

# Z | Offsets Strategy



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## Abbreviations and Units

Abbreviation	Definition
DSEWPaC	Commonwealth Department of Sustainability, Environment, Water, Population and Communities
EIS	Environmental Impact Statement
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999
EPC	Exploration permit for coal
ESD	Ecological Sustainable Development
HGPL	Hancock Galilee Pty Ltd
MDL	Mining development lease
MLA	Mining lease application
MNES	Matters of National Environmental Significance
NC Act	Nature Conservation Act 1992
QGEO	Queensland Government Environmental Offsets Policy
REs	Regional ecosystems
TECs	Threatened ecological communities
VM Act	Vegetation Management Act 1999

Unit	Definition
ha	hectares
km	kilometres

## Appendix Z Offsets Strategy

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### Z.1 Introduction

#### Z.1.1 Project Background

The Proponent, Hancock Galilee Pty Ltd (HGPL), proposes to develop a new coal mine to produce up to 30 million tonnes of thermal coal annually for the export market for a period of 30 years. The coal mine, which is comprised of both open-cut and underground operations, is targeting the thermal coal seams in the Upper Permian coal measures of the Galilee Basin in Queensland, Australia. This mine, known as the Kevin's Corner Coal Project (the Project), will be situated in central Queensland approximately 110 kilometres south-west of Clermont and 65 kilometres north of the township of Alpha, the nearest residential area to the Project site.

The Project is largely contained within mining development licence (MDL) 333. Since the mid-1970s HGPL has held MDL 333 and in the mid-1990s extended its tenure holding to include exploration permit for coal (EPC) 570 now known as MDL 285. In December 2007, HGPL obtained a further EPC 1210. Portions of MDL 333 and EPC 1210 have been combined to form the new mining leases currently under application. HGPL has also applied for mining lease application (MLA) 70425.

#### Z.1.2 Purpose of Offset Strategy

The Environmental Impact Statement (EIS) for Matters of National Environmental Significance (MNES) for the Kevin's Corner mine (URS, 2011) (hereafter referred to as the Kevin's Corner MNES EIS report) identified that the Project will have an indirect impact to MNES habitat of 12,542 ha, and a direct impact calculated at 2,897 ha.

Where the Project will impact important ecological values such as high conservation status regional ecosystems (REs), threatened ecological communities (TECs), essential habitat, important watercourse, marine plants, wetland or corridor vegetation, and habitat for threatened species offsets may be required under relevant Commonwealth and Queensland government offset policies. While this Project is exempt from the Queensland *Policy for Vegetation Management Offsets* (DERM, 2009) requirements (URS, 2011), other state offset policies may apply. This report summarises the Project's offset requirements under these policies and offers a strategy for further investigation into solutions.

This report will:

- Summarise anticipated Project impacts on MNES
- Outline the methodology to refine/reduce anticipated Project impacts
- Provide an action plan to identify offsets options
- Confirm the Proponent's initial offset commitments.

This document summarises the legislative context in relation to offset policies at both state and federal government levels, the direct and indirect impacts expected to matters of national environmental significance (MNES) listed under federal law, and outlines a strategy for locating a suitable offsets package.



## Z.2 Legislative Context

### Z.2.1 Introduction

The federal and state government offset policies that apply to the Project include:

- *Draft Policy Statement: Use of environmental offsets under the Environment Protection and Biodiversity Conservation Act 1999* (Department of the Environment and Water Resources, 2007)
- *Queensland Government Environmental Offsets Policy* (Environmental Protection Agency, 2008)
- *Queensland Government Policy for Biodiversity Offsets, Consultation Draft 2009* (Environmental Protection Agency, 2009)
- *Policy for Vegetation Management Offsets Version 2.4* (Department of Environment and Resource Management, 2009)
- *Mitigation and Compensation for Works or Activities Causing Marine Fish Habitat Loss* (Dixon and Beumer 2002).

### Z.2.2 Environment Protection and Biodiversity Conservation Act 1999

#### Z.2.2.1 Overview

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides the legal framework used to protect and manage MNES. Actions which are likely to have an effect on MNES must be referred to the Minister and undergo an environmental assessment and approval process.

Environmental offsets can be applied as an approval condition under the EPBC Act for developments that have undergone assessment and may be used when a development will result in impacts on a MNES protected by the EPBC Act (DEWR, 2007). The *Draft Policy Statement: Use of environmental offsets under the Environment Protection and Biodiversity Conservation Act 1999* (DEWR, 2007) states that offsets under the EPBC Act should 'maintain or enhance the health, diversity and productivity of the environment as it relates to matters protected by the EPBC Act' (DEWR, 2007). This policy stipulates that it does not intend to make projects with unacceptable impacts acceptable through the use of offsets. The draft policy also notes that the use of offset strategies will be determined on a case-by case basis dependent on the scale and intensity of the impact and the potential for conservation outcomes to be delivered through offsets (DEWR, 2007).

The Australian Government has identified eight principles for the use of environmental offsets under the EPBC Act. These principles are used to assess proposed environmental offsets and are listed below.

1. Environmental offsets should be targeted to the matter protected by the EPBC Act that is being impacted.
2. A flexible approach should be taken to the design and use of environmental offsets to achieve long-term and certain conservation outcomes which are cost effective for proponents.

3. Environmental offsets should deliver a real conservation outcome (e.g. the purchase of existing unprotected habitat, protection of this habitat in perpetuity, and active management of this habitat for long term conservation purposes).
4. Environmental offsets should be developed as a package of actions - which may include both direct (e.g. reservation of land) and indirect offsets (e.g. ongoing management activities).
5. Environmental offsets should, as a minimum, be commensurate with the magnitude of the impacts of the development and ideally deliver outcomes that are 'like for like'<sup>1</sup>.
6. Environmental offsets should be located within the same general area as the development activity.
7. Environmental offsets should be delivered in a timely manner and be long lasting.
8. Environmental offsets should be enforceable, monitored and audited.

#### **Z.2.2.2 Implications for the Project**

The *Draft Policy Statement: Use of environmental offsets under the Environment Protection and Biodiversity Conservation Act 1999* (DEWR, 2007) applies to this Project, as the Project will impact MNES protected by the EPBC Act.

The Project requires the clearance of vegetation that forms a component of a TEC and is habitat for threatened species listed under the EPBC Act, and this action carries offset obligations. Offset solutions can be used to maintain or enhance the health, diversity and productivity of the environment as it relates to matters protected by the EPBC Act (DEWR, 2007).

The offsets will need to be consistent with these principles and meet the legislative requirements for offsets outlined in the EPBC Act. Although state and territory government offsets policies may have the capacity to deliver offsets that will satisfy the Commonwealth Department of Sustainability, Environment, Water, Population and Communities' (DSEWPaC) draft policy and the requirements of the EPBC Act, it should not be assumed that that an offset which satisfies state and territory requirements will automatically satisfy the requirements of the EPBC Act. As such, the offset options will need to be negotiated with DSEWPaC and the relevant state government agencies.

### **Z.2.3 Queensland Government Environmental Offsets Policy**

#### **Z.2.3.1 Overview**

The *Queensland Government Environmental Offsets Policy* (QGEOP) provides a framework for the use of environmental offsets in Queensland, in order to counterbalance unavoidable, negative environmental impacts that result from an activity or a development. The QGEOP guides the appropriate use of environmental offsets across terrestrial and aquatic ecosystems based on the principles of Ecologically Sustainable Development (ESD). This policy is based on the premise that offsets are used consistently and transparently across the State, and are only considered after all environmental impacts have been avoided and minimised, and all other government environmental standards have been met (Queensland Government, 2008). The QGEOP is based on seven basic

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<sup>1</sup>Offset ratios can be applied when available, however offsets are required that are (at a minimum of equal quantity and quality to the area to be impacted, but preferably of a greater quantity and/or higher quality. The Australian Government considers the approach of the relevant state or territory with a view to complementing and/or building on that approach.



principles that guide the way in which offsets are used to contribute to ESD. The seven principles are as follows:

- 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.
- Environmental impacts must first be avoided, then minimised, before considering the use of offsets for any remaining impact.
- Offsets must achieve an equivalent or better outcome.
- Offsets must provide environmental values as similar as possible to those being lost.
- Offset provision should minimise the time-lag between the impact and delivery of the offset.
- Offsets must provide additional protection to environmental values at risk, or additional management actions to improve environmental values.
- Offsets must be legally secured for the duration of the offset requirement.

In Queensland, four specific-issue offset policies have been developed to provide detailed direction for offsets that address specific environmental issues. The QGEOP guides the content of the specific-issue offsets policies, these specific-issue policies must also comply with the seven policy principles of the QGEOP. The specific-issue offset policies and administering authorities include:

- Vegetation Management - *Policy for Vegetation Management Offsets* Version 2.4 (DERM, 2009) – not applicable to this Project (URS, 2011).
- Marine Fish Habitat - *Mitigation and Compensation for Works or Activities Causing Marine Fish Habitat Loss* (2002), Queensland Department of Employment, Economic Development and Innovation (Dixon and Beumer 2002) – not of relevance to this Project.
- Koala Habitat - *Offsets for Net Benefit to Koalas and Koala Habitat* (2006), Department of Environment and Resource Management (DERM, 2010) – not applicable to this Project.
- Biodiversity - *Draft Queensland Biodiversity Offsets Policy, Consultation Draft 2007* (Environmental Protection Agency) – discussed below.

The QGEOP supports coordination of federal and state government offset requirements, and where possible, promotes the development of offset packages that meets the offset requirements of the EPBC Act and any Queensland government specific-issue offset policy. This co-ordinated approach to offsets means that specific offsets sought under one policy will not also be sought under another policy, providing that the offsets package satisfies the requirements of both policies. For example, where overlapping of policies occurs (e.g. an area is listed as both an endangered RE under the VM Act and a nationally listed TEC under the EPBC Act), the offset package can be complementary to both offset policies.

### **Z.2.3.2 Implications for the Project**

The QGEOP provides a framework for the development of the specific issue offsets policies listed above, and principles and guidelines for the use of offsets in general. To that extent, it is not of direct relevance to this Project, except in so far as it guides the parameters of the specific issue policies.

## Z.2.4 Draft Biodiversity Offsets

### Z.2.4.1 Overview

The Queensland government proposed the draft *Policy for Biodiversity Offsets* (Environmental Protection Agency, 2007) as a mechanism to capture projects that have been previously exempt from offsetting requirements under current Queensland environmental management legislation. It is a 'specific-issue offset policy' proposed under the broader framework of the QGEOP.

The policy is proposed to apply to impacts on biodiversity values of state interest such as the protected area estate, endangered or of concern remnant vegetation, endangered, vulnerable and near threatened species, wetlands of high conservation value and other significant ecosystem values such as bioregional corridors. The proposed policy will be triggered where a state government agency is the decision maker or a concurrence agency under the *Sustainable Planning Act 2009*, Level 1 mining and petroleum activities under the *Environmental Protection Act 1994*, and permits for clearing protected plants under the *Nature Conservation Act 1992* (the NC Act).

The draft policy is currently being reviewed by DERM following the results of targeted consultation with key stakeholders in 2009. The details have not been finalised and endorsed by government, and the draft is no longer publicly available. The final Policy for Biodiversity Offsets is due to be released in October 2011. A confidential, pre-release copy of this policy indicates that it will not apply to declared significant projects or biodiversity values offset under another policy. It will apply to level one mining activities under the *Environmental Protection Act 1994*.

### Z.2.4.2 Implications to the Project

The Policy for Biodiversity Offsets will apply to this Project where impacts to biodiversity values of state interest as defined under the policy will occur. However, where those impacts are offset under another offset policy, including under the EPBC Act, offsets under the Policy for Biodiversity Offsets (EPA, 2007) will not be required.



## Z.3 Offset Strategy

### Z.3.1 Introduction

The Offset Strategy presented within this report incorporates the following:

- Current understanding of Project impacts and associated offset requirements (Section Z.3.2)
- A strategy to identify offset options that may meet the offset requirements (Section Z.4)
- Outstanding actions required to compile an offset package for the Project and secure the offsets (Section Z.5).

An assessment of the offset requirements and an options analysis has been undertaken and will be attached to the final offsets plan. For the purposes of this Strategy, the following sections provide a summary of that assessment.

### Z.3.2 Project Impacts and Offset Requirements

A summary of Project direct and indirect impacts to MNES is provided in Error! Reference source not found. and Table Z-2. Those MNES listed under the EPBC Act found to actually be present within the Kevin's Corner mine site during surveys are:

- The vulnerable squatter pigeon (*Geophaps scripta scripta* (southern subspecies))
- The endangered threatened ecological community (TEC) Natural grasslands of the Queensland central highlands and the northern Fitzroy basin (Natural grasslands TEC), and
- Two migratory species, the cattle egret (*Ardea ibis*) and the rainbow bee-eater (*Merops ornatus*).

However, suitable high and low value habitat for a range of other species was found to be present.

Throughout the planning and design stages of the Project steps were taken to minimise the residual impact of the Project by avoiding native vegetation where reasonable and minimising the Project footprint. The Kevin's Corner MNES EIS report (URS, 2011) concluded that removal of native vegetation was still likely to occur following measures taken to avoid and minimise the impact of the Project. A number of potential direct and indirect impacts were identified including the direct loss of vegetation, habitat and resources as a result of vegetation clearing.

Quantification of the amount of potential habitat for each threatened flora and fauna species and community was undertaken with respect to the area (and relative proportion) of potential habitat (confirmed, high value and low value) affected by direct impacts and indirect impacts. Areas that may support habitat for numerous EPBC Act-listed species of relevance to the mine study area were identified, which allowed for 'high value potential habitat' to be mapped on a regional and a mine scale. A summary of the areas of habitat affected is provided in the following tables.

Table Z-1 Quantification of Direct Impacts to Overlaid Potential Habitat and Threatened Ecological Communities

	Direct impact - number of hectares of potential habitat (overlaid)	Number of hectares of potential habitat (overlaid – landscape*	% potential habitat (overlaid) in landscape directly impacted	Direct impact footprint area	% Direct impact footprint area that is potential habitat (overlaid)	% potential habitat (overlaid) in landscape#
Potential habitat for 1-3 species	9,882 ha	561,925 ha	1.76	30,618 ha	47.93	24.47
Potential habitat for 4-6 species	317 ha	97,742 ha	0.33	20,618 ha	1.54	4.26
Potential habitat for 7-10 species	0.00 ha	10,565 ha	0.00	20,618 ha	0.00	0.46
Potential habitat for >10 species	0.00 ha	0.00 ha	0.00	20,618 ha	0.00	0.00

\*- 'landscape' is the landscape surrounding the Project study area (within the Brigalow Belt and Desert Uplands Bioregions) as depicted on a map sheet at a scale of 1:500,000

Table Z-2 Quantification of Indirect Impacts to Overlaid Potential Habitat and Threatened Ecological Communities

	Indirect impact - number of hectares of potential habitat (overlaid)	Number of hectares of potential habitat (overlaid – landscape*	% potential habitat (overlaid) in landscape indirectly impacted	Indirect impact footprint area	% Indirect impact footprint area that is potential habitat (overlaid)	% potential habitat (overlaid) in landscape*
Potential habitat for 1-3 species/TEC	2,725 ha	561,925 ha	0.48	5,971 ha	45.63	24.47
Potential habitat for 4-6 species/TEC	171 ha	97,742 ha	0.18	5,971 ha	2.88	4.26
Potential habitat for 7-10 species/TEC	0.00 ha	10,565 ha	0.00	5,971 ha	0.00	0.46
Potential habitat for >10 species/TEC	0.00 ha	0.00 ha	0.00	5,971 ha	0.00	0.00

\*- 'landscape' is the landscape surrounding the Project study area (within the Brigalow Belt and Desert Uplands Bioregions) as depicted on a map sheet at a scale of 1:500,000

## Z.4 Offset Options

### Z.4.1 Overview

The potential direct and indirect impacts associated with the Project have been assessed against federal and state government offset policies, and it has been determined that offsets are likely to be required for the Project.

Where residual impacts associated with the Project are anticipated, offsets will be provided as a means of reducing the Project impacts on the environment and complying with approval conditions under the EPBC Act and applicable state legislation.

Offset packages typically require the delivery of either direct or indirect offsets, or a combination of the two. Direct or 'in-kind' offsets aim to provide similar values, function, habitat and other attributes to those being lost or impacted by the adverse activity, and are usually given a higher status in an offset package than indirect offsets. Indirect or 'out of kind' offsets refer to offsetting activities that come in the form of either management, research, or financial contributions and are aimed at promoting gains for those values lost as a result of the impacting activity.

Location and size of offsets are also key determinants in an offsets package. Offset policies typically favour offsets which are located in close proximity to the impacted site, however balancing spatial relationships with conservation needs often poses challenges. In selecting the location of offsets one should take into account that the location of individuals, populations and communities will significantly affect their interactions and persistence.

An offset options analysis process will be conducted for this Project to identify potential offset areas that will comply with both state and federal offset policy requirement. The focus will be on locating direct offsets, at a relevant ratio, in close proximity to the impacted site. The provision of these land-based offsets will also assist in offsetting impacts on protected species, as they will replace lost habitat. Details of the methodology and results of the desktop analysis are provided in Section Z.4.2 below.

Other offset options that may be considered to supplement direct, land-based offsets include:

- Funding research into MNES species and communities in the Galilee Basin to expand the extent of current knowledge, with a preference for species with documented knowledge gaps.
- Development of long term monitoring plans across the Project area and immediate locale to identify local threatening processes and inform land management activities for MNES.
- Investigation into the provision of 'strategic offsets', land-based offsets that may not fit exactly within the requirements of offset policies, but where the location offers opportunities to achieve a higher ecological benefit at a local or regional scale than would otherwise be possible with land-based offsets constrained to meeting the offset policy. This could include the provision of a high level of protection to a strategically valuable, regionally important area of habitat, or enhancement of habitat corridors in order to ameliorate impacts arising from habitat fragmentation, and how the initiatives can be linked with other Galilee Basin mining developments

## Z.4.2 Desktop Analysis

The first stage of the offset site selection process will be a desktop analysis. Geospatial analysis will be used to identify sites that have the potential to meet the requirements of the offsets policies. At this stage of the site selection process, efforts will be focussed on sites within close proximity to the Project area.

Potential offset sites will be identified against the following criteria:

- Not covered by an existing mining lease or mineral development license
- Not declared protected area
- Suitable pre-clear vegetation
- Non-remnant vegetation present on the property and available for offsetting.

From this preliminary selection potential sites will be grouped together according to their suitability.

The number of suitable properties may be further refined through analysis based on aerial imagery. Further analysis, including field investigations, will then be required to confirm whether the potential sites identified are suitable and will meet offset policy requirements. This is discussed further in Section Z.5.

Consideration will also be given to finding a strategic offset of an appropriate quantum in combination with other factors such as location in the landscape, vegetation rehabilitation and research (indirect).

## Z.5 Outstanding and Ongoing Actions

### Z.5.1 Overview

A number of remaining tasks are either currently being undertaken or are yet to be undertaken as part of the offset process for the Project. In summary, these items are:

- Undertake a desktop assessment of potential offset sites for further investigation
- Undertake social and field investigations to determine the suitability of selected sites as offsets under the appropriate policies
- Refinement and review of the habitat mapping, including assessment of additional site specific information. The updates will be available to inform the assessment of direct and indirect impacts, and finalisation of this offsets strategy
- Identification of large-scale strategic offset sites (properties of several thousand hectares that might be suitable as a strategic offset for the project)
- Development of rehabilitation strategies to link areas of high ecological value in the landscape (to offset fragmentation effects on regional corridors)
- Development of supporting strategies including wider scale MNES research in the Galilee Basin and monitoring plans to assist with mitigating long term MNES and biodiversity threats
- Identifying opportunities for ameliorating direct and indirect impacts arising from habitat fragmentation in both project specific and regional contexts
- Landholder liaison and negotiation to secure required offsets



- Preparation of Biodiversity Offset Management Plan(s) to ensure the long-term viability of offset areas; including but not limited to:
  - pest and weed management
  - fencing for live-stock exclusion
  - fire management
  - rehabilitation and planting
  - monitoring and maintenance activities.
- Liaison with regulatory bodies and landowners to finalise contractual arrangements and covenants.

### Z.5.2 The Next Steps

Hancock will continue working with the Commonwealth and State agencies, and other affected and interested stakeholders, in the development and ultimate approval of this Offset Strategy.

Hancock aims to have the Offset Strategy finalised in conjunction with finalisation of the Queensland Coordinator General's report, following which the Commonwealth Minister's approval under the EPBC Act will be requested in accordance with the principles of the Bilateral Agreement between the State and Commonwealth Governments.



## Z.6 References

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