

# Tropicana Gold Project: Public Environmental Review

## 13. Environmental and Social Management Commitments



## 13. ENVIRONMENTAL AND SOCIAL MANAGEMENT COMMITMENTS

This chapter covers the environmental and social management commitments including the mitigation hierarchy, residual impacts and proposed offsets packages for the Project.

### 13.1. OFFSETS

In developing the Tropicana Gold Project (the Project), the Joint Venture aims to deliver an environmentally responsible project with a minimum standard of 'no net environmental loss' or alternatively with 'net conservation benefit' (EPA 2006). The purpose of an environmental offset is to achieve a 'like for like or better' environmental outcome. An environmental offset should achieve a net environmental benefit (EPA 2006). The use of environmental offsets is only one of many management tools and offsets must be used in conjunction with proactive mechanisms including leading practice environmental management to ensure impact avoidance is the primary consideration.

Environmental offsets are only to be used when all other options have been exhausted (Figure 13.1, adapted from EPA 2006, 2008). Environmental offsets are not intended to make proposals with unacceptable impacts acceptable (Australian Government 2007a), but are a tool to be used during project design, environmental assessment and implementation to achieve the principles of ecologically sustainable development. Through the use of direct and contributing offsets, the offset package should supplement expected environmental management practices, not replace them (EPA 2008a). For example, infrastructure corridors should be designed to avoid habitats of conservation interest species or known archaeological sites; energy efficient equipment should be incorporated into industrial activities or progressive rehabilitation and rectification (i.e. repair, rehabilitation and restoration) is typically regarded as industry leading practice in most circumstances and is of itself not an offset (EPA 2006).



Figure 13.1: Mitigation Hierarchy (Adapted from EPA Offsets Mitigation Hierarchy 2006, 2008)

In line with State and Federal guidance documents, environmental offsets are only being considered to mitigate impacts for which leading practice management options are insufficient (EPA 2006, 2007b; Commonwealth Government 2007). The key environmental factors of the Project that cannot be fully managed or mitigated without the use of offsets are clearing impacts, potential increased access to the region through improved road infrastructure and greenhouse emissions. These are described in more detail in the following section and in Chapter 14 for greenhouse gas emissions. Tables 13.1 and 13.2 outline the mitigation sequence and the decision framework for offsets associated with the Project, consistent with current EPA guidance.

### 13.1.1. Residual Impacts for which Offsets are Proposed

#### Clearing and Impacts on Protected Species

The Project will result in the clearing and the associated reduction in local biodiversity that may result in changes in ecosystem function. The maximum clearing footprint for the Project is estimated to be up to 3,440 ha, most of which will be rehabilitated over the life of the Project however, the impact on biodiversity and ecological function cannot be fully mitigated. There will be some localised impacts to some threatened species and their habitat e.g. individuals and habitat that exist under the footprint of critical infrastructure that cannot be moved (such as the resource area). These include species protected under the *Wildlife Conservation Act 1950* (WC Act), *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and other species which are generally thought to be of conservation significance (e.g. putative short range endemic species or Priority species recognised by the Department of Environment and Conservation) such as:

- Marsupial Mole - *Notoryctes typhlops* or *caurinus* (both listed as Schedule 1 under the WC Act, Endangered under the EPBC Act);
- Malleefowl - *Leipoa ocellata* (Schedule 1 under the WC Act, Vulnerable/ Migratory under the EPBC Act); and,
- Potential habitat of the Sandhill Dunnart - *Sminthopsis psammophila* (Schedule 1 under the WC Act, Endangered under the EPBC Act).

To date, appropriately 35 conservation interest species have been recorded in the region, most of these species will not be adversely affected by the proposed Project; 15 Priority Flora species will be directly affected by the Project clearing activities. The number of conservation interest species recorded during the Project surveys is as a result of the scale of surveys that have been undertaken to set the context for the Project and a lack of historical environmental surveys undertaken within the region. Unavoidable clearing and impacts on protected or conservation significant species will be mitigated through a combination of direct and contributing offsets.

#### Indirect Impact from Increased Access to the Region

One of the key environmental challenges for the Project is the issue of increased access to the region as a direct result of improved road access. Increased access has the potential to impact on areas surrounding the Project, in particular, on the Queen Victoria Spring and Plumridge Lakes Nature Reserves.

Without the proposed Project and associated upgraded access road, the area is relatively protected from access by the public due to its remoteness and the standard of existing access tracks which limit recreators and travellers easily accessing the area. The development of the Project will necessitate the construction of a higher quality gravel road than currently services the area. It is possible that this could lead to an increase in the number of visitors to the region, which in turn could lead to negative environmental outcomes including (but not limited to):

- increased pressure on Nature Reserves in the region which have been instated to protect biodiversity and conservation values in WA;

- introduction of invasive species by the general public who may not be educated in the threat to biodiversity of weeds and feral species in the wider region, and who will not have been educated and inducted into the hygiene and weed management practices of staff and contractors of the Joint Venture; and,
- increased incidence of anthropogenic (human induced) fire in the region with associated detrimental effects on ecosystem values and threatened flora and fauna.

The infrastructure will be privately owned which will provide an element of control in terms of access. Education (signage and inductions) and access controls (authorised access only and ability to close off the road) will be used as appropriate. Residual impacts may result even with strict controls and these will be mitigated via contributing offsets.

### **Greenhouse Emissions**

Like all mines in Australia the Project will generate emissions from fossil fuels used during mining activities, from the onsite power station plus other supporting activities. Due to the scale of the Project it is likely that a relatively large quantity of greenhouse emissions will be generated. It has been estimated that the maximum quantity of greenhouse emission produced by the Project will be 330,000 t CO<sub>2-e</sub>. The Joint Venture is seeking to reduce the greenhouse footprint through the incorporation of energy efficient technological such as High Pressure Grinding Rolls and by the use of best practice technology.

The potential impacts, management and proposed offset for greenhouse gas emissions is discussed in the following Chapter 14 and will not be discussed further in this chapter.

#### **13.1.2. Mitigation Sequence**

The Joint Venture recognises that environmental offsets should only be applied when other mitigating avenues have been exhausted. Table 13.1 outlines the process that has resulted in a proposed offsets package as part of the proposed Project. Table 13.2 outlines the decision making framework employed by the Joint Venture when evaluating Offset strategies.

**Table 13.1: The Joint Venture Mitigation Sequence for Offsets**

Mitigation Sequence (EPA 2006)	Clearing Impacts	Increased Access to the Region
Avoidance: Within reason, alternative locations or actions should be investigated to enable significant impacts to be avoided.	The clearing associated with the Project and the associated infrastructure will be progressively cleared and restricted to the minimum area required.	Road infrastructure is required to facilitate road access to the resource, via roads built to industry standards.
Minimisation: If adverse impacts are unavoidable, all practicable steps should be taken to minimise the impacts.	The Joint Venture has sought to reduce its disturbance footprint to avoid disturbance as far as practicable. Project design engineers have developed the Project layout with the objective of avoiding species of conservation significance as far as practicable.	The infrastructure will be held under Mining Act tenure. This results in liabilities for safety of the road and operational areas for the Joint Venture. Given this consideration and environmental management requirements, the Joint Venture will manage usage of the road and access to the site by third parties. Controls will include contractual access agreements with other potential users (such as mining tenements holders or adjacent Indigenous communities), boom gates, signage and other measures as may be required. Controls may include education (signage and inductions) and access controls (boom gates and authorised access only) will be used as appropriate.
Rectification: Where adverse impacts cannot be minimised, action should be taken to repair, rehabilitate or restore the site as soon as possible.	A Conceptual Mine Closure and Rehabilitation Management Strategy has been included with this PER. This includes the Joint Venture's commitment to rehabilitate areas impacted by the mine construction and operational activities and the offset the areas that cannot be restored, such as the void area.	A Project regional Landcare Plan will be developed as part of the offsets package to identify and prioritise areas that could be the subject to improvement or management. The aim of the plan will be to assist with the management of increased pressure on the nearby Nature Reserves (QVSNR and PLNR). It will also cover the road corridor past Pinjin. This plan would identify and prioritise management issues such as track restoration, rubbish, weeds, feral animals and fire.
Reduction: Where action cannot be taken immediately, steps should be taken to repair/ restore the impact over time through preservation and maintenance activities throughout the life of the action	Rehabilitation will occur progressively where possible.	The infrastructure will be held under Mining Act tenure. This results in liabilities for safety of the road and operational areas for the Joint Venture. Given this consideration and environmental management requirements, the Joint Venture will manage usage of the road and access to the site by third parties. Controls will include contractual access agreements with other potential users (such as mining tenements holders or adjacent Indigenous communities), boom gates, signage and other measures as may be required. Controls may include education (signage and inductions) and access controls (boom gates and authorised access only) will be used as appropriate.

Mitigation Sequence (EPA 2006)	Clearing Impacts	Increased Access to the Region
<p>Offsets: Where residual negative impacts are still apparent an offsets package can be utilised to achieve a “net environmental benefit” (as required by EPA and DEWHA).</p>	<p>Clearing to extract the resource will result in a permanent void. This area will not be able to be rehabilitated and will result in the need for offsets. The offsets package will address this residual impact as described in section 13.1.3.</p>	<p>Residual impacts may result even with strict controls and these will be mitigated via contributing offsets (as described in section 13.1.3).</p>

**Table 13.2: The Joint Venture Decision Framework for Offsets**

EPA principles to environmental offsets (EPA 2006)	The Joint Venture Undertaking
Environmental offsets should only be considered after all realistic attempts at mitigating negative impacts have been scrutinised and exhausted	The mitigation sequence has been followed as described in Table 13.1.
An environmental offset plan should include both direct (e.g. restoration or rehabilitation off site) and contributing offsets (e.g. contributing financially to an approved “bank”, credit trading scheme or trust fund)	Section 13.1.3 describes the offsets package which includes direct offsets, (restoration and rehabilitation) and contributing offsets (the establishment of an environmental trust).
Environmental offsets should aim to be ‘like for like or better’	Ideally land would be acquired for the conservation estate in an area of similar conservation value. The land surrounding the Project is crown land, owned by the State, and therefore land purchase option (freehold) are very limited. Existing conservation reserves however, require management support (via funding and works such as rehabilitation of unused roads) and the Joint Venture can assist in this way in line with the offsets package. The Joint Venture can work with DEC to identify areas of high conservation value that could be considered for addition to the conservation estate, as part of the Biodiversity Trust.
The size of the offset to impact ratio should be larger than 1:1 and be proportional to both the importance of the environmental asset being impacted, and the likelihood that the offset is unlikely to achieve a ‘net environmental benefit’ outcome. Offset ratios should be based on past findings, success rates, current research or other similar projects being undertaken.	The offset package is substantial and is considered proportional to both the importance of the region. Improved knowledge is the foundation required for improve decision making and conservation into the future. So little is known of this remote area.
Environmental offsets must entail a robust and consistent assessment process. Offsets should entail a thorough and transparent assessment process	The offset package is intended to provide a transparent assessment of the Project decision making process to provide for offsets as part of the Project.
Offsets are obliged to meet all statutory and legal requirements	It is intended that the Project Offsets package meets all statutory and legal requirements.
Offsets must be clearly defined, transparent, measurable and enforceable	The offset package is intended to provide a transparent assessment of the Project decision making process to provide for offsets as part of the Project. Progress will be reported annually the trust fund managers and restoration works will be managed in consultation with the relevant government agencies (lead agency will be the DEC, Kalgoorlie).
Offsets are required to ensure a long-term benefit to the environment	The offset package will provide a long-term benefit to the area by improving knowledge, reducing unauthorised access to nature reserves, and restoring degraded areas.

### 13.1.3. Proposed Offset Strategy

The following section describes the proposed offset strategy for the Project which is a combination of:

- direct offsets, restoration and rehabilitation; and,
- contributing offsets, the establishment of an environmental trust.

Recent discussions with government officers has highlighted the DEC's desire to secure additional land for inclusion in the conservation estate as part of the offset strategy (DEC/ AngloGold meeting 25/2/2009). Table 13.3 shows the proportion of the Great Victoria Desert represented in the conservation estate (IUCN criteria I-IV) by subregions.

**Table 13.3: Proportion of the Great Victoria Desert Represented in the Conservation Estate**

IBRA Region/ subregion code	IBRA subregion name	Area of subregion (ha)	Area in reserves (ha)	Proportion of subregion in reserves (%)	Area required to reach target of 15% reserved (ha)
GVD1	Shield	4,760,422	334,874	7.0	379,189
GVD2	Central	12,640,528	1,153,571	9.1	742,508
GVD3	Maralinga	4,478,278	382,420	8.5	289,322
GVD		21,879,228	1,870,865	8.6	1,411,019

Land has historically been added to the conservation estate by either acquiring freehold or pastoral leases. The majority of the land in the GVD is unallocated crown land and various forms of reserves. As there are very few pastoral leases and no freehold land located within the GVD there is limited opportunity for the Joint Venture to acquire such land (Figure 13.2). Acquiring land outside the GVD region would be inconsistent with the EPA and the DEWHA like for like philosophy.

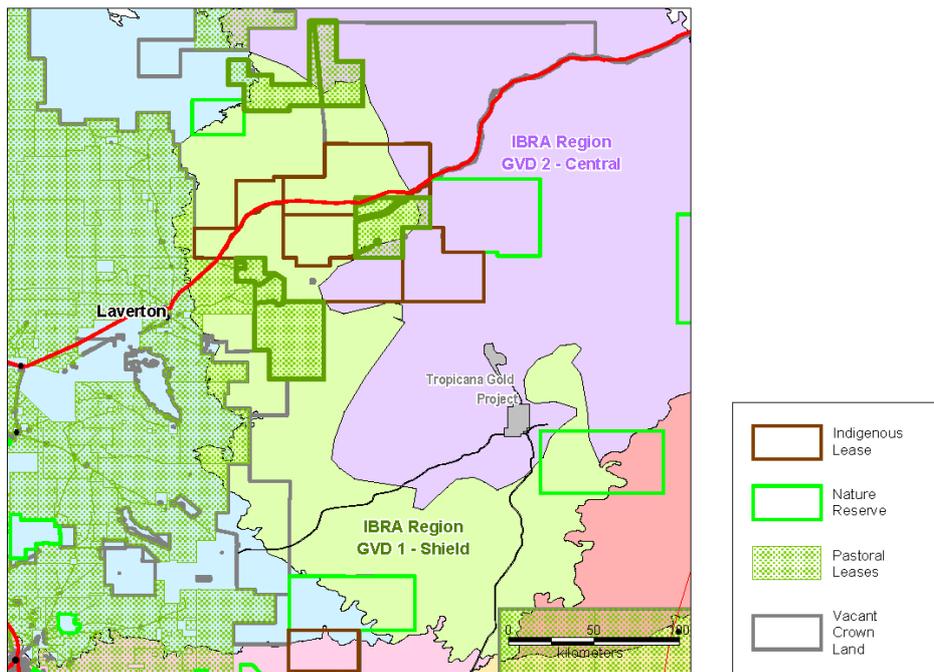
The Joint Venture's preferred offset strategy is the establishment of a Biodiversity Trust (refer below). The Joint Venture recognises that there could be opportunities to assist the government in selecting high value environmental assets for amalgamation into existing reserves/ or transfer from unallocated crown land to the conservation estate. Regional surveys to increase knowledge of high value assets could be funded by the Biodiversity Trust, and the results used by DEC to identify areas for incorporation into the conservation estate. Work carried out by the Joint Venture has resulted in a significant increase in scientific knowledge for the region and will be continued through the establishment of the trust. It is likely that there are existing high conservation value areas within the unallocated crown land, but, due to a lack of current resources to assess the conservation value of the expanses of the vacant crown land, action to identify and preserve land of high conservation value is limited. The benefits of the Joint Venture supporting the government in assessing the environmental assets in the unallocated crown land of the GVD include:

- a more rapid increase in the body of knowledge for the GVD than would ordinarily occur;
- a more rapid identification of potentially high value environmental assets; and,
- once high conservation value areas are identified, the government and other potential users are in a more informed position to preserve and manage these assets, including possible transfer of unallocated crown lands into the conservation estate.

In kind support could be provided by the Joint Venture in the following forms:

- botanical survey – this could be facilitated via the Biodiversity Trust Fund research. High value environmental assets could be identified as part of this work and prioritised for inclusion into the conservation estate. Other stakeholders including native title groups, DMP and mining act title holders would need to be consulted as part of this process; and,
- resources to facilitate the transfer process i.e. coordinate biological surveys, provision of cadastral survey information, application for inclusion, undertake liaison and agreement with key government agencies (i.e. DEC, DMP, Landgate, Native Title Claimants).

Map 1 : Pastoral Leases located with GVD 1 & GVD 2



Map 2 : Mineral Titles and Pastoral Leases Western GVD

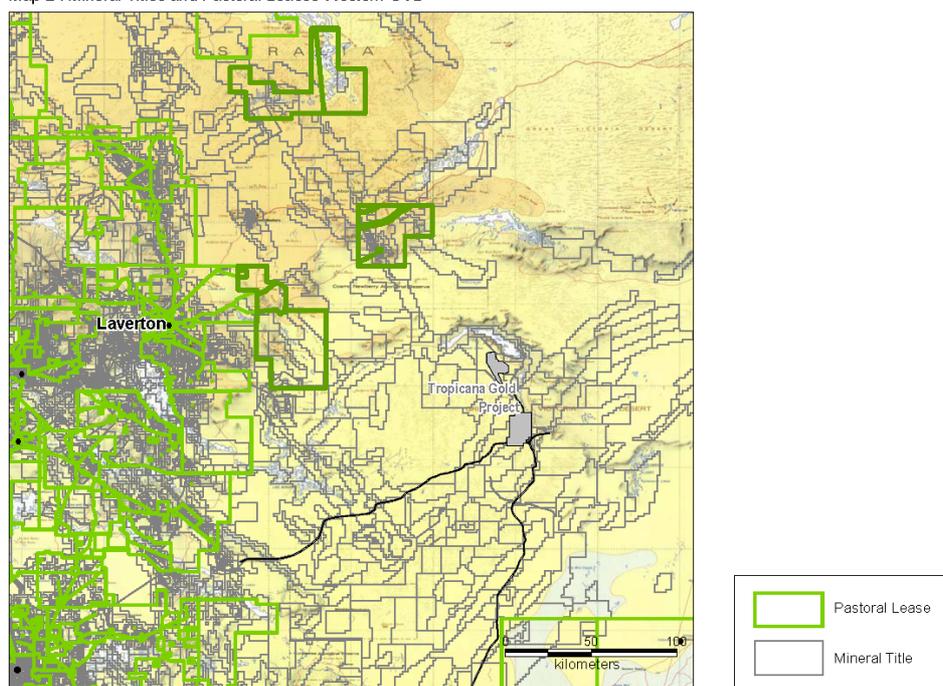


Figure 13.2: Pastoral Leases Near the Project, Within the GVD

### **Direct Offset - Restoration and Rehabilitation**

The restoration and rehabilitation of degraded areas outside the Project impact area is proposed. Areas to be rehabilitated will be agreed with stakeholders and will total at least 100 hectares. This may include:

- rehabilitation of surplus tracks in the region and particularly those in Nature Reserves in consultation with relevant authorities and other stakeholders; and,
- rehabilitation of disturbed areas in the Plumridge Lakes and/ or Queen Victoria Spring Nature Reserves in consultation with the DEC.

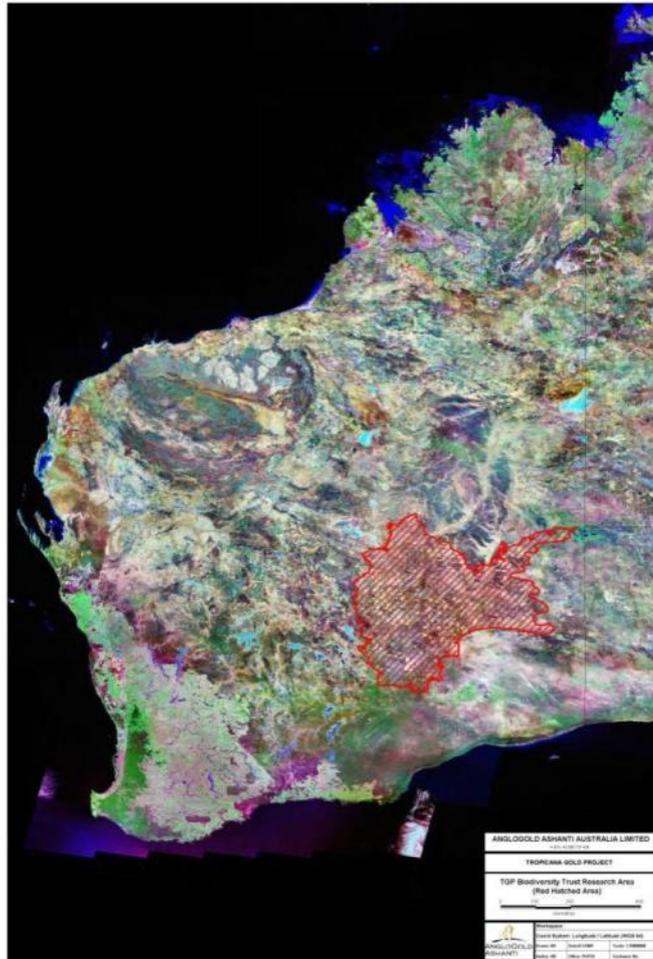
These rehabilitation activities can benefit the existing ecosystem by targeting and improving habitat for species including the Sandhill Dunnart and Malleefowl. Rehabilitation of the existing Nature Reserves has the advantage of involving land that is already in the conservation estate and therefore has secure tenure. The Australian Government (2007a) recognises that it may not be desirable or possible to locate offsets in the vicinity of a development site and in some cases, greater conservation outcomes may be delivered by locating offsets elsewhere e.g. opportunities in the vicinity of the site (or in the same bioregion if a better environmental outcome can be achieved) and to regional biodiversity strategies (EPA 2008). To inform this process a desktop assessment of degraded areas in the vicinity of the site will be undertaken in 2009/2010. Consideration will be given to the condition of vegetation complexes, linkages, soil types, presence of protected species and habitat.

### **Contributing Offset - Biodiversity Trust Fund**

The cornerstone of the Project offsets package is the establishment of a Biodiversity Protection and Research trust fund (the Trust) (or linkage with an equivalent appropriate, alternative). It is envisaged that the Trust would facilitate research, environmental education and on-ground conservation work that will benefit the wider Great Victoria Desert region. Where possible, this Trust will seek to collaborate with/ support other initiatives in the area, for example, supporting regional DEC staff in baseline surveys. The research would be focused on the Project Biodiversity area as delineated by Figure 13.3. The Trust would be managed by the establishment of a management board which would comprise representatives from the Joint Venture and interested organisations such as DEC, Botanic Gardens and Parks Authority, local universities, relevant NGO's (i.e. Conservation Council of WA, Wildflower Society and/ or Wilderness Society) and local Indigenous groups. It is also envisaged that the knowledge gained through the Trust would be available for use by the State, and used to inform future environmental investigations for potential Joint Venture projects in the region.

The Trust could aim to fund:

- research, scientific publication and the general improvement of conservation efforts, scientific knowledge and understanding of the region. Focus will be on the maintenance of functioning sustainable ecosystems and native flora and fauna protection, specifically priority, threatened and/ or endangered species. Such as:
  - taxonomic, morphological and genetic studies of conservation interest species within the research area;
  - regional surveys to improve the current lack of knowledge of species presence, abundance and distribution;
  - participate in, and contribute to, programmes that improve the overall knowledge of this Short Range Endemic fauna;
  - relationships between conservation interest fauna and habitat; and,
  - traditional Indigenous land management practices.



**Figure 13.3: Project Biodiversity Trust Research Area (Red Hatched Area)**

Activities that are of regional environmental benefit such as undertaking on-ground works which contribute to conservation efforts, specific protection and enhancement of the regions natural assets in the long term will also be considered. These may include:

- feral animal management targeted at European fox, rabbit, feral cat and camel populations in the area;
- weed management;
- recovery plans for threatened species occurring in the Project and surrounding region;
- fire control and management techniques;
- investigate the impacts of controlled burning on native species in the region with the intent of informing current fire management practices;
- protective mechanisms associated with opening up of country;
- education program targeted to recreators and travellers to minimise impacts associated with fire and weed control;
- assistance with the establishment of an Indigenous Landcare Trainee program for the Project Research Area with DEC; and,
- rehabilitation research such as understanding dune restoration requirements, the ecophysiology of framework species such as spinifex, mulga and marble gum, seed bank handling, seed catchment understanding, broadcasting, germination and propagation.

### 13.1.4. Timing for Offsets

The Joint Venture timing for the implementation of the Project offsets is shown in Table 13.4.

**Table 13.4: Joint Venture Timing for Implementation of Offsets**

Offset Activities	Joint Venture Timing Phase
Establish Biodiversity Trust Board Define the governance structure and trust objectives Establish the trust fund Established the Indigenous Trainee Program	During Construction Phase
Define framework for the research and development (R and D) program for greenhouse offsets (if the thermal-solar power option is not preferred).	During Construction Phase
Commence research and development (R&D) program for greenhouse offsets. The Joint Venture will invest \$1.00/tonne/annum of CO <sub>2-e</sub> produced in the preceding year following the first full year of gold production (if the thermal-solar power option is not preferred).	During Operational Phase
Assist the DEC to gather information of the natural values within the Project GVD research area to assist the DEC to identify areas that should be passed into the Conservation Estate	During Operational Phase
Define the rehabilitation scope and rehabilitation plans, undertake rehabilitation activities in conservation and Unallocated Crown Land areas adjacent to the Project.	During Operational Phase
Undertaken biodiversity research and management activities.	During Operational Phase
Commence the Indigenous Trainee Program	During Operational Phase

### 13.1.5. Enforceability, Monitoring and Auditing

It is recognised that offsets need to be enforceable, monitored and audited. The details of this program will be provided once the strategic framework has been agreed both internally and externally. At that point the key tasks can be identified, with agreed milestones, the required deliverables and criteria and the appropriate responsible parties identified. This will occur as part of the PER process to ensure that the public has had a chance to view the proposed offsets package consistent with the requirements of the EPA (2008).

### 13.1.6. Communication and Document Review

The DEC's Environment Management Branch and the Western Australian Office of Climate Change and the Federal DEWHA have been consulted on the Joint Venture's proposed offset strategies to seek feedback as to the appropriateness of the offsets proposed. Generally, both organisations are in agreement with the proposed strategies however, additional feedback will be required from other interested stakeholders before the document will be finalised. To this end the offset strategy may be subject to change.

## 13.2. SOCIAL MANAGEMENT COMMITMENTS

The Joint Venture is committed to working cooperatively with Traditional Owners, their representatives (e.g. Central Desert Native Title Service) and surrounding local communities, to build relationships to explore opportunities related to the projects development that may result in enduring beneficial community outcomes. Chapters 4 and 9 contain further details on the community and stakeholder liaisons to date, social and heritage aspects respectively.

Areas envisaged as primary opportunities are in employment, business development, cultural heritage preservation and cross cultural education. Youth development and education related initiatives are envisaged as also warranting focused attention. For further information refer to Chapter 8.

### **13.3. *PROPOSED SOCIAL AND ENVIRONMENTAL MANAGEMENT COMMITMENTS FOR THE PROJECT***

The development of the Project will be as described in this document (including its appendices) and as amended from time-to-time. The methodologies stated in the plans are correct as at the date of publication. The methodology may change during implementation. Material changes to methodology will be referred to the advisory agency listed for the Condition.

The Joint Venture seeks to document conditions with clarity. Table 13.5 states what actions are required, when the actions are to be taken, where the conditions apply, where to take action(s) and how the action(s) should be administered.

**Table 13.5: The Joint Venture Proposed Social and Environmental Management Commitments for the Project**

No.	Topic	Actions	Joint Venture Commitments	Timing	Seek Advice from
1.	Integrated Management System	Develop and implement an IMS that meets ISO14001/OHSAS18001 requirements.	Obtain and maintain ISO14001 or equivalent certification over the life of the project.	System developed and implemented prior to Construction. Certification obtained in first year of production.	None.
2.	Management Strategies	Documented management strategies will be established, maintained and incorporated in to the Project's IMS for environmental aspects that require documented controls to ensure the desired environmental outcomes are achieved. The following management strategies have been identified as required: <ul style="list-style-type: none"> <li>• Construction Environmental Management Strategy.</li> <li>• Operations Environmental Management Strategy.</li> <li>• Threatened Species and Communities Management Strategy.</li> <li>• Heritage Management Strategy.</li> <li>• Tailing Environmental Management Strategy.</li> <li>• Conceptual Closure and Rehabilitation Management Strategy.</li> <li>• The Joint Venture will ensure its management strategies are modified as new information becomes available and will develop additional management strategies as required.</li> </ul>	Management Strategies incorporated in to the Project IMS to ensure effective environmental management throughout the life of the project.	Construction EMS implemented prior to the commencement of Construction. The Threatened Species and Communities Management Strategy will be implemented throughout the life of the project. Heritage Management Strategy implemented prior to the commencement of Construction. All other management strategies implemented prior to construction.	Key Stakeholder during Part IV process (refer to Chapter 4).
3	Environmental Offsets - Trust	<ul style="list-style-type: none"> <li>• Establish the Trust.</li> <li>• Finalise the Strategic Direction for the Trust.</li> </ul>	Regional environmental benefits realised as a result of the Project from: <ul style="list-style-type: none"> <li>• Improved knowledge</li> <li>• Improved management of conservation reserves</li> </ul>	During construction.	DEC-EMB, DMP and DEWHA.
3.1	Environmental Offsets Rehabilitation	<ul style="list-style-type: none"> <li>• Finalise the Environmental Offsets Documentation.</li> <li>• Define the rehabilitation scope and rehabilitation plans.</li> <li>• Undertake rehabilitation activities in conservation areas and areas adjacent Project.</li> </ul>	Regional environmental benefits realised as a result of the Project from restoration activities.	During operations.	DEC-EMB, DMP and DEWHA.
3.2	Environmental Offsets - Research	Environmental Offsets - Biodiversity Trust. Undertake biodiversity research and management activities.	Regional environmental benefits realised as a result of the Project from Improved knowledge.	During operations.	DEC-EMB

No.	Topic	Actions	Joint Venture Commitments	Timing	Seek Advice from
4.0	Social Commitments	Indigenous Trainee Program (funding split between the biodiversity trust and Community Partnership Agreement 50/50).	Regional social benefits realised as a result of the Project from: Engagement of Indigenous representatives from the region Support of local businesses Providing relevant training opportunities	During operations.	DIA
5.0	Conceptual Closure and Rehabilitation Strategy	Finalise Conceptual Closure and Rehabilitation Strategy Develop and maintain a Closure Knowledge Document Control procedure prior to construction commencing. Finalise the research strategy	Completion criteria agreed that are achievable and tailored to the Project.	Within 5 years of construction commencing.	DMP, DEC
5.1	Rehabilitation Research Program	Finalise the findings from the Rehabilitation Research Program and incorporate these into the rehabilitation program for the Project.	Rehabilitation techniques based on learned knowledge and tailored to the Project environment.	Within 5 years of construction commencing.	DMP, DEC
5.2	Rehabilitation Strategy	Develop the final Rehabilitation Strategy defining appropriate closure criteria necessary for the establishment of safe landforms and self sustaining ecosystems; A rehabilitation strategy for all disturbed areas and a description of a process to agree on the end land use(s) with all stakeholders;	Completion criteria agreed that are achievable and tailored to the Project.	Review every 3-5 years until relinquishment.	DMP, DEC
6.3	Closure Strategy	Develop a Closure Strategy which includes: <ul style="list-style-type: none"> <li>rationale for the siting and design of plant and infrastructure as relevant to environmental protection, and conceptual plans for the removal or, if appropriate, retention of plant and infrastructure;</li> <li>a conceptual strategy for a care and maintenance phase; and, management of noxious materials to avoid the creation of contaminated areas;</li> <li>set out procedures for monitoring and reporting to ensure compliance with the closure criteria.</li> </ul> In the event of sudden closure review immediately.	Completion criteria achieved. Site closed in a manner that does not compromise future generations and ensures the environmental impacts have been minimised.	Within 5 years of construction commencing. Review every 2-3 years and every year for the last 5 years of operation.	DMP
6.4	Closure Strategy	Implement the Final Mine Closure and Rehabilitation Strategy.	Completion criteria achieved. Site closed in a manner that does not compromise future generations and ensures the environmental impacts have been minimised.	Within 5 years of mine closure.	DMP, DEC