2.4.3 Staged offset delivery

Where an applicant seeks to stage offset delivery in line with stages of a *prescribed activity*, this needs to be identified before the relevant authority is issued so that the conditions of the authority can reflect this.

Assessment of the application for the relevant *prescribed activity* will need to consider, for the whole project:

- avoidance and mitigation of impacts on *prescribed environmental matters*;
- the maximum likely extent and duration of the *significant residual impact* on *prescribed environmental matters*.

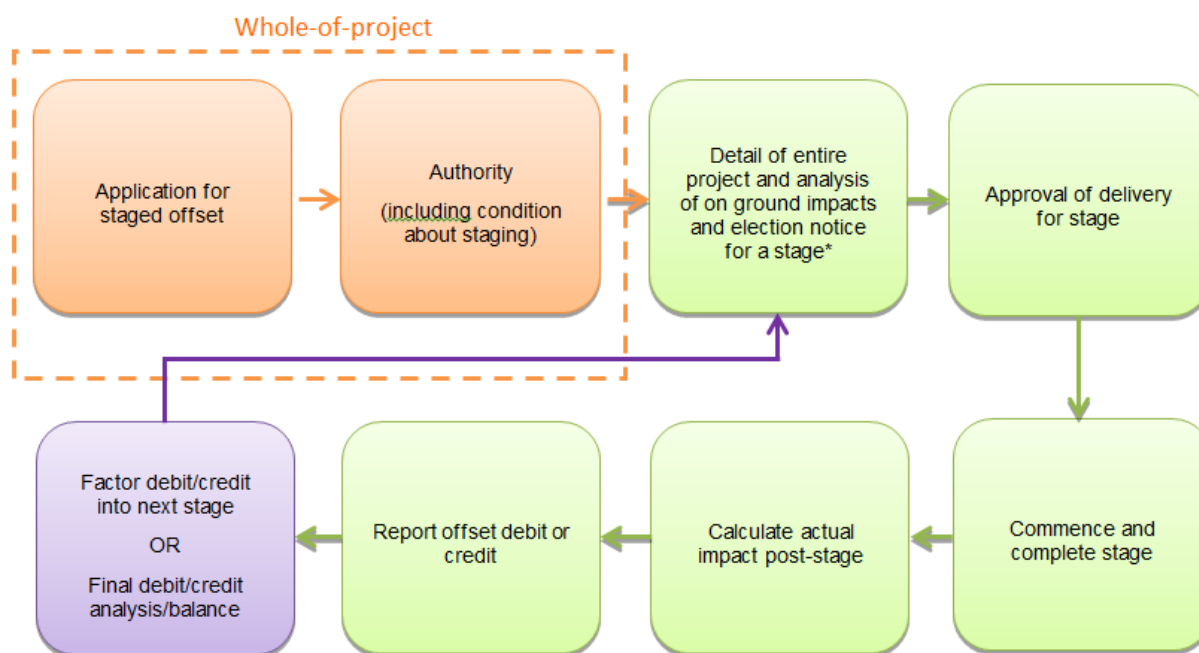
As a condition of the *authority*, detailed assessment of the impact of each stage of the activity—and the offset requirement for each stage—will need to be conducted prior to providing the notice of election for that stage. A notice of election will not be considered until the quantum of impact on *prescribed environmental matters* to be offset has been determined and approved for each stage. In addition, the *administering agency* will seek information in relation to any completed stages with the notice of election so that any offset credit or debits can be assessed for subsequent stages. Offset staging will provide *proponents* with flexibility to adapt offset provision to operational and development changes over time, which were not evident at the time of application for the relevant activity.

This approach enables offset credits from one stage to be used in subsequent stages where the credit relates to the same *prescribed environmental matter*. For example, where an offset was provided for a matter but actual on-ground operations did not actually impact on that matter.

In unavoidable circumstances this approach can also be used for unforeseen impacts on matters where an offset

debit is created. Notice of election for any debits should be provided at least three months before the proposed commencement of the subsequent stage and within six months from the end of the final stage. However, where there is a significant offset debit, the *administering agency* may direct the *proponent* to undertake additional or an alternative approach to on-ground analysis prior to impacts occurring for future stages and may consider any relevant compliance and enforcement action if the extent of impacts significantly exceeds that which were agreed to through the *agreed delivery arrangement*.

Where a land-based offset results in a credit at the end of the entire project the *proponent* may choose to use this as an *advanced offset*. However, where a financial settlement has occurred there can be no refund on monies paid because the offset funds will have been committed to delivery of the offset obligation. Similarly, credits will not be considered for a DBMP as they are based on outcomes of management actions.



\*This step can occur for the first stage of a staged activity before the *authority* is granted

**Figure one: illustration of the staged offset delivery approach**

#### 2.4.4 Impacts on legally secured offset areas

Where a prescribed activity will have a *significant residual impact* on a legally secured offset area, the offset is required for both the impact on:

- the matters requiring offset as identified by the original *authority* requirements; and
- any other *prescribed environmental matter* that will be impacted as a result of the activity.

If a site that is currently a legally secured offset area is to be affected in whole or part by a *prescribed activity*, that *prescribed activity* cannot commence until the mechanism for legal security has been removed from the area that will be impacted by the activity.

In addition, if the legally secured offset area is an environmental offset protection area declared under section 30 of the *Environmental Offset Act 2014* or an area of high nature conservation value under section 19F of the *Vegetation Management Act 1999*, the mechanism cannot be removed until the *proponent* has entered into an *agreed delivery arrangement* in relation to providing an *environment offset* for significant residual impacts to the area.

#### 2.4.5 Strategic Offset Investment Corridors

*Strategic Offset Investment Corridors* identify areas where *land* may be suitable for land management activities that provide a benefit to matters likely to be impacted by development, whilst also providing landscape-scale benefit.

These pre-identified areas can benefit *proponents* by making offsets more cost effective and easier to find.

Landholder involvement in offsets within a *Strategic Offset Investment Corridors* is voluntary. However *proponents* are expected to seek offset opportunities in these corridors wherever possible because they provide strategic landscape outcomes for *prescribed environmental matters*. These corridors connect conservation hubs (e.g. national parks) in corridor areas that are under low development pressure, and not zoned for activities such as urban development.

For further detail on *Strategic Offset Investment Corridors* refer to the Queensland Government website.

## Chapter 3 Protected areas

### 3.1 Application of this chapter

This chapter outlines the offset requirements for *significant residual impacts* on a *prescribed environmental matter* that is a *protected area*, and the additional public benefit values that may be lost through an impact on a *protected area*. Chapter 2 sets out required offsets for the loss of *prescribed environmental matters* that are not a *protected area*, even where these occur within a *protected area*.

Offsets payable under this chapter will be additional to those under Chapter 2 Offsets for impacts on prescribed environmental matters (other than protected areas).

*Protected areas* are set aside in the public interest, in perpetuity, to protect unique values or to preserve the land for specific purposes, such as:

- permanent preservation of natural and cultural values
- protection of land for public enjoyment and appreciation
- protection of watersheds and productive resources
- iconic geological and landscape values
- significance to traditional owners/Indigenous peoples.

The impacts of activities on protected areas are two-fold. There is the loss of values that have environmental significance, and there is the loss of the associated 'public benefit' values, such as access, open space, tourism, recreation and cultural pursuits. Section 8 of the *Environmental Offsets Act 2014* describes what constitutes a *significant residual impact* in relation to a protected area.

This chapter explains how an offset liability is determined for a *protected area*. The calculation aims to ensure sufficient compensation is made to replace the lost public benefit values through enhanced management of the existing protected area estate, or where appropriate, the acquisition and establishment of new protected areas. If the protected area is jointly managed with traditional owners, funding will be attributed to the joint management area that is impacted.

For the purposes of this chapter, administering agency is taken to mean the relevant Chief Executive responsible for administering these areas, as follows:

- for nature refuges—the Chief Executive of EHP
- for all other *protected areas*—the Chief Executive of the Department of National Parks, Sport, Recreation and Racing (NPRSR).

### 3.2 Impacts to be offset

An offset is required for any *prescribed activity* that results, or may result, in a significant residual impact and one or more of the following after all reasonable on-site avoidance and mitigation measures have been undertaken:

- the authorised clearing or inundation of all or part of the *protected area* for the construction of private or publicly owned infrastructure on the area; or
- the exclusion of, or reduction in, the public use or enjoyment of all or part of the *protected area*; or
- a reduction in the natural or cultural values within the meaning of the *Nature Conservation Act 1992*, for all or part of the *protected area*.

Except where:

- the area is a nature refuge; or
- the *prescribed activity* is conducted as part of a management action by the *administering agency* consistent with the principles for the protected area; or
- the *administering agency* of the relevant *protected area* determines that an offset will be waived or reduced or an alternative arrangement negotiated, noting that any alternative arrangement will be equal to or better than the agreed offset value.

For a nature refuge, an offset is required for any *prescribed activity* that results or may result in *significant residual impact* as defined under section 8 (1) of the *Environmental Offsets Act 2014*.

### 3.3 Determining offset liability

Activities on *protected areas* may be immediate and long term. An offset should compensate for the full suite of natural and cultural values impacted by the *prescribed activity*, including current and future values relating to the provision of ecological services (such as clean air, water and carbon storage), recreation and tourism opportunities, grazing, scenic amenity, and cultural and spiritual significance.

In order to determine the quantum of impact, a simple ‘ratio’ or multiplier has been used.

These ratios are directly proportionate to the level of legislative protection and the corresponding level of public benefit (based on the significance of protection that the values are afforded). The ratios account for both the primary impacts that occur within the impact area (impact footprint), but also the secondary impacts that occur, such as habitat fragmentation, edge effects and changes to ecosystem function. The ratios also account for:

- the lost public benefit values that result from the land no longer being available for public enjoyment or community benefit;
- the lost effort and investment applied over time to maintain and improve the value and condition of the protected area, and the lost opportunity for future use caused by the impact; and
- the likely costs of replacing the values.

**Table 1: Offset ratios for protected areas**

Protected area category	Offset ratio (multiple of land value)
National park	10
National park (Aboriginal land)	10
National park (Torres Strait Islander land)	10
National park (CYPAL)	10
Regional park	5
Nature refuge	5
	2 where: <ul style="list-style-type: none"> <li>• comparable or better conservation values can be protected; and</li> <li>• includes surrender of exploration authorities and/or licences that may eventuate in impacts on the proposed offset area.</li> </ul>

### 3.4 Offset delivery

An offset for an authorised impact on a *protected area* may be delivered as a financial settlement or, with the agreement of the Chief Executive, a proponent-driven offset.

A payment associated with a financial settlement is calculated by multiplying the total area (in hectares) of clearing, inundation, construction or exclusion by the average unimproved land value for the local government area and then, by the relevant ratio associated with the protected area category (as per Table 1). Where the average unimproved land value is less than \$500 per hectare, a floor price of \$500 will be applied. The total area will also be rounded up to the nearest hectare. The costs associated with direct impacts to assets and infrastructure owned by NPRSR will be added, where applicable, to this figure. These costs include, as an example, the replacement of fire control lines, lookouts and other assets. Information will be provided by NPRSR about these costs as part of the assessment process.

For example, an offset liability for infrastructure requiring five hectares of clearing on a national park would be based on the following formula:

offset liability = (5 [being the area in ha] x land value [assume \$1200/ha] x 10[ratio for national park]) + direct impact costs [assume nil]

offset liability = ((5 x \$1200) x 10) + \$0

offset liability = \$ 60,000

An offset will be payable by the *proponent* to the *offset account* prior to the commencement of works. The administrator of the *offset account* will ensure that any offset payments for impacts on a *protected area* will be given to the department responsible for administration of that protected area, who will then be responsible for the delivery of an *environmental offset*.

## Chapter 4 Review and amendment

### 4.1 Evaluation and review

Evaluation and review of the policy will be undertaken within five years of commencement. This evaluation will review the cap and assess the level of compliance of individual offsets with their offset delivery plans, as well as evaluating the policy's overall success in achieving the goal of an overall *conservation outcome* for *prescribed environmental matters*.

This evaluation will be based on a combination of information sources including satellite analysis based on the Queensland Government's Statewide Landcover and Trees Study, regular reporting provided by proponents and offset providers and through targeted field audits by government officers. The outcomes of this review will be reported to the Queensland Parliament.

### 4.2 Policy amendment

Any policy amendment that does not constitute a minor or administrative amendment will be subject to the requirements of the Regulatory Impact Statement System guidelines, and detail about this can be found at [www.treasury.qld.gov.au](http://www.treasury.qld.gov.au) (search for 'regulatory impact system'). A minor or administrative amendment to the Policy may be made where—

- the amendment is made merely to reflect a part of another Statutory instrument, and adequate public consultation was carried out in relation to the making of that other Statutory instrument;
- the amendment corrects or changes any of the following:
  - an explanatory matter about the policy;
  - the format or presentation of the policy;
  - a spelling, grammatical or mapping error in the policy;
  - a factual matter incorrectly stated in the policy;
  - a redundant or outdated term in the policy;
  - inconsistent numbering of provisions in the policy; or
  - a cross-reference in the policy.

## Appendix 1 Self-administered Code of Compliance

The Chief Executive administering the *Environmental Offsets Act 2014* may approve a self-administered code of compliance for *prescribed activities* requiring offsets that are undertaken by the following entities:

- Government departments and agencies; or
- Government-owned corporations.

In order to approve a self-administered code of compliance, the Chief Executive must be satisfied that the code:

- sets out the circumstances in which an *environmental offset* may or may not be required, having regard to sections 14 and 15 of the *Environmental Offsets Act 2014*;
- sets out the characteristics of an area that is suitable for undertaking an *environmental offset*;
- provides for the ongoing management and monitoring of, and reporting about, an *environmental offset*;
- provides for deciding the size and scale of an *environmental offset* so the offset is proportionate to the *significant residual impact* on a *prescribed environmental matter*; and
- describe how an *environmental offset* will be undertaken and the *conservation outcome* will be achieved, including how the plan will meet the principles outlined in section 1.3 of this policy and the following:
  - effectively account for and manage the risks of the offset failing to achieve the *conservation outcome*;
  - ensure the offset provides benefits in relation to the *prescribed environmental matter* in addition to any other benefit provided under a requirement of an Act;
  - have transparent governance arrangements, including being able to be readily measured, monitored, audited and enforced; and
  - ensure the offset is of a size and scale proportionate to the *significant residual impact* on the *prescribed environmental matter*.

Where a *prescribed activity* and/or *prescribed environmental matter* is outside of the scope of a self-administered code, the standard requirements of the offset policy apply and the relevant entity will be required to submit an offset proposal to the *administering agency* that complies with the policy.



## Appendix 2 Bioregions of Queensland

The Bioregions of Queensland map, below, specifies the bioregions in accordance with Schedule 2 clause 1 of the Environmental Offsets Regulation 2014.

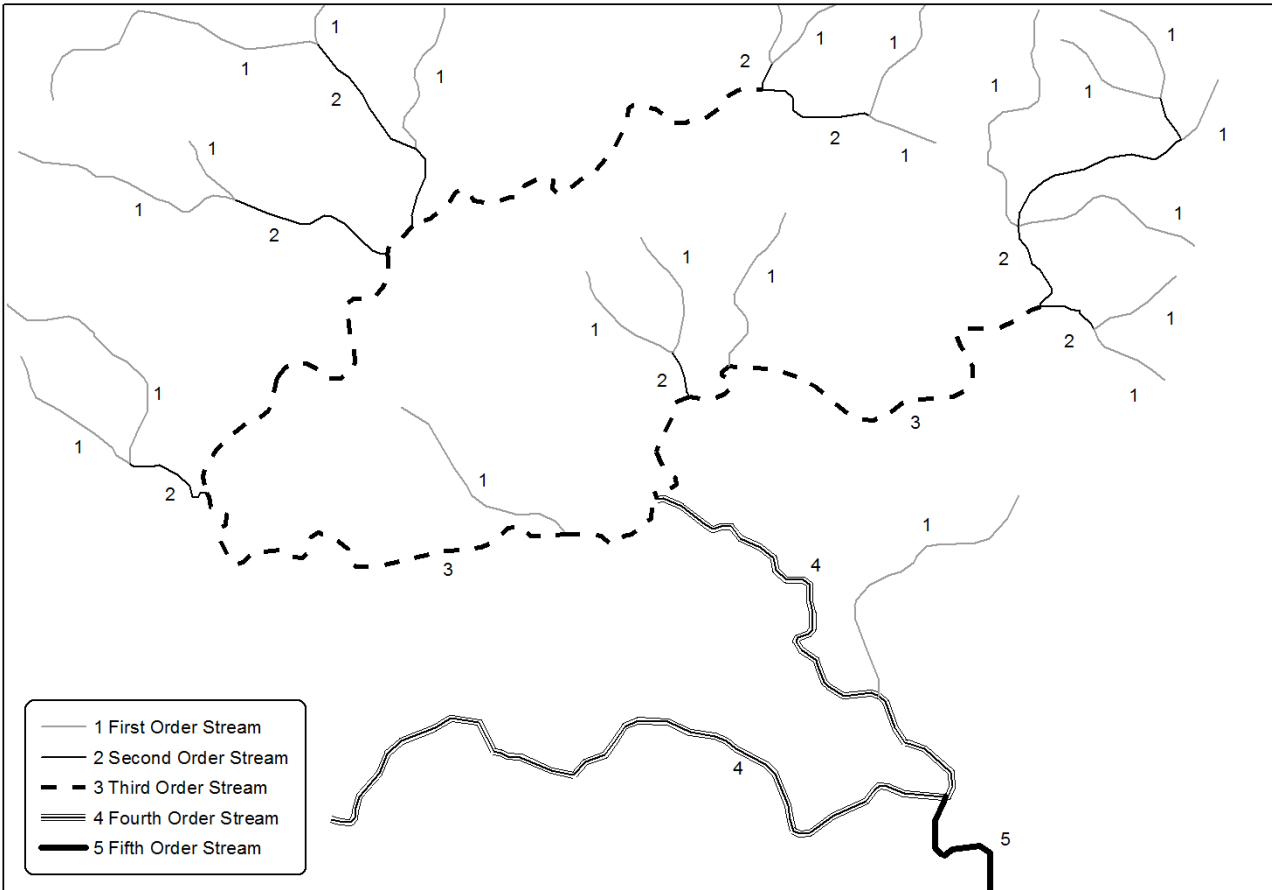


Figure two: Map of Queensland's bioregions

## Appendix 3 Defined distance

The defined distance for a regional ecosystem is determined using the table and diagrams below, in accordance with Schedule 2 clause 2, subsections (4) and (6) of the Environmental Offsets Regulation 2014.

Defined distance for a regional ecosystem	
<b>Coastal bioregions and sub-regions:</b> <ul style="list-style-type: none"> <li>• Townsville Plains (11.1), Bogie River Hills (11.2) and Marlborough Plains (11.14) Subregions, Brigalow Belt (SBRB) Bioregion</li> <li>• Central Queensland Coast (CQC) Bioregion</li> <li>• Starke Coastal Lowlands (3.2) Subregion, Cape York Peninsula (CYP) Bioregion</li> <li>• Hodgkinson Basin (9.3) Subregion, Einasleigh Uplands (EIU) Bioregion</li> <li>• Wet Tropics (WET) Bioregion</li> <li>• South East Queensland (SEQ) Bioregion.</li> </ul>	
Watercourse stream order	Distance from the defining bank (metres)
1 or 2	10
3 or 4	25
5 or greater	50
<b>Non-coastal bioregions and sub-regions:</b> <ul style="list-style-type: none"> <li>• Brigalow Belt (SBRB) Bioregion (excluding Subregions 11.1, 11.2 and 11.14)</li> <li>• New England Tableland (NET) Bioregion</li> <li>• Northwest Highlands (NWH) Bioregion</li> <li>• Gulf Plains (GUP) Bioregion</li> <li>• Cape York Peninsula (CYP) Bioregion (excluding Subregion 3.2)</li> <li>• Mitchell Grass Downs (MGD) Bioregion</li> <li>• Channel Country (CHC) Bioregion</li> <li>• Mulga Lands (MUL) Bioregion</li> <li>• Einasleigh Uplands (EIU) Bioregion (excluding Subregion 9.3)</li> <li>• Desert Uplands (DEU) Bioregion.</li> </ul>	
Watercourse stream order	Distance from the defining bank (metres)
1 or 2	25
3 or 4	50
5 or greater	100



**Figure three: watercourse stream order map**

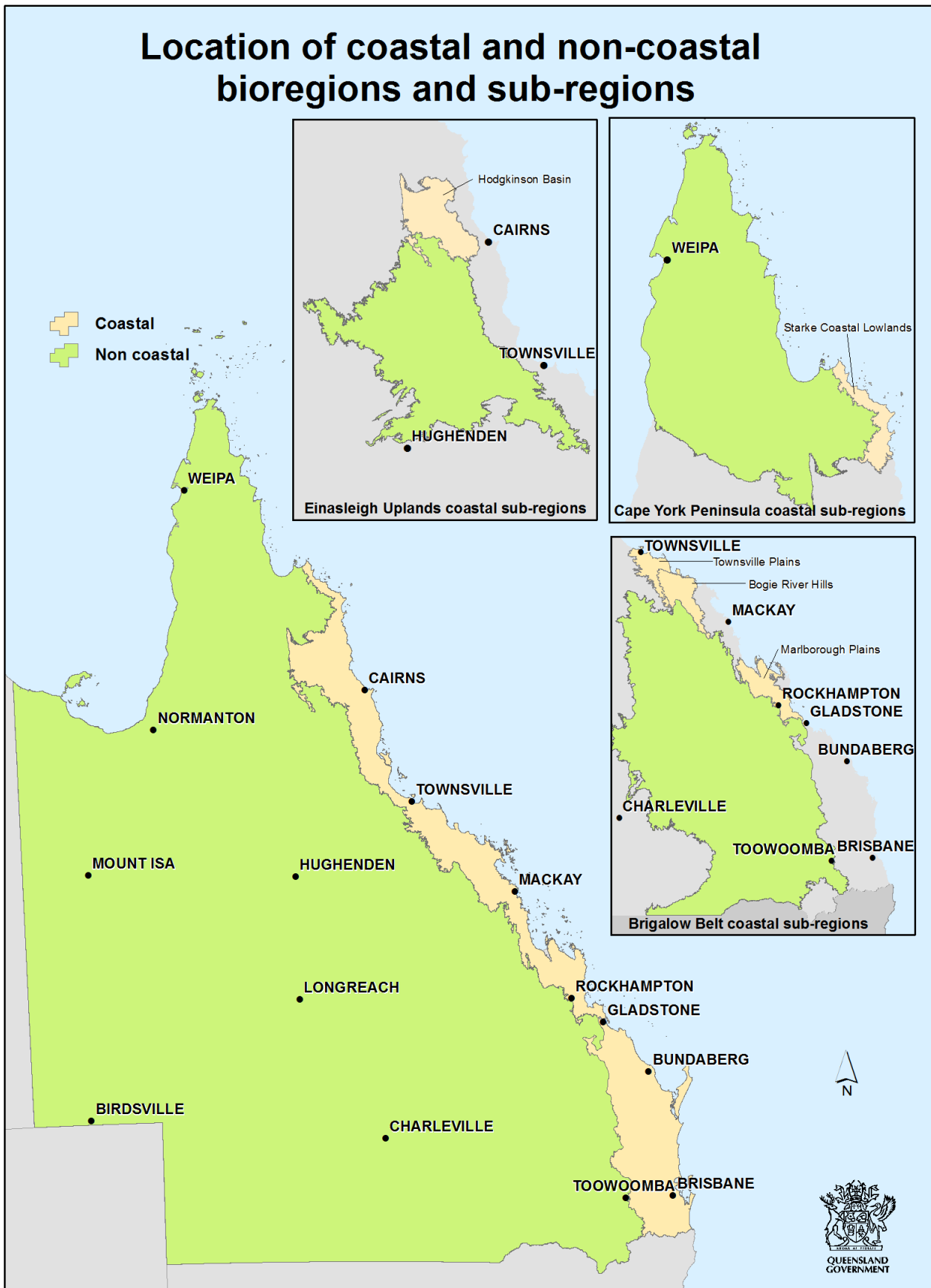


Figure four: location of coastal and non-coastal bioregions and sub-regions

## Appendix 4 Financial Settlement Offset Calculation Methodology

### Table of contents

4.1 Purpose	25
4.2 Terms specific to the Financial Settlement Offset Calculation Methodology	25
4.3 Calculation methodology	26
4.3.1 Overview	26
4.3.2 Summary of calculation methodology	26
4.3.3 Section	27
4.3.4 Distinct Matter Area	27
4.3.5 Distinct Matter Area guiding principles	28
4.3.6 Multipliers	29
4.3.7 Calculate Total Offset Area x On-ground Cost per hectare	29
4.3.8 Calculate landholder incentive payment	30
4.3.9 Calculate administrative cost	31
4.3.10 SEQ koala habitat matters variations	31
6.3.11 Protected area matters variations	31
6.3.12 Marine and aquatic matters variations	32
4.3.13 Sliding scale calculation	32
4.4 Calculation data selection and entry process	1
4.5 Data tables	1
4.5.1 Threatened animals data table	1
4.5.2 Other matters data table	10
4.5.3 Local Government Area data table	12
4.5.4 Bioregion and subregion data table: on ground cost per hectare and 20-year loss	15

### 4.1 Purpose

This calculation methodology is to be used to calculate the financial settlement for an *environmental offset*.

This methodology provides sufficient information to enable the calculation to be performed independently of the Financial Settlement Offset Calculator and provides the statutory basis for calculating the required financial payment under section 24(3) of the *Environmental Offsets Act 2014*.

### 4.2 Terms specific to the Financial Settlement Offset Calculation Methodology

**Administrative cost** is the estimated cost to the government to maintain and administer the land-based offset over its life.

**Landholder Incentive Payment** is a component of the financial settlement offset calculation. It is not intended to cover the full lost economic opportunity costs of a proposed offset, rather enough motivation for the individual

landholder to be willing to participate in the market.

**Multiplier** is a number used to calculate the size of the offset requirement given the significant residual impact area, for a given *prescribed environmental matter*. A significant residual impact area for a certain matter (for example a regional ecosystem) may be 1ha and the multiplier for that regional ecosystem may be 4. Thus the required offset area for the impacted matter would be 1ha X 4 = 4ha.

**On-ground cost** is an interim component (sub-total) of the financial settlement offset calculation, used in the calculation of total on-ground cost.

**Section** is defined as an impact area containing one or more matters where the area:

- is contained in a single Local Government Area; and
- is contained in a single subregion.

**Species Functional Group** is a group of species (threatened animals in the context of the financial settlement offset calculation) that has similar attributes and habitats.

**Sliding scale and sliding scale multiplier** The sliding scale calculation produces a 'sliding scale multiplier' which is a percentage greater than 10% and up to 100%. To account for economies of scale for large offsets, a sliding scale of per hectare (ha) costs is applied to the financial settlement amount for certain matters. The financial settlement amount is multiplied by the sliding scale multiplier, which has the effect of reducing the financial settlement amount for those large offsets.

**Threatened animals** includes animals that are endangered, vulnerable and special least concern.

**Threatened plants** includes plants that are endangered and vulnerable.

**Total on-ground cost** is a component of the financial settlements offset calculation.

**Total on-ground section cost** is an interim (sub-total) result (for a section) in the calculation of *total on-ground cost*.

## 4.3 Calculation methodology

### 4.3.1 Overview

#### 4.3.1.1 Introduction

The components of the calculation methodology are summarised in this section.

The calculation of a financial settlement offset for a single matter is relatively straightforward. However, the calculation for impacts with multiple impact areas in different locations involving multiple matter types can be complex. This methodology document addresses a range of example impact types, to assist in understanding.

#### 4.3.2 Summary of calculation methodology

The location of the impact area/s and the ability of some *prescribed environmental matters* to be co-located can affect the overall cost of a financial settlement offset. To determine this cost an impact site area needs to:

- be divided into one or more *sections*; and
- include consideration of the ability of prescribed environmental matters to be co-located by estimating each of **one or more Distinct Matter Areas (DMA)**.

A residual impact area in ha is multiplied by a defined multiplier to derive the Total offset area.

The financial settlement calculation is based on the following formula:

$$\text{Financial settlement} = (\text{total offset area} \times \text{on-ground cost per ha}) + \text{landholder incentive payment} + \text{administrative cost.}$$

Each of these components uses different inputs and has its own formula.

Variations apply to the financial settlement calculation described above for South East Queensland (SEQ) koala habitat, *protected areas* and marine and aquatic matters.

In addition, a sliding scale multiplier may apply to larger offsets. The sliding scale multiplier has the effect of

reducing the total financial settlement offset amount.

Each component of the formula is described in more detail in the following sections:

- Section 4.3.3            *Section*
- Section 4.3.4            Distinct Matter Area
- Section 4.3.5            Distinct Matter Area guiding principles
- Section 4.3.6            *Multipliers*
- Section 4.3.7            Calculate Total offset area X on-ground cost per ha
- Section 4.3.8            Calculate *Landholder incentive payment*
- Section 4.3.9            Calculate *Administrative cost*
- Section 4.3.10          SEQ koala habitat matters variations
- Section 4.3.11          *Protected areas* variations
- Section 4.3.12          Marine and aquatic matters variations
- Section 4.3.13          Sliding scale calculation

### 4.3.3 Section

A *section* is defined as an impact area containing one or more matters where the area is contained in a single:

- Local Government Area; and
- subregion.

The *on-ground cost* per ha varies by subregion.

The *landholder incentive payment* varies by Local Government Area (LGA) or subregion, depending on the bioregion.

If the impacted area covers two or more subregions or LGAs (e.g. a linear development such as a rail line or pipeline) it will need to be broken into separate areas (called *sections*) for the purposes of calculating the total financial settlement accurately.

### 4.3.4 Distinct Matter Area

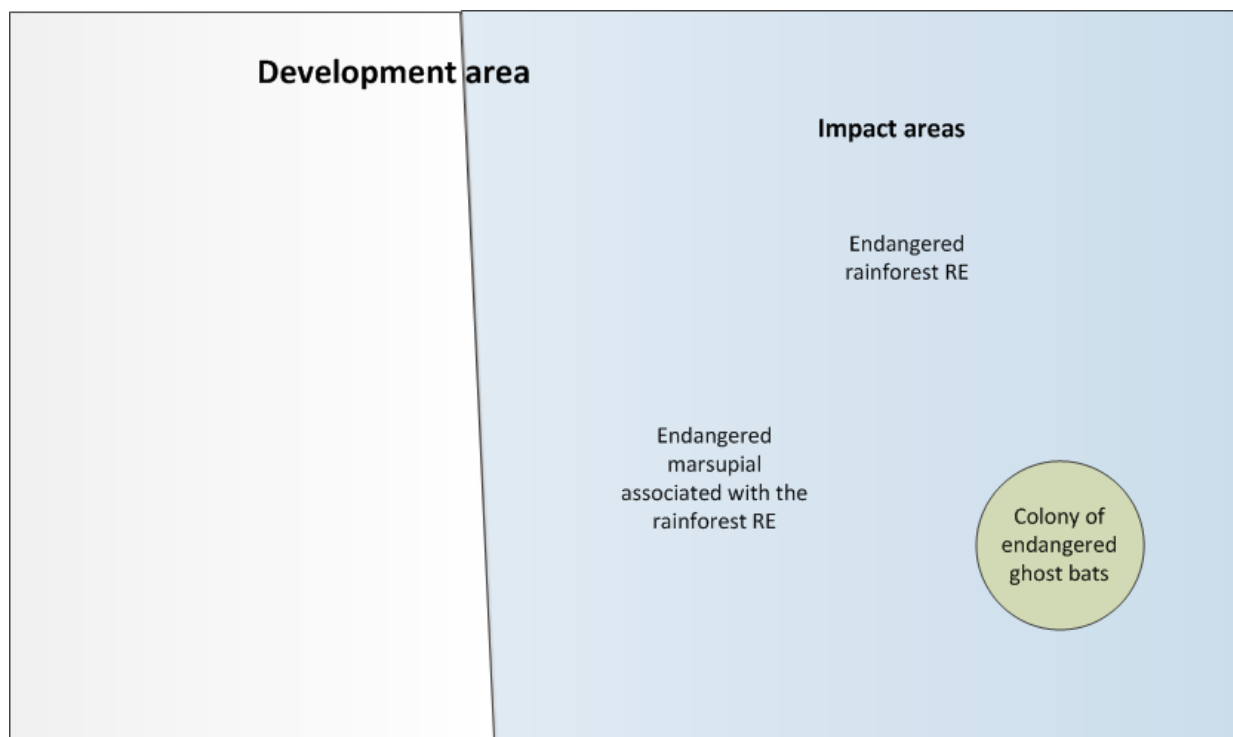
An impact area may have more than one *prescribed environmental matter* located on it. In these cases, the calculation needs to know whether to count each matter separately or combine the matters for the impact area. Where a *prescribed environmental matter* cannot be co-located, it is counted separately in the calculation of the financial settlement offset.

Where there is a requirement to account for each matter separately, the area that contains the matter is identified as a distinct matter area to the calculation. The distinct matter areas are termed “Distinct Matter Area” or DMA. For a given residual impact area, DMA areas (in a given Section) that use the same sliding scale calculation (e.g. terrestrial DMAs – refer to section 4.3.13) are summed before the total on-ground cost, landholder incentive payment and administrative cost are calculated.

Each area of impact for co-located matters is also termed a DMA. The calculation deals with the DMA as if it contains a single matter (the matter with the highest *multiplier*—see section 4.3.6 below).

Two DMAs are illustrated in the following hypothetical diagram of an impact area with a total area of 100ha, in which there are three matters:

- an endangered rainforest RE that covers the impact area of 100ha;
- an endangered marsupial that inhabits the RE; and
- a colony of endangered ghost bats in a cave with an area of 10ha in the RE.



**Figure five: Illustration of multiple DMAs**

In this example, there are two DMAs:

- a DMA of 100ha with the endangered RE and the endangered marsupial. The endangered marsupial can clearly be co-located with the RE, because it is dependent on the RE.
- a DMA of 10ha with the colony of endangered ghost bats. The colony needs to be calculated separately because there is no guarantee that a cave could be found in that RE. A separate offset site is likely to be needed for the ghost bats.

So, although the total impact area is 100ha, the calculation takes as input a DMA of 100ha (for the RE and marsupial) and a DMA of 10ha (for the ghost bats) = a total of 110ha. Each DMA is counted separately in the calculation of the financial settlement offset.

#### 4.3.5 Distinct Matter Area guiding principles

The financial settlement calculation starts with the assumption that all *prescribed environmental matters* on the impact site can be co-located if treated as a single DMA, and only one offset site should be needed in most cases.

However, separate DMAs must be based on the following principles:

- there should be one only Regional Ecosystem per DMA;
- wetlands must be in separate DMAs to non-wetland areas;
- impacts to *protected areas* are treated as a separate DMA to the other matters impacted;
- species that have very specific habitat requirements (such as rocks for rock wallabies or caves for certain bat species) must be in separate DMAs;
- each separate species functional group must be in a separate DMA; and
- matters imposed by Queensland Government agencies must be in separate DMAs from matters imposed by local governments.



## 4.3.6 Multipliers

### 4.3.6.1 Introduction

The total offset area for each *prescribed environmental matter* is calculated by taking the impact area of the *prescribed environmental matter*, and multiplying it by the relevant *multiplier*.

The *multiplier* for each matter is described in sections 4.3.6.2 and 4.3.6.3 below, and tables of *prescribed environmental matters* and *multipliers* are included in section 4.5.

### 4.3.6.2 Threatened animals

The *multiplier* for threatened animals is located in the last column of the threatened animals data table (table 4.5.1).

### 4.3.6.3 Other matters

For other matters, the *multiplier* is the last column in the other matters data table (table 4.5.2).

## 4.3.7 Calculate Total Offset Area x On-ground Cost per hectare

To derive the total offset area for each application, use the following approach:

1. within each DMA, select the matter with the highest *multiplier*;
2. multiply the area of the DMA by the highest *multiplier* to get the offset area required for that DMA;
3. repeat the previous two steps for each DMA in that *section*;
4. sum the offset area of each DMA in that section to get a total offset area for the *section*; and
5. multiply the total offset area for the section by the *on-ground cost* per ha for the subregion of the *section* to arrive at the total on-ground section cost.

The *on-ground cost* for the subregion is shown in the table in section 4.5.4 of this appendix.

Repeat the five steps above for each *section*.

Sum the total on-ground *section* costs for all *sections* to arrive at the total on-ground cost.

Multiply the total on-ground cost by the derived sliding scale *multiplier* to derive the total *on-ground cost* as described in section 4.3.13.2.

### Example

This example has two *sections*. *Section 1* has one DMA which contains two matters, whilst *Section 2* has two DMAs that each contain a single matter.

Section 1, DMA 1:

- LGA                      Brisbane City Council
- Bioregion              South East Queensland
- Subregion              Moreton Basin
- DMA area                10ha
- Matter group            Threatened regional ecosystem
- Matter                    12.3.1 Gallery rainforest (notophyll vine forest) on alluvial plains
- Matter *multiplier*      4
- Matter group            Other matters
- Matter                    Connectivity
- Matter *multiplier*      1

Section 2, DMA 1:

- LGA Logan City Council
- Bioregion South-east Queensland
- Subregion Sunshine Coast-Gold Coast Lowlands
- DMA area 12 ha
- Matter group Threatened regional ecosystem
- Matter 12.3.10 Eucalyptus populnea woodland on alluvial plains
- Matter *multiplier* 4

Section 2, DMA 2:

- LGA Logan City Council
- Bioregion South-east Queensland
- Subregion Sunshine Coast-Gold Coast Lowlands
- DMA area 3ha
- Matter group Koala habitat
- Matter Bushland habitat
- Matter *multiplier* 3

The calculations are:

- Section 1, DMA 1:

DMA area X *multiplier* X *on ground cost*

$$= 10 \times 4 \times \$20,000 = \$800,000$$

(the higher *multiplier* of the two matters is used (i.e. connectivity has a *multiplier* of '1' whilst the ecosystem has a *multiplier* of '4' – consequently '4' is used)

- Section 2:

((DMA 1 area X *multiplier*) + (DMA 2 area X *multiplier*)) X *on-ground cost*

$$= ((12 \times 4) + (3 \times 3)) \times \$20,000 = (48 + 9) \times \$20,000 = \$1,140,000$$

(as the area is not greater than 100ha there is no sliding scale)

### 4.3.8 Calculate landholder incentive payment

#### 4.3.8.1 Calculate landholder incentive payment for each section

The *landholder incentive payment* cost can vary depending on the bioregion, LGA and subregion. Therefore, where the impact areas occur in more than one bioregion, LGA or subregion these costs need to be considered separately.

Calculate the *landholder incentive payment* for each section:

- **For the bioregions South-east Queensland, Central Queensland Coast and Wet Tropics**

The *landholder incentive payment* for each *section* = offset *section* area X LGA statutory land value (for each subregion/LGA pair) (see table 4.5.3 for LGA UV).

- **For the Bioregions Brigalow Belt, Channel Country, Cape York Peninsula, Desert Uplands, Einasleigh Uplands, Gulf Plains, Mitchell Grass Downs, Mulga Lands, New England Tableland, Northwest Highlands**

The *landholder incentive payment* for each *section* = offset *section* area multiplied by the 20 year

productivity loss per ha of the subregion in question.

The 20-year productivity loss is the last column in the bioregion and subregion data table 5.4 for the subregion in question.

#### 4.3.8.2 Calculate total landholder incentive payment

Sum the *landholder incentive payments* for each *section* to derive the total *landholder incentive payment*.

Calculate the sliding scale of per ha cost *multiplier* as described in section 4.3.13.

Multiply the total *landholder incentive payment* by the derived sliding scale multiplier to derive the *landholder incentive payment* as described in section 4.3.13.

If the result is less than \$10,000, set the landholder incentive payment to \$10,000.

#### 4.3.9 Calculate administrative cost

Multiply the total *on-ground cost* (see section 4.3.6) by 25% to derive the *administrative cost*.

Apply the sliding scale *multiplier* as described in section 4.3.13.

For impacts over 2.5 hectares, if the result is less than \$50,000, set the amount to \$50,000; the *administrative cost floor price*. For impact less than or equal to 2.5 hectares, the *administrative cost floor price* will not be applied.

If the amount is greater than \$1,000,000, set the amount to \$1,000,000.

#### 4.3.10 SEQ koala habitat matters variations

The financial settlement calculation for koala habitats for SEQ (as identified in the South East Queensland Regional Plan) differs from the standard formula described in sections 4.3.7 to 4.3.9 in the following ways:

- koala habitat calculations for all SEQ LGAs are performed separately from any standard (as per sections 4.3.7 to 4.3.9) financial settlement calculations;
- koala habitat calculations in SEQ are counted in addition to any other prescribed environmental matters in the same impact area;
- the results of the koala habitat calculations for each LGA are calculated separately;
- the sliding scale *multiplier* is not applied to koala habitat calculations;
- for SEQ LGAs, the standard calculation described in sections 4.3.7 to 4.3.9 applies;
- however, the total settlement for SEQ LGAs is capped at \$230,000 per impact ha, calculated as follows:
  - follow steps 3.7–3.9, ignoring the sliding scale components;
  - multiply the total impact area in ha by \$230,000 to derive the upper limit of any financial settlement; and
  - compare the results of the standard calculation described in sections 4.3.7 to 4.3.9 and the calculation with a cap of \$230,000 per impact ha. The lower applies. Note that the cap of \$230,000 per impact ha may increase in line with the increase in statutory land values; and
- koala offset requirements in SEQ are based on an average tree density within koala bushland habitat of 250 trees per hectare. The total quantum of impact for a single koala habitat tree in SEQ, using this estimate, is 0.004 ha or 40 m<sup>2</sup>.

#### 4.3.11 Protected area matters variations

The calculation for *protected areas* is as follows:

- multiply the total area (in hectares rounded up to the nearest hectare) of impact by the *multiplier* for the protected area type. The *multiplier* is the last column in the *protected area* data table;
- multiply the result by the average statutory land value (Table 4.5.3) for the Local Government Area; and

- where the average statutory land value is less than \$500 per hectare, apply a price of \$500 per ha.

**For example**, an offset liability for infrastructure requiring 4.5ha of clearing on a national park would be calculated as follows:

- offset liability = (5 [4.5 rounded up] x multiplier [10 for national parks] X statutory land value [assume \$1200/ha]) + direct impact costs [assume nil]
- offset liability = ((5 x 10 X \$1200) + \$0)
- offset liability = \$60,000.

Direct impact costs are costs for replacement of infrastructure such as toilet blocks that will be advised by the Department of National Parks, Recreation, Sports and Racing.

Note that *protected areas* are always a separate DMA to the other matters impacted which occur within the *protected area* (e.g. habitat for endangered animals).

The sliding scale *multiplier* is not applied to where the impacted matter is a *protected area*.

### 4.3.12 Marine and aquatic matters variations

The area of a marine and aquatic offset is calculated by taking the impact area of the *prescribed environmental matter* and multiplying it by the relevant *multiplier* in the other matters data table (Table 4.5.2).

The marine and aquatic calculation methodology contains some variations from the standard methodology described in sections 6.3.7 to 6.3.9. These are:

- the *landholder incentive payment* is \$0;
- there are marine bioregions. For the purposes of the calculation, they are shown in the subregion data table (table number 4.5.4) as Offshore, Inshore–Remote, Inshore–Non-remote, and Rivers and inland waterways. The landward boundary of the Inshore-Remote and Inshore-Non-Remote marine bioregions extends to the limits of Highest Astronomical Tide (HAT); and
- there are two sliding scales—
  - one for marine plants, marine parks and declared fish habitat areas; and
  - one for fish passage (impacted by waterway barrier works).

The application of sliding scales is described at section 4.3.13.

### 4.3.13 Sliding scale calculation

#### 4.3.13.1 Timing and method of calculation

To account for economies of scale for large offsets, a sliding scale of per hectare (ha) costs is applied to the financial settlement amount for certain matters, listed below. The sliding scale calculation produces a sliding scale *multiplier* which is a percentage of costs ranging from 10% up to 100%. The financial settlement amount is multiplied by the sliding scale *multiplier*, which has the effect of reducing the financial settlement amount for those large offsets.

The sliding scale *multipliers* should be applied as the second last step in the calculation methodology as described below in this section. The last step is the application where required of the floor for *landholder incentive payment* (section 4.3.8) and the floor or cap for the administrative charge (section 4.3.9).

Three sliding scales apply:

- terrestrial, which applies to threatened REs, threatened plants, threatened animals, wetlands, and marine, MLES and connectivity matters. The sliding scale is described in section 4.3.13.2.
- marine parks, marine plants and fish habitat areas. The sliding scale is described in section 4.3.13.3.

- fish passage. The sliding scale is described in section 4.3.13.3.

Sum the areas of all matters in all value groups in all DMAs in all sections in the offset area (impact area multiplied by relevant *multiplier*) for each of the three types above, and apply the relevant sliding scale at the end to the sums of the areas.

As discussed in sections 4.3.10 and 4.3.11, the sliding scale *multiplier* is not applied to the SEQ koala habitat and *protected areas*.

#### 4.3.13.2 Terrestrial sliding scale of per ha cost

To account for economies of scale for very large offsets, a sliding scale of per hectare (ha) costs is applied according to the rules listed in the following table.

**Table one: Sliding scale rules for determining the overall per hectare costs**

Portion of total offset area (ha)	Percentage of cost
1 - 100	100%
100 - 1,000	75%
1,000 - 5,000	50%
5,000 - 10,000	25%
Greater than 10,000	10%

That is, the first 100ha of the total offset area attracts 100% of the per ha cost. The next 900 ha (1000 ha less the first 100 ha) attract 75% of the per ha cost, and so on.

For example, the percentage of cost for a 2500ha offset area would be calculated as follows:

$$\begin{aligned}
 & ((100 * 100\%) + ((1,000-100) * 75\%) + ((2,500-1,000) * 50\%))/2,500 \\
 & = 1,525/2,500 \\
 & = 61\%, \text{ which is the sliding scale multiplier.}
 \end{aligned}$$

Thus, the approach for calculating the total offset area x on-ground cost per ha for an offset which had one impact matter is:

- calculate the total on-ground cost as described in section 4.3.7; and
- multiply the total on-ground cost by the derived sliding scale *multiplier* based on the total offset area as described above.

For impacts with multiple sections and/or DMAs and/or multiple matter groups, the sliding scale(s) of per ha cost is/are applied as the second last step in the calculations, when the areas of the relevant matter groups have been aggregated. In this context, 'relevant matter groups' means the matter groups to which the sliding scale applies:

- terrestrial (excluding *protected areas* and SEQ koala habitat for which the sliding scale does not apply). For example, the sliding scale *multiplier* would be applied to the total area when the areas of all terrestrial offsets had been totalled;
- marine plants, marine parks and declared fish habitat areas;
- fish passage.

Note that the terrestrial sliding scale multiplier is applied to the total offset area x on-ground cost per ha, the *landholder incentive payment* and the *administrative cost*.

The floor price for the *landholder incentive payment* and the floor and ceiling costs for the *administrative cost* are applied as the last step in the calculation, as described in sections 6.3.8 and 6.3.9.

#### 4.3.13.3 Marine and aquatic matters

The sliding scales for determining the overall per hectare costs for marine plants, marine parks, declared fish habitat areas and fish passage are shown in the below tables.

**Table Two: sliding scales for marine plants, marine parks and declared fish habitat areas**

Portion of total offset area (ha)	Percentage of cost
0 – 25	100%
25 – 100	75%
100 – 500	50%
500 +	25%

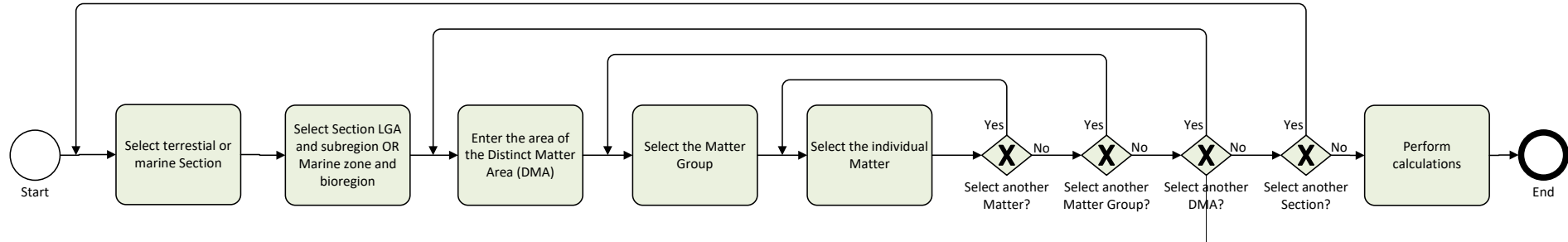
**Table Three: sliding scales for fish passage (assessable waterway barrier works)**

Portion of total offset area (ha)	Percentage of cost
0 – 100	100%
100 – 1000	75%
1000 – 2000	50%
2000+	25%

## 4.4 Calculation data selection and entry process

An impact area may consist of one or more *sections*. Each section may consist of one or more DMA. Each DMA may consist of one or more matter groups, and each matter group may consist of one or more matters.

As a result, the selection and entry of the various section(s) details, DMA area(s), matter group(s) and matter(s) to the calculation follows a looping process illustrated in the following diagram:



**Financial Settlements Offsets Calculation data selection and entry process**

## 4.5 Data tables

### 4.5.1 Threatened animals data table

Scientific name	Common name	Species functional group	NCA class	Multiplier
<i>Acrocephalus australis</i>	Australian reed-warbler	05	SL	4
<i>Acrocephalus orientalis</i>	oriental reed-warbler	05	SL	4
<i>Acrodipsas illidgei</i>	Illidge's ant-blue	04	V	4
<i>Actitis hypoleucos</i>	common sandpiper	13	SL	4
<i>Adelotus brevis</i>	tusked frog	11	V	4
<i>Anas querquedula</i>	garganey	15	SL	4
<i>Anomalopus mackayi</i>	long-legged worm-skink	10	E	4
<i>Anous stolidus</i>	common noddy	06	SL	4
<i>Anthochaera phrygia</i>	regent honeyeater	18	E	4
<i>Apus pacificus</i>	fork-tailed swift	18	SL	4
<i>Arctocephalus tropicalis</i>	Subantarctic fur seal	01	V	4
<i>Ardea ibis</i>	cattle egret	18	SL	4
<i>Ardea modesta</i>	eastern great egret	15	SL	4
<i>Ardenna carneipes</i>	flesh-footed shearwater	19	SL	4
<i>Ardenna grisea</i>	sooty shearwater	19	SL	4
<i>Ardenna pacifica</i>	wedge-tailed shearwater	06	SL	4
<i>Ardenna tenuirostris</i>	short-tailed shearwater	19	SL	4
<i>Arenaria interpres</i>	ruddy turnstone	13	SL	4
<i>Argyreus hyperbius inconstans</i>	Australian fritillary	04	E	4
<i>Atrichornis rufescens</i>	rufous scrub-bird	08	V	4
<i>Bettongia tropica</i>	northern bettong	11	E	4
<i>Calidris acuminata</i>	sharp-tailed sandpiper	15	SL	4
<i>Calidris alba</i>	sanderling	13	SL	4
<i>Calidris alpina</i>	dunlin	13	SL	4
<i>Calidris canutus</i>	red knot	13	SL	4



Scientific name	Common name	Species functional group	NCA class	Multiplier
<i>Calidris ferruginea</i>	curlew sandpiper	15	SL	4
<i>Calidris melanotos</i>	pectoral sandpiper	13	SL	4
<i>Calidris ruficollis</i>	red-necked stint	13	SL	4
<i>Calidris subminuta</i>	long-toed stint	15	SL	4
<i>Calidris tenuirostris</i>	great knot	13	SL	4
<i>Calonectris leucomelas</i>	streaked shearwater	19	SL	4
<i>Calyptorhynchus lathami</i>	glossy black-cockatoo	02	V	4
<i>Carcharias taurus</i>	greynurse shark	01	E	4
<i>Caretta caretta</i>	loggerhead turtle	06	E	4
<i>Casuarius casuarius johnsonii</i> (northern population)	southern cassowary (northern population)	11	V	4
<i>Casuarius casuarius johnsonii</i> (southern population)	southern cassowary (southern population)	11	E	4
<i>Cecropis daurica</i>	red-rumped swallow	20	SL	4
<i>Chalinolobus dwyeri</i>	large-eared pied bat	16	V	4
<i>Charadrius bicinctus</i>	double-banded plover	13	SL	4
<i>Charadrius dubius</i>	little ringed plover	13	SL	4
<i>Charadrius hiaticula</i>	ringed plover	13	SL	4
<i>Charadrius leschenaultii</i>	greater sand plover	13	SL	4
<i>Charadrius mongolus</i>	lesser sand plover	13	SL	4
<i>Charadrius veredus</i>	oriental plover	13	SL	4
<i>Chelonia mydas</i>	green turtle	06	V	4
<i>Chlamydogobius micropterus</i>	Elizabeth Springs goby	03	E	4
<i>Chlamydogobius squamigenus</i>	Edgbaston goby	03	E	4
<i>Chlidonias leucopterus</i>	white-winged black tern	13	SL	4
<i>Concinna frerei</i>	Bartle Frere bar-sided skink	08	V	4
<i>Cophixalus concinnus</i>	beautiful nurseryfrog	08	V	4
<i>Cophixalus crepitans</i>	northern nurseryfrog	08	V	4
<i>Cophixalus exiguus</i>	dainty nurseryfrog	08	V	4

Scientific name	Common name	Species functional group	NCA class	Multiplier
<i>Cophixalus mcdonaldi</i>	Mount Elliot nurseryfrog	08	V	4
<i>Cophixalus monticola</i>	mountain nurseryfrog	08	V	4
<i>Cophixalus neglectus</i>	Bellenden Ker nurseryfrog	08	V	4
<i>Cophixalus peninsularis</i>	Cape York nurseryfrog	08	V	4
<i>Cophixalus saxatilis</i>	Black Mountain boulderfrog	07	V	4
<i>Cophixalus zweifeli</i>	Cape Melville boulderfrog	07	V	4
<i>Coracina tenuirostris</i>	cicadabird	18	SL	4
<i>Crinia tinnula</i>	wallum froglet	04	V	4
<i>Crocodylus porosus</i>	estuarine crocodile	15	V	4
<i>Cuculus optatus</i>	oriental cuckoo	18	SL	4
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's fig-parrot	11	E	4
<i>Cyclopsitta diophthalma macleayana</i>	Macleay's fig-parrot	16	V	4
<i>Dasyercus blythi</i>	brush-tailed mulgara	10	V	4
<i>Dasyercus cristicauda</i>	crest-tailed mulgara	10	V	4
<i>Dasyornis brachypterus</i>	eastern bristlebird	08	E	4
<i>Dasyuroides byrnei</i>	kowari	10	V	4
<i>Dasyurus maculatus gracilis</i>	spotted-tailed quoll (northern subspecies)	11	E	4
<i>Dasyurus maculatus maculatus</i>	spotted-tailed quoll (southern subspecies)	11	V	4
<i>Delma torquata</i>	collared delma	09	V	4
<i>Denisonia maculata</i>	ornamental snake	10	V	4
<i>Dermochelys coriacea</i>	leatherback turtle	06	E	4
<i>Diomedea antipodensis antipodensis</i>	Antipodean albatross	14	V	4
<i>Diomedea antipodensis gibsoni</i>	Gibson's albatross	14	V	4
<i>Diomedea epomophora</i>	royal albatross	14	SL	4
<i>Diomedea exulans</i>	wandering albatross	14	V	4
<i>Dugong dugon</i>	dugong	01	V	4

Scientific name	Common name	Species functional group	NCA class	Multiplier
<i>Eclectus roratus macgillivrayi</i>	eclectus parrot	16	V	4
<i>Egernia rugosa</i>	yakka skink	11	V	4
<i>Egretta sacra</i>	eastern reef egret	13	SL	4
<i>Elseya lavarackorum</i>	Gulf snapping turtle	03	V	4
<i>Elusor macrurus</i>	Mary River turtle	03	E	4
<i>Epthianura crocea crocea</i>	yellow chat (gulf)	05	V	4
<i>Epthianura crocea macgregori</i>	yellow chat (Dawson)	04	E	4
<i>Eretmochelys imbricata</i>	hawksbill turtle	06	V	4
<i>Erythrotriorchis radiatus</i>	red goshawk	18	E	4
<i>Erythrura gouldiae</i>	Gouldian finch	02	E	4
<i>Esacus magnirostris</i>	beach stone-curlew	13	V	4
<i>Fregata ariel</i>	lesser frigatebird	19	SL	4
<i>Fregata minor</i>	great frigatebird	19	SL	4
<i>Furina dunmalli</i>	Dunmall's snake	09	V	4
<i>Gallinago hardwickii</i>	Latham's snipe	15	SL	4
<i>Gallinago megala</i>	Swinhoe's snipe	15	SL	4
<i>Geophaps scripta scripta</i>	squatter pigeon (southern subspecies)	02	V	4
<i>Glareola maldivarum</i>	oriental pratincole	15	SL	4
<i>Grantiella picta</i>	painted honeyeater	18	V	4
<i>Grus antigone</i>	sarus crane	15	SL	4
<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	18	SL	4
<i>Hemiaspis damelii</i>	grey snake	10	E	4
<i>Hipposideros cervinus</i>	fawn leaf-nosed bat	16	V	4
<i>Hipposideros semoni</i>	Semon`s leaf-nosed bat	16	E	4
<i>Hipposideros stenotis</i>	northern leaf-nosed bat	16	V	4
<i>Hirundapus caudacutus</i>	white-throated needletail	18	SL	4
<i>Hirundo rustica</i>	barn swallow	20	SL	4
<i>Hydroprogne caspia</i>	Caspian tern	15	SL	4

Scientific name	Common name	Species functional group	NCA class	Multiplier
<i>Hypochrysops apollo apollo</i>	Apollo jewel (Wet Tropics subspecies)	04	V	4
<i>Hypochrysops piceata</i>	bulloak jewel	02	E	4
<i>Jalmenus eubulus</i>	pale imperial hairstreak	02	V	4
<i>Lasiorhinus krefftii</i>	northern hairy-nosed wombat	02	E	4
<i>Lathamus discolor</i>	swift parrot	02	E	4
<i>Lepidochelys olivacea</i>	olive ridley turtle	06	E	4
<i>Lerista allanae</i>	Allan's lerista	10	E	4
<i>Lerista ameles</i>		09	V	4
<i>Lerista ingrami</i>	Ingram's lerista	04	V	4
<i>Lerista vittata</i>	Mount Cooper striped lerista	09	V	4
<i>Liburnascincus scirtetis</i>	Black Mountain rainbow-skink	07	V	4
<i>Limicola falcinellus</i>	broad-billed sandpiper	13	SL	4
<i>Limnodromus semipalmatus</i>	Asian dowitcher	13	SL	4
<i>Limosa lapponica</i>	bar-tailed godwit	13	SL	4
<i>Limosa limosa</i>	black-tailed godwit	13	SL	4
<i>Litoria andiirrmalin</i>	Melville Range treefrog	12	V	4
<i>Litoria dayi</i>	Australian lacelid	12	E	4
<i>Litoria freycineti</i>	wallum rocketfrog	04	V	4
<i>Litoria kroombitensis</i>	Kroombit treefrog	12	E	4
<i>Litoria lorica</i>	little waterfall frog	12	E	4
<i>Litoria nannotis</i>	waterfall frog	12	E	4
<i>Litoria nyakalensis</i>	mountain mistfrog	12	E	4
<i>Litoria olongburensis</i>	wallum sedgefrog	04	V	4
<i>Litoria pearsoniana</i>	cascade treefrog	12	V	4
<i>Litoria rheocola</i>	common mistfrog	12	E	4
<i>Litoria subglandulosa</i>	New England treefrog	12	V	4
<i>Lophochroa leadbeateri</i>	Major Mitchell's cockatoo	02	V	4
<i>Macroderma gigas</i>	ghost bat	11	V	4

Scientific name	Common name	Species functional group	NCA class	Multiplier
<i>Macronectes giganteus</i>	southern giant-petrel	19	E	4
<i>Macronectes halli</i>	northern giant-petrel	19	V	4
<i>Macrotis lagotis</i>	greater bilby	10	E	4
<i>Magmellia luteilateralis</i>	orange-speckled forest-skink	08	V	4
<i>Malurus coronatus</i>	purple-crowned fairy-wren	05	V	4
<i>Megaptera novaeangliae</i>	humpback whale	01	V	4
<i>Melomys rubicola</i>	Bramble Cay melomys	04	E	4
<i>Merops ornatus</i>	rainbow bee-eater	18	SL	4
<i>Mixophyes fleayi</i>	Fleay's barred frog	12	E	4
<i>Mixophyes iteratus</i>	giant barred frog	12	E	4
<i>Monarcha frater</i>	black-winged monarch	18	SL	4
<i>Monarcha melanopsis</i>	black-faced monarch	18	SL	4
<i>Motacilla alba</i>	white wagtail	20	SL	4
<i>Motacilla cinerea</i>	grey wagtail	20	SL	4
<i>Motacilla taivana</i>	green-headed yellow wagtail	20	SL	4
<i>Motacilla tschutschensis</i>	eastern yellow wagtail	20	SL	4
<i>Murina florium</i>	tube-nosed insectivorous bat	16	V	4
<i>Myiagra cyanoleuca</i>	satin flycatcher	18	SL	4
<i>Nactus galgajuga</i>		07	V	4
<i>Nangura spinosa</i>	Nangur skink	12	E	4
<i>Nannoperca oxleyana</i>	Oxleyan pygmy perch	03	V	4
<i>Natator depressus</i>	flatback turtle	06	V	4
<i>Neochmia phaeton evangelinae</i>	crimson finch (white-bellied subspecies)	05	E	4
<i>Neochmia ruficauda ruficauda</i>	star finch (eastern subspecies)	05	E	4
<i>Ninox strenua</i>	powerful owl	18	V	4
<i>Notomys aquilo</i>	northern hopping-mouse	04	V	4
<i>Notomys fuscus</i>	dusky hopping-mouse	10	E	4
<i>Numenius minutus</i>	little curlew	15	SL	4

Scientific name	Common name	Species functional group	NCA class	Multiplier
<i>Numenius phaeopus</i>	whimbrel	13	SL	4
<i>Nyctophilus corbeni</i>	eastern long-eared bat	02	V	4
<i>Oceanites oceanicus</i>	Wilson's storm-petrel	19	SL	4
<i>Onychogalea fraenata</i>	bridled nailtail wallaby	10	E	4
<i>Onychoprion anaethetus</i>	bridled tern	06	SL	4
<i>Ornithoptera richmondia</i>	Richmond birdwing	12	V	4
<i>Ornithorhynchus anatinus</i>	platypus	15	SL	4
<i>Orraya occultus</i>		08	V	4
<i>Pandion cristatus</i>	eastern osprey	18	SL	4
<i>Pedionomus torquatus</i>	plains-wanderer	10	V	4
<i>Petaurus australis</i> unnamed subsp.	yellow-bellied glider (northern subspecies)	08	V	4
<i>Petaurus gracilis</i>	mahogany glider	16	E	4
<i>Petrogale penicillata</i>	brush-tailed rock-wallaby	07	V	4
<i>Petrogale persephone</i>	Proserpine rock-wallaby	07	E	4
<i>Petrogale purpureicollis</i>	purple-necked rock-wallaby	07	V	4
<i>Petrogale sharmani</i>	Sharman's rock-wallaby	07	V	4
<i>Pezoporus occidentalis</i>	night parrot	10	E	4
<i>Pezoporus wallicus wallicus</i>	ground parrot	04	V	4
<i>Phaethon lepturus</i>	white-tailed tropicbird	19	SL	4
<i>Phaethon rubricauda</i>	red-tailed tropicbird	06	V	4
<i>Phalaropus fulicarius</i>	grey phalarope	19	SL	4
<i>Phalaropus lobatus</i>	red-necked phalarope	19	SL	4
<i>Phascolarctos cinereus</i>	koala	11	SL	4
<i>Phascolarctos cinereus</i>	koala in SEQ Bioregion (outside the SEQ Region)	11	V	4
<i>Philomachus pugnax</i>	ruff	15	SL	4
<i>Phoebastria fusca</i>	sooty albatross	14	V	4
<i>Phoebastria palpebrata</i>	light-mantled sooty albatross	14	SL	4

Scientific name	Common name	Species functional group	NCA class	Multiplier
<i>Phyllurus caudiannulatus</i>	ringed thin-tailed gecko	12	V	4
<i>Phyllurus gulbaru</i>	Gulbaru gecko	12	E	4
<i>Phyllurus isis</i>		12	V	4
<i>Phyllurus kabikabi</i>		08	E	4
<i>Plegadis falcinellus</i>	glossy ibis	15	SL	4
<i>Pluvialis fulva</i>	Pacific golden plover	15	SL	4
<i>Pluvialis squatarola</i>	grey plover	13	SL	4
<i>Podargus ocellatus plumiferus</i>	plumed frogmouth	12	V	4
<i>Poecilodryas cerviniventris</i>	buff-sided robin	02	SL	4
<i>Poephila cincta cincta</i>	black-throated finch (white-rumped subspecies)	02	E	4
<i>Potorous tridactylus tridactylus</i>	long-nosed potoroo	11	V	4
<i>Procellaria aequinoctialis</i>	white-chinned petrel	19	SL	4
<i>Procellaria parkinsoni</i>	black petrel	19	SL	4
<i>Procellaria westlandica</i>	Westland petrel	19	SL	4
<i>Psephotus chrysopterygius</i>	golden-shouldered parrot	02	E	4
<i>Pseudomugil mellis</i>	honey blue eye	03	V	4
<i>Pseudomys australis</i>	plains rat	10	E	4
<i>Pseudomys oralis</i>	Hastings River mouse	09	V	4
<i>Pseudophryne covacevichae</i>	magnificent broodfrog	12	V	4
<i>Pterodroma heraldica</i>	Herald petrel	19	E	4
<i>Pterodroma leucoptera leucoptera</i>	Gould's petrel (Australian subspecies)	19	SL	4
<i>Pterodroma solandri</i>	providence petrel	19	SL	4
<i>Pygmaeascincus sadleri</i>	Magnetic Island dwarf skink	09	V	4
<i>Rheobatrachus silus</i>	southern gastric brooding frog	12	E	4
<i>Rheobatrachus vitellinus</i>	northern gastric brooding frog	12	E	4
<i>Rheodytes leukops</i>	Fitzroy River turtle	03	V	4
<i>Rhinolophus philippinensis</i>	greater large-eared horseshoe bat	16	E	4

Scientific name	Common name	Species functional group	NCA class	Multiplier
<i>Rhinonictoris aurantia</i>	orange leaf-nosed bat	16	V	4
<i>Rhipidura rufifrons</i>	rufous fantail	18	SL	4
<i>Rostratula australis</i>	Australian painted snipe	15	V	4
<i>Saccolaimus saccolaimus nudicluniatus</i>	bare-rumped sheath-tail bat	16	E	4
<i>Scaturiginichthys vermeilipinnis</i>	redfin blue eye	03	E	4
<i>Sminthopsis douglasi</i>	Julia Creek dunnart	10	E	4
<i>Stercorarius longicaudus</i>	long-tailed jaeger	19	SL	4
<i>Stercorarius maccormicki</i>	South Polar skua	19	SL	4
<i>Stercorarius parasiticus</i>	Arctic jaeger	19	SL	4
<i>Stercorarius pomarinus</i>	pomarine jaeger	19	SL	4
<i>Sterna dougallii</i>	roseate tern	13	SL	4
<i>Sterna hirundo</i>	common tern	13	SL	4
<i>Sterna sumatrana</i>	black-naped tern	06	SL	4
<i>Stipiturus malachurus</i>	southern emu-wren	04	V	4
<i>Sula dactylatra</i>	masked booby	19	SL	4
<i>Sula leucogaster</i>	brown booby	19	SL	4
<i>Sula sula</i>	red-footed booby	06	SL	4
<i>Symposiachrus trivirgatus</i>	spectacled monarch	18	SL	4
<i>Tachyglossus aculeatus</i>	short-beaked echidna	11	SL	4
<i>Taudactylus acutirostris</i>	sharp snouted dayfrog	12	E	4
<i>Taudactylus diurnus</i>	southern dayfrog	12	E	4
<i>Taudactylus eungellensis</i>	Eungella dayfrog	12	E	4
<i>Taudactylus pleione</i>	Kroombit tinkerfrog	12	E	4
<i>Taudactylus rheophilus</i>	northern tinkerfrog	12	E	4
<i>Techmarscincus jigurru</i>		08	V	4
<i>Thalassarche bulleri</i>	Buller's albatross	14	V	4
<i>Thalassarche carteri</i>	Indian yellow-nosed albatross	14	V	4
<i>Thalassarche cauta</i>	shy albatross	14	V	4



Scientific name	Common name	Species functional group	NCA class	Multiplier
<i>Thalassarche chrysostoma</i>	grey-headed albatross	14	V	4
<i>Thalassarche impavida</i>	Campbell albatross	14	SL	4
<i>Thalassarche melanophris</i>	black-browed albatross	14	SL	4
<i>Thalassarche salvini</i>	Salvin's albatross	14	SL	4
<i>Thalassarche steadi</i>	white-capped albatross	14	V	4
<i>Thalasseus bengalensis</i>	lesser crested tern	06	SL	4
<i>Tringa brevipes</i>	grey-tailed tattler	13	SL	4
<i>Tringa glareola</i>	wood sandpiper	15	SL	4
<i>Tringa incana</i>	wandering tattler	06	SL	4
<i>Tringa nebularia</i>	common greenshank	15	SL	4
<i>Tringa stagnatilis</i>	marsh sandpiper	15	SL	4
<i>Tringa totanus</i>	common redshank	13	SL	4
<i>Turnix melanogaster</i>	black-breasted button-quail	11	V	4
<i>Turnix olivii</i>	buff-breasted button-quail	10	V	4
<i>Tympanocryptis condaminensis</i>	Condamine earless dragon	10	E	4
<i>Tyto novaehollandiae kimberli</i>	masked owl (northern subspecies)	18	V	4
<i>Xenus cinereus</i>	terek sandpiper	13	SL	4
<i>Xeromys myoides</i>	water mouse	04	V	4

#### 4.5.2 Other matters data table

Category	Sub-Category	Multiplier
Connectivity	Connectivity	1
Local Government Matter	MLES 1	1
Local Government Matter	MLES 2	2
Local Government Matter	MLES 3	3
Local Government Matter	MLES 4	4

Marine	Assessable waterway barrier works	1
Marine	Fish Habitat Area	4
Marine	Marine Park	4
Marine	Marine plants	4
Protected areas	National Park	10
Protected areas	National Park (Aboriginal Land)	10
Protected areas	National Park (Torres Strait Islander Land)	10
Protected areas	National Park (Cape York Peninsula Aboriginal Land)	10
Protected areas	Regional Parks	5
Protected areas	Nature Refuge	5
Koala Habitat (SEQ LGAs)	<p>Non-juvenile koala habitat tree (s. 6(3), Schedule 2, Environmental Offsets Regulation 2014)</p> <p>Essential habitat (s. 2(3)(b), Schedule 2, Environmental Offsets Regulation 2014)</p> <p>Habitat for koalas (s. 6(4), Schedule 2, Environmental Offsets Regulation 2014)</p>	3
Threatened plants		4
Endangered Regional ecosystems		4
Of Concern Regional ecosystems		4
Least Concern Regional ecosystems (intersecting a watercourse or associated with a wetland)		4
Wetlands		4
Watercourses		4

### 4.5.3 Local Government Area data table

LGA Name	Statutory Land Value (\$/ha <sup>3</sup> )
Aurukun Shire Council	100
Balonne Shire Council	687
Banana Shire Council	1202
Barcaldine Regional Council	449
Barcoo Shire Council	107
Blackall Tambo Regional Council	308
Boulia Shire Council	452
Brisbane City Council	229626
Bulloo Shire Council	101
Bundaberg Regional Council	4641
Burdekin Shire Council	3149
Burke Shire Council	168
Cairns Regional Council	12724
Carpentaria Shire Council	222
Cassowary Coast Regional Council	4438
Central Highlands Regional Council	2466
Charters Towers Regional Council	2854
Cherbourg Aboriginal Shire Council	100
Cloncurry Shire Council	5832
Cook Shire Council	5681
Croydon Shire Council	100
Diamantina Shire Council	2006
Doomadgee Aboriginal Shire Council	100
Douglas Shire Council	7531

<sup>3</sup> The dollar figure is the average \$/ha for the local government area for all lots of 10ha or greater

<b>LGA Name</b>	<b>Statutory Land Value (\$/ha<sup>3</sup>)</b>
Etheridge Shire Council	288
Flinders Shire Council	191
Fraser Coast Regional Council	6399
Gladstone Regional Council	4990
City of Gold Coast	58443
Goondiwindi Regional Council	972
Gympie Regional Council	6281
Hinchinbrook Shire Council	3188
Hope Vale Aboriginal Shire Council	100
Ipswich City Council	23071
Isaac Regional Council	1914
Kowanyama Aboriginal Shire Council	100
Livingstone Shire Council	7280
Lockhart River Aboriginal Shire Council	100
Lockyer Valley Regional Council	7329
Logan City Council	34751
Longreach Regional Council	301
Mackay Regional Council	5454
Mapoon Aboriginal Shire Council	100
Maranoa Regional Council	1083
Mareeba Shire Council	6550
Mckinlay Shire Council	137
Moreton Bay Regional Council	26983
Mornington Shire Council	100
Mount Isa City Council	23057
Murweh Shire Council	872
Napranum Aboriginal Shire Council	100
Noosa Shire Council	13170
North Burnett Regional Council	1053

<b>LGA Name</b>	<b>Statutory Land Value (\$/ha<sup>3</sup>)</b>
Northern Peninsula Area Regional Council	100
Palm Island Aboriginal Shire Council	100
Paroo Shire Council	225
Pormpuraaw Aboriginal Shire Council	100
Quilpie Shire Council	168
Redland City Council	64283
Richmond Shire Council	129
Rockhampton Regional Council	3761
Scenic Rim Regional Council	8462
Somerset Regional Council	6288
South Burnett Regional Council	2184
Southern Downs Regional Council	3361
Sunshine Coast Regional Council	19141
Tablelands Regional Council	8283
Toowoomba Regional Council	3765
Torres Shire Council	23767
Torres Strait Island Regional Council	100
Townsville City Council	18202
Weipa Town Council	21984
Western Downs Regional Council	1753
Whitsunday Regional Council	4304
Winton Shire Council	152
Woorabinda Aboriginal Shire Council	100
Wujal Wujal Aboriginal Shire Council	100
Yarrabah Aboriginal Shire Council	100

**4.5.4 Bioregion and subregion data table: on ground cost per hectare and 20-year loss**

Bioregion name	Subregion name	On-Ground cost per ha (\$)	20-year loss (\$)
Brigalow Belt	Anakie Inlier	4000	105
Brigalow Belt	Arcadia	4000	298
Brigalow Belt	Banana - Auburn Ranges	4000	195
Brigalow Belt	Barakula	4000	154
Brigalow Belt	Basalt Downs	4000	416
Brigalow Belt	Belyando Downs	4000	397
Brigalow Belt	Beucazon Hills	4000	272
Brigalow Belt	Bogie River Hills	2000	170
Brigalow Belt	Boomer Range	4000	96
Brigalow Belt	Buckland Basalts	2000	66
Brigalow Belt	Callide Creek Downs	4000	712
Brigalow Belt	Cape River Hills	2000	149
Brigalow Belt	Carnarvon Ranges	2000	55
Brigalow Belt	Claude River Downs	4000	325
Brigalow Belt	Culgoa - Bokhara	4000	458
Brigalow Belt	Dawson River Downs	4000	688
Brigalow Belt	Dulacca Downs	4000	771
Brigalow Belt	Eastern Darling Downs	4000	428
Brigalow Belt	Inglewood Sandstones	4000	91
Brigalow Belt	Isaac - Comet Downs	4000	670
Brigalow Belt	Macintyre - Weir Fan	4000	513
Brigalow Belt	Marlborough Plains	4000	249
Brigalow Belt	Moonie - Barwon Interfluve	4000	388
Brigalow Belt	Moonie R. - Commoron Creek Floodout	4000	582
Brigalow Belt	Mount Morgan Ranges	4000	182
Brigalow Belt	Narrandool	4000	128
Brigalow Belt	Nebo - Connors Ranges	4000	253

<b>Bioregion name</b>	<b>Subregion name</b>	<b>On-Ground cost per ha (\$)</b>	<b>20-year loss (\$)</b>
Brigalow Belt	Northern Bowen Basin	4000	239
Brigalow Belt	South Drummond Basin	4000	279
Brigalow Belt	Southern Downs	4000	318
Brigalow Belt	Tara Downs	4000	771
Brigalow Belt	Taroom Downs	4000	1055
Brigalow Belt	Townsville Plains	2000	287
Brigalow Belt	Upper Belyando Floodout	4000	335
Brigalow Belt	Warrambool - Moonie	4000	458
Brigalow Belt	Weribone High	4000	385
Brigalow Belt	Woorabinda	4000	112
Brigalow Belt	Wyarra Hills	2000	164
Channel Country	Bulloo	2000	78
Channel Country	Bulloo Dunefields	2000	22
Channel Country	Coongie	2000	45
Channel Country	Cooper - Diamantina Plains	2000	45
Channel Country	Dieri	2000	22
Channel Country	Georgina - Eyre Plains	2000	45
Channel Country	Goneaway Tablelands	2000	22
Channel Country	Lake Pure	2000	22
Channel Country	Noccundra Slopes	2000	22
Channel Country	Simpson Desert	2000	22
Channel Country	Strzelecki Desert	2000	22
Channel Country	Sturt Stony Desert	2000	45
Channel Country	Toko Plains	2000	22
Central Queensland Coast	Byfield	20000	238
Central Queensland Coast	Clarke - Connors Ranges	20000	238
Central Queensland Coast	Debella	20000	434

Bioregion name	Subregion name	On-Ground cost per ha (\$)	20-year loss (\$)
Central Queensland Coast	Manifold	20000	122
Central Queensland Coast	Proserpine - Sarina Lowlands	20000	835
Central Queensland Coast	Whitsunday	20000	753
Cape York Peninsula	Battle Camp Sandstones	2000	21
Cape York Peninsula	Cape York - Torres Strait	2000	82
Cape York Peninsula	Coastal Plains	2000	255
Cape York Peninsula	Coen - Yambo Inlier	2000	21
Cape York Peninsula	Jardine - Pascoe Sandstones	2000	21
Cape York Peninsula	Laura Lowlands	2000	21
Cape York Peninsula	Northern Holroyd Plain	2000	21
Cape York Peninsula	Starke Coastal Lowlands	2000	23
Cape York Peninsula	Weipa Plateau	2000	50
Desert Uplands	Alice Tableland	2000	74
Desert Uplands	Cape - Campaspe Plains	2000	95
Desert Uplands	Jericho	4000	136
Desert Uplands	Prairie - Torrens Creeks Alluvials	2000	113
Einasleigh Uplands	Broken River	2000	99
Einasleigh Uplands	Georgetown - Croydon	2000	86
Einasleigh Uplands	Herberton - Wairuna	2000	111
Einasleigh Uplands	Hodgkinson Basin	2000	61
Einasleigh Uplands	Kidston	2000	107
Einasleigh Uplands	Undara - Toomba Basalts	2000	217
Gulf Plains	Armraynald Plains	2000	270
Gulf Plains	Claraville Plains	2000	46
Gulf Plains	Donors Plateau	2000	189
Gulf Plains	Doomadgee Plains	2000	75
Gulf Plains	Gilberton Plateau	2000	44



Bioregion name	Subregion name	On-Ground cost per ha (\$)	20-year loss (\$)
Gulf Plains	Holroyd Plain - Red Plateau	2000	32
Gulf Plains	Karumba Plains	2000	517
Gulf Plains	Mitchell - Gilbert Fans	2000	38
Gulf Plains	Wellesley Islands	2000	87
Gulf Plains	Woondoola Plains	2000	351
Inshore (remote)	East Cape York	50000	0
Inshore (remote)	Karumba-Nassau	50000	0
Inshore (remote)	Wellesley	50000	0
Inshore (remote)	West Cape York	50000	0
Inshore (non-remote)	Lucinda-Mackay Coast	30000	0
Inshore (non-remote)	Shoalwater Coast	30000	0
Inshore (non-remote)	Tweed-Moreton	30000	0
Inshore (non-remote)	Wet Tropic Coast	30000	0
Mitchell Grass Downs	Barkly Tableland	2000	224
Mitchell Grass Downs	Central Downs	2000	262
Mitchell Grass Downs	Flinders	2000	190
Mitchell Grass Downs	Georgina Limestone	2000	69
Mitchell Grass Downs	Kynuna Plateau	2000	157
Mitchell Grass Downs	Southern Wooded Downs	2000	181
Mitchell Grass Downs	Southwestern Downs	2000	224
Mulga Lands	Cuttaburra - Paroo	2000	19
Mulga Lands	Eastern Mulga Plains	4000	28
Mulga Lands	Langlo Plains	4000	19
Mulga Lands	Nebine Plains	4000	19
Mulga Lands	North Eastern Plains	4000	19
Mulga Lands	Northern Uplands	2000	19
Mulga Lands	Urisino Sandplains	2000	26
Mulga Lands	Warrego Plains	2000	52
Mulga Lands	West Balonne Plains	4000	83

<b>Bioregion name</b>	<b>Subregion name</b>	<b>On-Ground cost per ha (\$)</b>	<b>20-year loss (\$)</b>
Mulga Lands	West Bulloo	2000	26
Mulga Lands	West Warrego	2000	26
New England Tableland	Nandewar Northern Complex	4000	102
New England Tableland	Stanthorpe Plateau	4000	110
New England Tableland	Tenterfield Plateau	4000	123
Northwest Highlands	McArthur	2000	42
Northwest Highlands	Mount Isa Inlier	2000	52
Northwest Highlands	Southwestern Plateaus & Floodouts	2000	88
Northwest Highlands	Thorntonia	2000	88
Offshore	Arafura	50000	0
Offshore	Carpentaria	50000	0
Offshore	Central Reef	50000	0
Offshore	Mackay-Capricorn	50000	0
Offshore	Marion Plateau Province	50000	0
Offshore	Northern Coral Sea Province	50000	0
Offshore	Pompey-Swains	50000	0
Offshore	Queensland Plateau Province	50000	0
Offshore	Ribbons	50000	0
Offshore	Torres Strait	50000	0
Rivers and inland waterways	Inland Waterways	20000	0
Rivers and inland waterways	Rivers	20000	0
Southeast Queensland	Brisbane - Barambah Volcanics	20000	568
Southeast Queensland	Burnett - Curtis Coastal Lowlands	20000	147
Southeast Queensland	Burnett - Curtis Hills and Ranges	20000	176

<b>Bioregion name</b>	<b>Subregion name</b>	<b>On-Ground cost per ha (\$)</b>	<b>20-year loss (\$)</b>
Southeast Queensland	Burringbar - Conondale Ranges	20000	637
Southeast Queensland	Great Sandy	20000	37
Southeast Queensland	Gympie Block	20000	325
Southeast Queensland	Moreton Basin	20000	568
Southeast Queensland	Scenic Rim	20000	1273
Southeast Queensland	South Burnett	20000	637
Southeast Queensland	Southern Great Barrier Reef	20000	176
Southeast Queensland	Sunshine Coast - Gold Coast Lowlands	20000	494
Southeast Queensland	Woodenbong	20000	597
Wet Tropics	Atherton	20000	637
Wet Tropics	Bellenden Ker - Lamb	20000	637
Wet Tropics	Daintree - Bloomfield	20000	637
Wet Tropics	Herbert	20000	687
Wet Tropics	Innisfail	20000	941
Wet Tropics	Kirrama - Hinchinbrook	20000	372
Wet Tropics	Macalister	20000	637
Wet Tropics	Paluma - Seaview	20000	298
Wet Tropics	Tully	20000	741

## Appendix 5 Advanced offsets

An *advanced offset* is an area of land that has been identified and registered under section 14 of the Environmental Offsets Regulation 2014 as an *advanced offset*. *Advanced offsets* may be used as an offset to compensate for a future *significant residual impact* on one or more *prescribed environmental matters*. *Advanced offsets* are encouraged where practical, as they provide a means to better manage the risks associated with the time delay in finding a suitable offset site and realising the *conservation outcome* for the *prescribed environmental matters* on that site. *Advanced offsets* within a *Strategic Offset Investment Corridor* are also encouraged because they will provide a landscape outcome for the *prescribed environmental matter*.

### Requirements for identification and registration of an advanced offset

For section 14 of the Environmental Offsets Regulation 2014, this section of the policy must be considered when deciding an application for an area of land to be identified as an *advanced offset*. In this regard:

- an area of land may be identified as an *advanced offset* only where the application in the approved form is a properly made application; and
- the site contains, or is capable of containing a *prescribed environmental matter*.

For species and regional ecosystems, habitat quality must be determined in accordance with the Guide to Determining Terrestrial Habitat Quality unless an alternative approach has been approved by EHP. Following this baseline assessment of the *advanced offset* details of the site and habitat quality assessment must be recorded in the offset register.

How the *advanced offset* is managed to achieve a *conservation outcome* is at the discretion of the landholder—it is not a consideration under section 14 of the Environmental Offsets Regulation 2014. A landholder does not need to submit an *offset delivery plan* or legally secure the site for the site to be registered as an *advanced offset*.

### Assessing an offset application using an advanced offset

Once the *advanced offset* is identified to deliver a specific offset condition, the site and management of the site must satisfy all requirements in this policy, including those relating to offsets required by other legislation and authority requirements. In assessing the suitability of the *advanced offset* the *administering agency* must consider any *conservation outcome* achieved for the *prescribed environmental matter/s* from the date that the *advanced offset* was recorded in the offsets register.

It is important to note that *advanced offsets* do not in any way prejudice the outcome of any future assessment of a *prescribed activity*.

## Appendix 6 Direct Benefit Management Plans

A Direct Benefit Management Plan (DBMP) is a packaged investment that outlines priority actions to address threats to, and provide substantial benefits for, particular *prescribed environmental matters*. A DBMP may include direct actions as well as indirect actions such as research and education. Substantial benefits are achieved by providing landscape-scale benefits for those matters, or if the matter is localised, improved outcomes compared to a traditional land-based offset.

A DBMP can also include measures that improve our knowledge, understanding and management of these matters—leading to improved *conservation outcomes* for the impacted matter.

A DBMP must be pre-approved by the Chief Executive of EHP (other than for MLES) before they can be used for proponent-driven offsets. For MLES the DBMP must be approved by the relevant local government.

### Approval of Direct Benefit Management Plans

A draft DBMP for any matter that is not MLES must be submitted to EHP. If necessary, EHP can establish a Scientific Technical Committee to assess the DBMP to ensure it meets the criteria outlined in this policy. On approval the DBMP will be listed on the publicly available offset register.

### Examples of actions in a DBMP

Direct Benefit Management Plans may include:

- implementing part of a Queensland Government ‘back on track’ priority program;
- implementing part of a species recovery plan developed by the Queensland Government or Australian Government;
- a plan developed by an offset provider, authority holder or landholder, that is approved by the Chief Executive of EHP as suitable for providing a *conservation outcome* for *prescribed environmental matters*; or
- for MLES, a plan approved by the local government as meeting a *conservation outcome* for that matter.

A Direct Benefit Management Plan may be developed for:

- an individual species or range of species;
- ecosystems, such as wetlands or mangroves, that are difficult to replicate through a land-based offset; or
- fish habitat and marine environment.

### Criteria for a DBMP

DBMPs must be pre-approved as priority actions for the *prescribed environmental matter*:

- by EHP—where the matter is an accredited MNES or a MSES; and
- by the relevant local government—where the matter is an MLES.

In electing to provide an offset (or part of an offset) through actions in a DBMP the *proponent* will need to include as part of the notice of election:

- the pre-approved DBMP relating to an assessment of the *significant residual impacts* for the impacted *prescribed environmental matters*;
- an *offset delivery plan* outlining how the actions in the DBMP will be implemented to achieve a *conservation outcome* for the impacted *prescribed environmental matters*; and
- demonstration that the proposed actions selected from the DBMP are additional to existing activities, are cost effective and in themselves can provide a *conservation outcome* for the impacted *prescribed environmental matters*.

Examples of a *conservation outcome* can include but is not limited to the following, where these activities are additional to existing management practices or requirements, and are priority actions for the *prescribed environmental matter*:

- enhancing, restoring and establishing key habitat across multiple tenures or properties;
- threat mitigation activities such as (but not restricted to) weed or feral animal control on a landscape scale or across multiple properties;
- propagating and planting of threatened plant species or establishment and intensive management of new populations of threatened fauna in appropriate habitat;
- protecting and restoring significant freshwater, marine or estuarine ecosystems;
- landscape scale fire management activities such as patch burning or protective burns; and
- fencing or other management techniques to manage access impacts on the prescribed environmental matter including legal security where relevant to all or part of the area.

In reaching agreement about the agreed delivery arrangement the *administering agency* must ensure that delivery of the DBMP actions will achieve the principles of this policy.

### Indirect actions - research and education

A DBMP may include indirect actions such as research and education. However, unless otherwise agreed by EHP, research and education is not to be greater than 10% of the offset requirement.

A suitable research or education program under a DBMP must:

- endeavour to improve the viability of the impacted *prescribed environmental matters*, for example:
  - signage in key areas to educate the public regarding the risks to a threatened or migratory species, where it can be demonstrated that this is likely to improve the viability of the species; or
  - research into effective re-vegetation techniques for a threatened ecological community or regional ecosystem;
- be targeted toward key research/education activities as identified in 'back on track' actions for biodiversity or relevant Commonwealth approved recovery plan and threat abatement plan. Where approved guidance documents are not available or are insufficient in detail, the additional information sources such as state and territory management plans or peer reviewed scientific literature may be suitable to inform priority offset activities;
- be undertaken in a transparent, scientifically robust and timely manner;
- be undertaken by a qualified individual or organisation in a suitable manner; and
- consider best practice research approaches.

### Additional requirements for research programs

The following additional requirements apply for research programs:

- the program will be tailored to at least a postgraduate education level, however there will be scope to engage other educational levels in educational programs (see below);
- the program will present findings that can be peer-reviewed;
- the findings will be published in an internationally recognised peer-reviewed scientific journal or be of a standard that would be acceptable for publication in such a journal. Publications should be submitted to free, open access journals. Data and information collected should have creative commons licensing and be free and accessible; and
- research outputs should inform future management decisions on the *prescribed environmental matters* and, where possible, be readily applicable to other similar matters (e.g. species groupings).

### **Additional requirements for educational programs**

The following additional requirements apply for educational programs:

- the program will be likely to vary in scope, mode of delivery and duration according to the target audience and the *prescribed environmental matters* (for instance, school or community programs, signage or printed materials);
- the program should seek to attain measurable outcomes. Whilst it may be difficult to ascertain the scope of influence of educational programs in facilitating behavioural change and subsequent improvement in the viability of the *prescribed environmental matters*, the program must demonstrate to a reasonable extent how it will assist to counterbalance a significant residual impact of the prescribed activity on the *prescribed environmental matters*; and
- the program should be targeted toward behavioural change and subsequent improvement in the viability of the *prescribed environmental matters*.

## Appendix 7 Offset account and trust fund administration

Financial settlement offset payments for State-required offsets will be managed by EHP, in accordance with Part 11, Division 1 of the *Environmental Offsets Act 2014*. The funds will be quarantined for offset projects throughout the state. This approach will direct investment to benefit the relevant impacted *prescribed environmental matters*, whilst acquitting *authority holders* of all offset obligations upon payment.

EHP will be responsible for ensuring delivery of *conservation outcomes* for the impacted *prescribed environmental matters* through the facilitation of strategic offset projects. Offset projects will deliver *conservation outcomes* that may be based on a single financial offset project, or pooling a number of offset payments in order to achieve more effective and strategic outcomes for the impacted matters. The use of a DBMP and investment of offsets in *Strategic Offset Investment Corridors* will avoid piecemeal offset investment.

Management of the offset funds will be subject to best practice governance policies and a transparent reporting regime to ensure that objectives of the projects are met on time and on budget. The quarantined offset account will be audited by the Queensland Audit Office and details of offsets will be entered into the offset register that will be available on the Queensland Government website.

The exception to this approach is in relation to impacts on a *protected area* (excluding nature refuges). In these circumstances, EHP will distribute funds for such impacts directly to NPRSR in order to ensure that NPRSR is adequately compensated for impacts on *protected areas*.

Where there has been a financial settlement payment made for the known impacts on a matter/matters at the time of assessment, no refund will be made should the actual development result in less impact than originally calculated.

### Local government offsets

Under sections 24(2)(a) and (b) and 89 of the *Environmental Offsets Act 2014*, financial settlement offset payments must be credited to the local government's trust fund. The trust money may be used by the local government to pay for the delivery of an *environmental offset* to achieve a *conservation outcome*, and fees associated with administering the trust fund.



## Glossary

**Administering agency** has the same meaning as the *Environmental Offsets Act 2014*.

**Administrative cost floor price** is the set minimum amount of the administrative cost component of a financial settlement offset, regardless of the area of impact. It is applied to impacts that are greater than 2.5ha.

**Advanced offset** is an area of land identified and registered as an advanced offset under section 14 of the *Environmental Offsets Regulation 2014*. Refer to Appendix 8 for detail.

**Agreed delivery arrangement** has the same meaning as the *Environmental Offsets Act 2014*.

**Authority** has the same meaning as the *Environmental Offsets Act 2014*.

**Authority holder**, for:

- an offset condition, has the same meaning as in the *Environmental Offsets Act 2014*.
- a self-administered offset code of compliance, is an individual or organisation (including a government or government owned corporation) who is required to provide an *environmental offset* under the framework.

**Broad Vegetation Group (BVG)** represents a combination of regional ecosystems grouped by similar vegetation communities. There are three scales of BVGs mapped in Queensland; 1:1,000,000 (regional), 1:2,000,000 (state) and 1:5,000,000 (national). A hybrid Broad Vegetation Group (BVG) classification has been adopted under the offset framework. This classification operates at the broadest scale (1:5,000,000) for the majority of vegetation groups, but works at finer scales for Coastal Eucalypt forests, Eucalypt woodlands on floodplains, Melaleuca open woodlands and Acacia dominated communities.

**Commonwealth Significant Impact Guideline** is a significant impact guideline for a matter of National environmental significance made by the department that administers the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* ([www.environment.gov.au/resource/draft-koala-referral-guidelines](http://www.environment.gov.au/resource/draft-koala-referral-guidelines)).

**Conservation outcome** has the same meaning as the *Environmental Offsets Act 2014*.

**Direct Benefit Management Plan (DBMP)** see Appendix 5 for more details.

**Environmental offset** has the same meaning as the *Environmental Offsets Act 2014*.

**Environmental Offset Protection Area** has the same meaning as the *Environmental Offsets Act 2014*.

**Government Owned Corporation** has the same meaning as the *Government Owned Corporations Act 1993*.

**Highest Astronomical Tide** means the highest tidal levels which can be predicted to occur under average meteorological conditions and any combination of astronomical conditions.

**Land** has the same meaning as the *Environmental Offsets Act 2014*.

**Offset Account** has the same meaning as the *Environmental Offsets Act 2014*.

**Offset Delivery Plan** has the same meaning as the *Environmental Offsets Act 2014*.

**Offset Provider** is a person or organisation that has entered into contractual arrangements with the Government or an authority holder to deliver an offset in accordance with the contractual arrangements.

**Prescribed activity**, in relation to an application made:

- after 1 July 2014 has the same meaning as the *Environmental Offsets Act 2014*;
- before 1 July 2014, and to which section 95A or 95B of the *Environmental Offsets Act 2014* applies, means the activity that is subject to the application for an authority under another Act, for which an *environmental offset* (however described) may be required.

**Prescribed environmental matter**, in relation to an application made:

- after 1 July 2014 has the same meaning as the *Environmental Offsets Act 2014*;
- before 1 July 2014, and to which section 95A or 95B of the *Environmental Offsets Act 2014* applies, means the environmental values that will be, or are likely to be, impacted by an activity that is subject to the application for an authority under another Act, for which an *environmental offset* (however described) may be required.

**Proponent** is an *authority holder* or person who has submitted an application and may be the holder of an *authority* once granted.

**Prescribed ERA** has the same meaning as the *Environmental Protection Act 1994*.

**Protected area** has the same meaning as the *Environmental Offsets Act 2014*.

**Significant residual impact** has the same meaning as the *Environmental Offsets Act 2014*.

**Strategic Offset Investment Corridor** is an area that is approved by the Chief Executive administering the *Environmental Offsets Act 2014* as being identified for the benefit of prescribed environmental matters using the Strategic Investment Corridor Mapping Method. The location and extent of mapped areas is available in digital electronic form on the Queensland Government website.

**Wetland Habitat Type** is a typology developed for the Queensland wetland classification scheme. This scheme provides attribute information for wetland habitats in Queensland based on hydro-geo-ecological drivers, using a scientifically robust and logical methodology.

## **Abbreviations**

DMA is the Distinct Matter Area

EHP is the Department of Environment and Heritage Protection

LGA is a Local Government Area

MLES is a Matter of Local Environmental Significance

MNES is a Matter of National Environmental Significance

MSES is a Matter of State Environmental Significance

NPRSR is the Department of National Parks, Recreation, Sport and Racing.