

# BHP Billiton Mitsui Coal South Walker Creek Mulgrave Pit Extension EPBC 2014/7272 Offset Delivery Plan



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## BHP Billiton Mitsui Coal South Walker Creek Mulgrave Pit Extension EPBC 2014/7272 Offset Delivery Plan

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## 1 EXECUTIVE SUMMARY

BHP Billiton Mitsui Coal Pty Ltd (**BMC**) proposes to continue mining at its existing South Walker Creek (**SWC**) Mine through continued development of the existing Mulgrave open cut mining pit; in a west to north-westerly direction (see **Figure 1**).

The BHP Billiton Mitsui Coal South Walker Creek Mulgrave Pit Extension Project (hereafter **the Project**) was declared a Controlled Action on the 14th August 2014 for listed threatened species and communities under sections 18 and 18A of the *Environmental Protection and Biodiversity Conservation Act 1999 (Cth)* (**EPBC Act**).

The offset proposed comprises two parts, being an offset for the brigalow Threatened Ecological Community (**TEC**) and another for the ornamental snake (*Denisonia maculata*), and are planned to be provided on two properties, both located within the Brigalow Belt bioregion and experiencing similar habitat and climatic conditions as the impact site.

This Offset Delivery Plan is to address the offset requirements for the impacts to the ornamental snake **only**. The summary of the impact area for ornamental snake versus the offset area are detailed in **Table 1**.

The property on which the 20ha habitat offset for the ornamental snake is located is the same property on which a 400ha EPBC offset is located for Cockatoo Coal Ltd. The offset area has an additional 4.8 ha of area that is not core habitat for the ornamental snake, however this additional area is included in the offset management area to link with an adjoining offset for ornamental snake and other MNES.

This offset for ornamental snake is located on Lot 9 BH194, known as “Zamia Creek (North Section)”, and is solely owned by the Woorabinda Aboriginal Shire Council, and is located 60km west of Moura and 297km south of the Project. The “Zamia Creek (North Section)” property has brigalow TEC patches already established and substantial areas of brigalow regrowth with gilgai relief. 20ha of this brigalow regrowth area has been selected for the offset as it contains the core habitat requirements for the ornamental snake and will rehabilitate/regenerate to habitat for the ornamental snake to satisfy the offset requirements of this Project.

Additionally, there is a 38.8ha patch of the brigalow TEC within the Zamia Creek Conservation Park which is located within the south-western portion of the property and adjacent to this offset. Field verification studies of the property undertaken in October 2014 noted that the presence of habitat suitable for the ornamental snake, which is co-located with the brigalow TEC due to the presence of deep cracking soils and gilgai, however the species was not verified at that time due to the dry conditions. Subsequent field verification was undertaken in January 2015 during the wet season which successfully verified the presence of the ornamental snake.

**Table 1: Summarised Impact vs Proposed Offset Area**

Summary of impact site and proposed offset area	
Protected Matter	<i>Denisonia maculata</i> (ornamental snake)
Status	Vulnerable
Impact area (ha)	17.5
Impact area Habitat Quality Score	5
Offset area (ha)	20.0
Offset area Habitat Quality Score	4
Regional Ecosystem	11.4.8/11.4.9 Endangered
Offset Property	Zamia Creek (North Section)
% of impact offset	<b>102.32%</b>

## 2 PROJECT BACKGROUND

### 2.1 Project Description

The mine is located approximately 25km west-south west of Nebo, Queensland, in the Bowen Basin within the boundaries of Mining Lease 4750 (ML). The mine can be accessed via Peak Downs Highway from Mackay in the east, or Moranbah from the west. The proposed action is to take place on approved Surface Areas 2, 3 and 4 associated with ML4750.

The proposed activity will require clearing of some previously undisturbed land, the subsequent diversion of a watercourse; continued excavation and mining of the existing Mulgrave Pit, leading up to the ultimate rehabilitation of disturbed lands. The mining activity at SWC is authorised by the Queensland Government through the historical grant of ML4750 and associated surface rights. Activity at SWC is regulated under Environmental Authority MIN100552107.

### 2.2 Preliminary Documentation

The Preliminary Documentation was submitted in final form to the Department of the Environment (DotE) on the 4th October 2014, subsequent to the Project being declared a Controlled Action on the 14th August 2014. The reference document is *South Walker Creek Mine, Mulgrave Resource Access EPBC Act Preliminary Documentation (EPBC 2014/7272)*. Section 4.2 of that document describes the impacts to Matters of National Environmental Significance (MNES), with the impacts to the ornamental snake, which is offset via this Offset Delivery Plan and the attached Offset Area Management Plan (OAMP), detailed in section 4.2.4 of that document.

### 2.3 Purpose of Offset Delivery Plan

This Offset Delivery Plan provides additional information to the Preliminary Documentation and has been prepared to address the Project's residual significant impacts to MNES (ornamental snake) as identified in the Preliminary Documentation. The offset proposed will provide environmental benefits to counterbalance the significant impacts of the Project that will remain after measures to avoid, mitigate and manage have been implemented. The offset proposal includes:

- Analysis of the likely offset requirements of the Project under the EPBC Act *Environmental Offsets Policy (October 2012) (EOP)*;
- Assessment of the offsets and process proposed to meet the likely offset requirements of the Project in accordance with the EOP and associated Offsets Assessment Guide; and
- Determination of the overall suitability of and environmental outcome provided by the offset proposed.

Figure 1: Project Locality

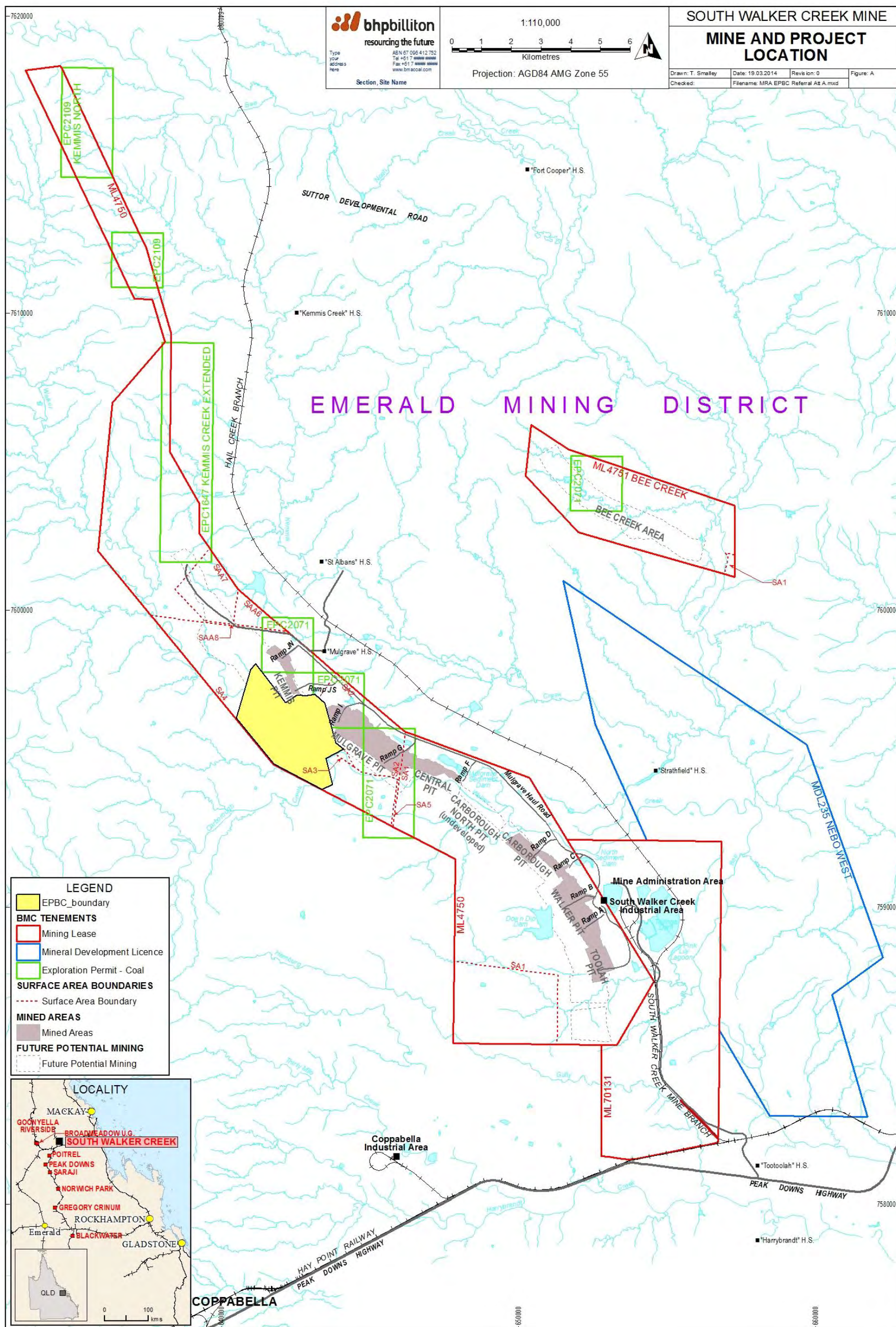
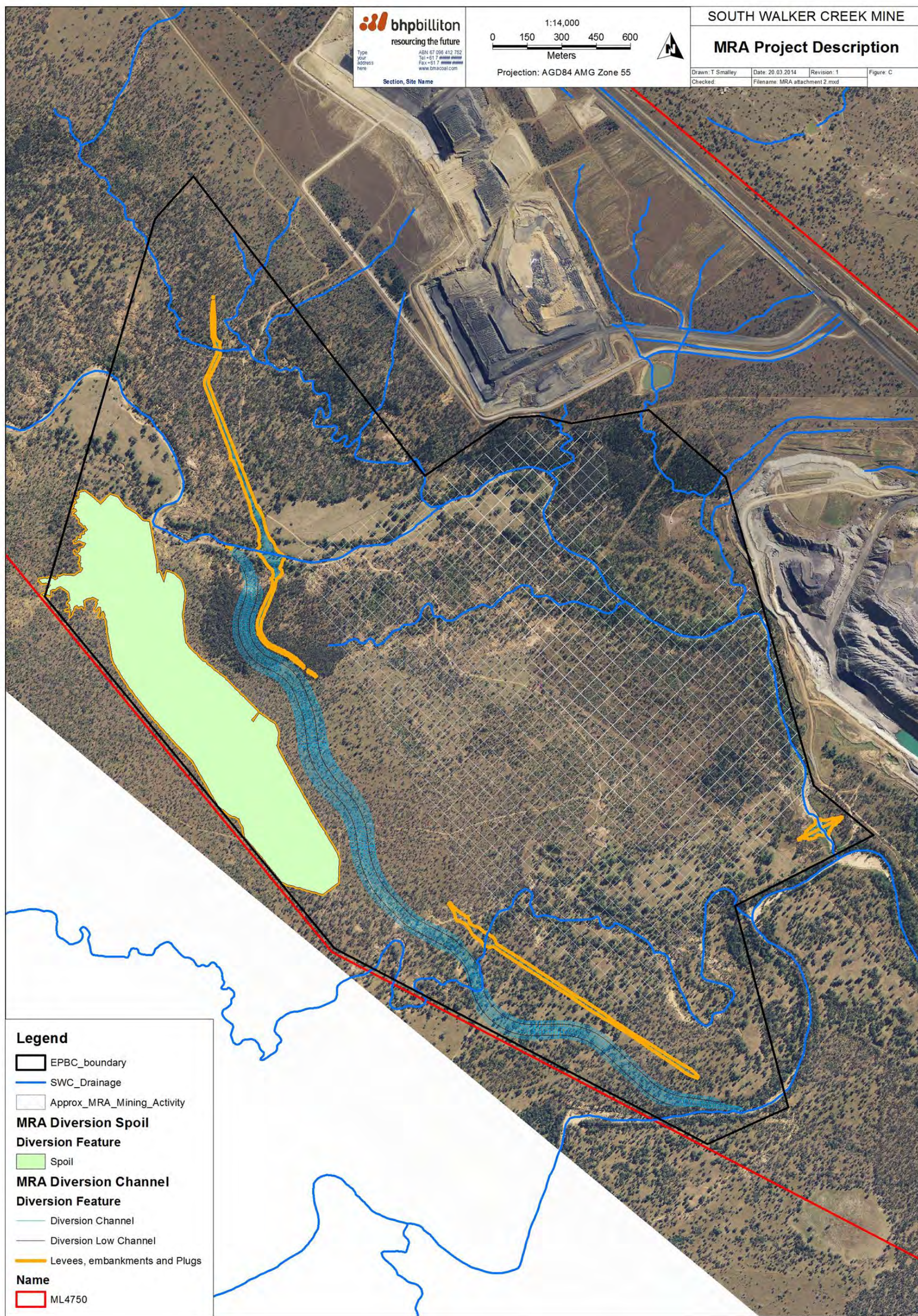


Figure 2: Proposed Mulgrave Pit layout



### 3 OFFSET REQUIREMENT

Under the EOP, consideration of offsets are required for MNES where a residual significant impact is likely to remain after avoidance, mitigation and management measures have been undertaken. For the Project, residual significant impacts have been assessed as being likely for the listed threatened species – ornamental snake.

#### 3.1 Policy Principles

The EPBC Act EOP sets out eight key overarching principles that must be applied in determining the suitability of offsets. They are summarised as follows:

1. Deliver an overall conservation outcome that improves or maintains viability;
2. Be built around direct offsets but may include other compensatory measures;
3. Be in proportion to the level of statutory protection that applies;
4. Be of a size and scale proportionate to the residual impacts on the protected matter;
5. Manage the risks of the offset not succeeding;
6. Be additional to what is already required;
7. Be efficient, effective, timely, transparent, scientifically robust and reasonable; and
8. Have transparent governance arrangements.

Considering the above policy principles in relation to the likely offset requirements of the Project, BMC has coordinated with another mining company (Cockatoo Coal Ltd) who had previously undertaken offset suitability assessment of a large area of land on the Zamia Creek (North Section) property, The Zamia Creek (North Section) property can supply the offset values required, and provides additional environmental values through this offset being co-located with offsets for other mining companies, therefore achieving an exponential environmental outcome. Woorabinda Aboriginal Shire Council own 44,000 ha of land across four properties, of which the Zamia Creek property is one. During the selection of the offset site, consideration was given to property plans and any potential future use of the property to minimise the potential for future conflicting land use pressures.

The Zamia Creek property is a freehold property and has the same rights and privileges as any freehold property in Queensland. Held under a Deed of Grant in Trust (**DOGIT**) the grant has a rolling 99 year term and is held by the Woorabinda Aboriginal Shire Council for the benefit of the Indigenous community. As the underlying tenure is freehold, Council is bound to the same laws as the other owners of freehold land, and as such, a legally binding mechanism on title in the form of a Voluntary Declaration (**VDec**) and a supporting Offset Area Management Plan (**OAMP**) will be registered on the title of the property, and therefore will be binding on the current and future landowners. The OAMP, as contained at **Schedule 1**, has been prepared using the Queensland Department of Natural Resources and Mines (**DNRM**) template, and therefore will meet the Department's requirements for Voluntary Declarations.

There are no registered interests on the title of this property.

There are two mining/exploration interests recorded against the property. An Exploration Permit Coal (EPC 2908) is held by Eastern Coal Pty Ltd and an Authority to Prospect (ATP1079) is held by Santana Resources LLC. Woorabinda Aboriginal Shire Council has advised the Queensland Department of Natural Resources and Mines that they do not support these applications. Given the Council's absence of support for the resource activity applications along with a combination of no local infrastructure to support coal and/or gas development, a subdued outlook for commodity prices over the medium to long term, and the difficulties in gaining government consent to impact on DOGIT lands, the likelihood of future conflicting land use in the offset area is low.



## 4 PROPOSED OFFSET

### 4.1 Overview of Impact Site

The details of the quantum and quality of the habitat to be impacted are detailed in **Table 2**.

**Table 2: Impact Details**

Attribute	Value	Rationale/Assumption
Impact Area	17.5 ha	Despite the species not being recorded in the Project Area during targeted fauna surveys consistent with Commonwealth (SEWPaC 2011a; SEWPaC 2011b) and State (DSITIA 2012) survey guidelines, the preferred habitat type is present.
Quality	5/10	<p><b>Site Condition = 6</b></p> <p>Dominated by low, closed woodland of brigalow on deep cracking grey clays with well-developed gilgai formations. In areas where gilgai were less well-developed to absent, yellow wood formed a dense understorey to the brigalow. Ground cover was dominated by native grass species, with patches of blackcurrant bush scattered throughout. Fallen timber and leaf litter was common to abundant, though trees with decorticating bark were not. Bog marsh and other floating aquatic emergents were common in those gilgai that supported surface water, indicating that these gilgai had supported surface water for extended periods of time.</p> <p><b>Site context = 5</b></p> <p>The Project area has large areas of essentially monotypic vegetation on deeply-weathered sand plains, dominated by poplar gum and poplar box woodlands which are unsuited to the ornamental snake. The 17.5ha of ornamental snake habitat identified was fragmented and located in three disconnected patches (see Figure 4-11 in the report at <b>Appendix B1</b>). These patches have no connectivity to remnant areas.</p> <p>The two gilgai patches identified in the northern Project area have been significantly impacted upon by pastoral land management practices (e.g., clearing and grazing). The gilgai patch in the southern section has a relatively intact canopy. The gilgai patch in the southern section has a relatively intact canopy, with fallen timber and leaf litter common.</p> <p><b>Species stocking rate = 5</b></p> <p>Surveys within the brigalow gilgai communities recorded several reptile species, but none of the targeted species, specifically ornamental snake. Of particular note was the lack of frog species, the primary food source for ornamental snakes, from all developmental stages, i.e., tadpoles, metamorphs, juveniles, sub-adults or adults within the gilgai areas.</p>

### 4.2 Overview of Offset Property – Zamia Creek (North Section)

#### 4.2.1 Offset Site- General Description

Lot 9 BH194, known as the Zamia Creek property (North Section), is located on the northern side of the Dawson Highway, contains the proposed offset area, and Zamia Creek Conservation Park, and Zamia Creek forms the western boundary of the property. The property is characterised by floodplain coolabah, floodplain

eucalypt woodland (Regional Ecosystem (RE) 11.3.3/11.3.4), brigalow-bauhinia regrowth (RE 11.4.9a), brigalow-blackbutt (RE 11.4.8). Surveys conducted over the last 11 years have only recorded ornamental snakes within grey cracking clay soils supporting gilgai formations (*pers. Obs. A. Veary*) and ecological modelling has identified that grey cracking clays in REs 11.4.8 and 11.4.9 appear to be the primary habitat type for the ornamental snake (refer *Threatened Terrestrial Fauna Species Assessment Report for Mulgrave Pit Expansion Project –Footprints Environmental Consultants, June 2013* (hereafter referred to as the **Field Report**) as provided at **Appendix B1**. The offset area will be managed to enable the natural regeneration process of the TEC and associated habitat to occur. This will also result in enhanced connectivity to the Zamia Creek Conservation Park and the Zamia Creek watercourse.

The Zamia Creek watercourse supports a diverse range of foraging habitats due to the creek containing a well-vegetated riparian corridor including tall tree canopy layer, tall shrub layer and ground cover including native grasses and leaf litter layer. The low shrub layer and leaf litter layers have been significantly impacted upon by cattle which has greatly reduced these resources and subsequently reduced the value of the site.

**Table 3** below provides details of the offset property.

**Table 3: Property Details – Zamia Creek (North Section)**

Property Details			
Property name: Zamia Creek (North Section) Note : this property is owned by Woorabinda Aboriginal Shire Council			
Real property description (lot on Plan/s): Lot 9 BH194			
Tenure: Freehold		Primary Local Government Area: Woorabinda Aboriginal Shire Council	
Planning Scheme Zone: Rural		Property area (ha): 2,784.7 ha Offset management area (ha): 24.8ha	
Landzone/geology		Landzone 4 - Tertiary-early Quaternary clay deposits, usually forming level to gently undulating plains not related to recent Quaternary alluvial systems. Excludes clay plains formed in-situ on bedrock. Mainly Vertosols with gilgai microrelief.	
Soils		Land zone 4 - Deep cracking black clay with gilgai present	
Pre-clear regional ecosystem (V.)		11.4.8/11.4.9	
Existing vegetation (RE)		Regrowth 11.4.8 and 11.4.9	
Estimated age of vegetation		>8 years	
Is there a Property Map of Assessable Vegetation (PMAV) currently over all or part of the property, Please detail		Yes – 2005/109907	
BioCondition Site 1			
Observation sites 23, 24,25	11.4.8	Brigalow regrowth 1-3m tall (avg. 2m) on moderate gilgai. Ground layer sparse in dips. Mostly buffel on higher areas (rims) and in small flat cleared areas.	20.0ha
Total Offset Area – habitat			20.0ha
Total Offset Management Area			24.8ha

### **Mapped Vegetation**

The Regional Ecosystem (RE) mapping for the property is generally correct. However, there is a large wedge of brigalow and belah, between the anabranches of the Zamia Creek watercourse, which is mappable as the brigalow TEC.

The large brigalow remnant of Zamia Creek Conservation Park, which is located within the property and adjacent to this offset, is correctly mapped as a mosaic of two brigalow REs (11.4.9a and 11.4.8), which is recognised as prime habitat for ornamental snake. For more detail, see Section 4.3.2.2 in the *Investigation and Assessment of Potential Biodiversity Offsets – Baralaba North Project and Associated Infrastructure – Footprints Environmental Consultants, December 2014*, attached as **Appendix B2**.

#### **4.2.2 Site Surveys and Results**

There is circa 85ha of brigalow regrowth on gilgai (RE 11.4.8/11.4.9), which is of high value for the ornamental snake and other protected fauna. There is also circa 200ha of additional brigalow regrowth without gilgai, which functions as fauna habitat for the squatter pigeon (adjacent Cockatoo Coal offset project) and as connective vegetation to remnant patches. These additional areas (465ha in total) are also being utilised as offsets for other mining companies therefore improving this offset’s value due to the exponential outcome achieved by this coordinated approach.

#### **4.2.3 Offset Site Start Values**

A copy of the EPBC Offset Assessment Guide calculator output worksheets for the ornamental snake is provided at **Schedule 3. Table 4** below provides a description of the input values used for the calculation.

**Table 4: *Denisonia maculata* (ornamental snake) - Offset Area EPBC Calculator Input (start) and Offset Area future quality (outcome) scores**

Offset Calculator Step	Score attributed	Comments
Step 8 – Time horizon	20 years	Time over which loss is averted: the value selected for time over which loss is averted was the maximum of 20 years for the offset site.
Time until ecological benefit	10 years	As noted in the <i>Conservation of Biodiversity in Brigalow Landscapes (University of Queensland, 2011)</i> , regrowth with an age of 16-30 years begins to have the characteristics of older regrowth with density of stems beginning to thin due to competition for resources and a reduction in grasscover. The improvements from herein are related to stem size and the accumulation of leaf litter and fallen woody debris which is augmented by the exclusion of fire in the area. As the regrowth area is already circa eight years of age, a time of ten years to achieve an intermediate stage is reasonable. During this time, gilgai and associated ecological function will be enhanced, due to the exclusion of mechanical control of the brigalow regrowth. Grazing is restricted to fuel reduction purposes only during the dry season, thus reducing associated impact on the gilgai when moisture is present.
Step 9 – Start area and quality	20 ha  Score - 4	Targeted surveys positively identified the species on-site, both adult and sub-adult.  There were a diverse range of gilgai habitats supported on-site in terms of depth and sizes of depressions and heights and sizes of mounds, and extensive evidence of long term water holding (presence of dense aquatic growth including bogmarsh and sedges).  Positive identification of sub-adult animals on-site indicates that site supports suitable breeding habitat for the species.

Offset Calculator Step	Score attributed	Comments
		<p>Identification of 13 species of frogs in abundance of different age classes on-site, which included “preferred” prey species (<i>Andrew Veary pers. obs and Steve Wilson pers. comm.</i>).</p> <p>However, due to historic land management practices and the abundant presence of cane toads on the site, a ‘Start Quality’ score of ‘4’ has been given for the ornamental snake habitat present on-site.</p>
<p>Step 10 – Future area and quality without offset</p> <p>Risk of loss (%) Without Offset</p>	<p>2.0 ha Score - 1</p> <p>90%</p>	<p>Historically, the Zamia Creek (North Section) property has been subjected to various land management techniques including vegetation clearing and pulling, blade ploughing and inappropriate fire regimes. In addition, active cattle grazing and unfettered access to gilgai areas, particularly during wet environmental conditions, significantly reduces the habitat values of the site. In association with cattle grazing and associated impacts, cane toad populations also have an impact on ornamental snake populations and thus the value of the site. Typically, increased cane toad densities are linked to increasing grazing pressure. Without the offset and the subsequent inability to eliminate these three primary threatening impacts, it is considered highly likely that the habitat values for the ornamental snake will most likely continue to decline which may result in the loss of this species from this property. Therefore, a ‘Future Quality without Offset’ score of ‘1’ has been given.</p>
<p>Step 11 – Future area and quality with offset</p> <p>Risk of loss (%) With Offset</p>	<p>18.0 ha Score - 7</p> <p>10%</p>	<p>This Offset Delivery Plan and accompanying Offset Area Management Plan outlines a number of planned management actions that will be implemented to enable the quality of the habitat on site for the ornamental snake to improve.</p> <p>For example, cattle will be excluded from the gilgai areas of the site (i.e., greater than the offset area) with the exception of controlled grazing activities during dry periods to reduce grass fuel loads.</p> <p>The removal of cattle when there is any evidence of moisture in the gilgais will enable the swelling and cracking nature of the soil to increase the depth of the gilgais over time, as well as to enable the cracks in the soil to stay intact (further assisted by exclusion of mechanical control), which will improve the extent of time that moisture is present in the gilgais, thus enabling a longer period for use of these areas by frogs, as the primary food source for the ornamental snake. These improvements will primarily include increases to longevity of the existing population and breeding success which will lead to more successful recruitment of the site and local area. The values of the gilgai (i.e., the depth of the depressions and the height of the mounds formed through the process of the clay shrinking and swelling) will improve over time, but will be dependent on rainfall events (and the removal of mechanical disturbance), both in terms of occurrence and severity. The exclusion of chemical control methods for regrowth control (both pelleted and foliar spray) should have a positive effect on the native frog population, again enabling a greater food source for the ornamental snake.</p> <p>Further, the risk of mechanical and chemical control of the brigalow community, which provides key habitat attributes for the species, is removed and frequent/high intensity fire is excluded from the offset area to</p>

Offset Calculator Step	Score attributed	Comments
		<p>allow the accumulation of leaf litter and fallen woody debris.</p> <p>The management actions proposed align with mitigating the threats to this species identified in DotE's approved <i>Conservation Advice for Denisonia maculata (Ornamental Snake)</i> (approved 29 April 2014), being:</p> <ul style="list-style-type: none"> <li>• continued legacy of past broadscale land clearing – refer forestry operations and grazing management actions in <b>Table 5</b>.</li> <li>• habitat degradation – refer grazing management actions in <b>Table 5</b>.</li> <li>• modification of habitat through agricultural land and urban development – refer forestry operations and grazing management actions in <b>Table 5</b>.</li> <li>• destruction of wetland habitat by feral pigs – refer pest (pest animals) management actions in <b>Table 5</b>.</li> <li>• destruction of frog habitat (being the key prey source) refer forestry operations and grazing management actions in <b>Table 5</b>.</li> <li>• direct competition for food sources – refer pests (pest animals) management actions in <b>Table 5</b>.</li> </ul> <p>The conservation advice for the ornamental snake also identifies a potential threat of poisoning resulting from the ingestion of cane toads. As outlined in <b>Table 5</b>, there is difficulty in in-field control of cane toads (e.g., as chemical control poses further threats for a range of native species). Research into effective control measures is in its infancy, particularly with regard to control methods in an extended area, such as the Zamia Creek (North Section) offset area.</p> <p>Provided that these key strategies are effectively employed, the habitat values of the offset will improve. The predicted "Future Quality with Offset" score of '7' has been applied within the calculator based upon the effective implementation of a management plan.</p>
Step 12 – Start quality and future quality without offset	Score – 4  Score - 1	See commentary in Step 9 and 10 respectively
Step 13 – Future quality (with offset)	Score – 7	See commentary Step 11
Step 14 – Calculating adjusted gain using confidence in result (%)	12.0 ha 4.5	Automatic Calculator Outputs

Offset Calculator Step	Score attributed	Comments
Confidence in Result	75%	75% confidence based on habitat surveys of the site and proven management measures.
Step 15 – Net present value (adjusted hectares)	8.95 ha	Automatic Calculator Outputs
Step 16 – Percentage of impact offset	102.32%	Automatic Calculator Outputs

## 5 LEGALLY SECURING THE OFFSET

In this instance, the offset will be secured via a Voluntary Declaration, noting that the offset site is an area of high conservation value under the *Vegetation Management Act 1999 (Qld)*. This means the offset site will be declared an area of high nature conservation value under section 19F of the *Vegetation Management Act 1999 (Qld)*, secured for the purposes of an environmental offset. Once this has been registered on the property title, the offset area will be mapped as a Category A area on the Property Map of Assessable Vegetation (**PMAV**). A Category A area on a PMAV is red in colour and is described as an “Area subject to compliance notices, offsets and voluntary declarations”.

A copy of the draft Request for Voluntary Declaration for the property is provided at **Schedule 2**.

## 6 OFFSET MANAGEMENT ACTIONS

An Offset Area Management Plan (**OAMP**) has been prepared in accordance with the specific requirements contained within this Offset Delivery Plan. The OAMP includes, but is not limited to, information on the threats and the management actions required on the offset site to abate those threats identified to the ornamental snake. The OAMP contains details of the management and the reporting and monitoring program that will extend until the management outcomes are achieved.

Management actions recommended in the OAMP include:

- Limitations on the clearing of vegetation to that required for maintenance of fencing and fire control lines;
- Exclusion of domestic livestock from the offset area except for the infrequent grazing associated with fuel reduction in dry periods;
- Feral pest animal management;
- Management of fire; and
- A weed management program.

Please see **Schedule 1** for the OAMP for “Zamia Creek (North Section)”. The schedule of management actions for the Zamia Creek (North Section) property is shown in **Table 5** below for ease of reference.

**Table 5: Management Actions – Zamia Creek (North Section)**

Management action	How the action will be carried out	Where the action will be carried out	When the action will be carried out	Who will be carrying out the action	Progress/ measurable outcomes	Comments/ corrective actions
<b>Forestry Operations, Native Timber Harvesting and general Vegetation clearing</b>	<p>Vegetation clearing on the Offset Area is restricted to:</p> <ul style="list-style-type: none"> <li>a) that necessary for the removal of non-native weeds or declared pests;</li> <li>b) establishing and maintaining fencing around the boundary of the declared area;</li> <li>c) establishing and maintaining fire breaks; and</li> <li>d) ensure public safety</li> </ul> <p>Vegetation clearing for any other purpose <b>is not</b> permitted within the offset area.</p>	Only in those areas subject to non-native weed control, fire control lines and fences.	As required and identified in the quarterly inspections of the fences and collocated fire control lines.	Landowner or suitable qualified person appointed by the Landowner.	<p>No evidence of recent forestry or timber harvesting activities are evident during term of the offset management plan.</p> <p>Any illegal clearing to be recorded in the landholder records and identified during the monitoring and reporting program.</p>	<p>Any evidence of clearing apart from weeds is to be noted in the Annual Landholder reports.</p> <p>If evidence of recent timber harvesting is noted during inspections, the landholder is to reassess access protocols for any lessees etc., signage and general access.</p>
<b>Fire</b>	<p>Fire is to be, excluded from the Offset Area except for low intensity ecological burns by:</p> <ul style="list-style-type: none"> <li>a) Maintaining firebreaks relative to the Offset Area;</li> <li>b) Using a low intensity fire &gt;20 years interval; and</li> <li>c) Firebreaks are to be co-located with roads and fence lines on the property where possible.</li> </ul> <p><b>Note:</b> Fire is not to be used as a tool for regrowth management on the Offset Area.</p>	Throughout the Offset Area.	<p>Fire Control lines are to be inspected weekly and maintenance undertaken as required but at an interval of at least each 2 years.</p> <p>If fire is used at all, it is to be at a low intensity fire at &gt;20 years interval.</p>	Caretaker will undertake weekly inspections, Pastoral Manager monthly inspections. Grading of the fire breaks is to be undertaken by a suitable qualified person appointed by the Pastoral Manager or council CEO.	<p>No evidence of fire is observed during the term of the offset management plan, except for prescribed mosaic &gt; 20 year burns.</p> <p>Any incidence of wild fire or illegal burning (Force Majeure) is to be identified during weekly inspections and documented within the monitoring and reporting program.</p>	<p>Any occurrence of fire in the Offset Area is to be noted during weekly inspections of the property and recorded in the Annual Landholder reports.</p> <p><b>Corrective action:</b> Check and repair all fire control management lines. Destock the offset area, re-establish fire breaks and control lines and if appropriate, widen fire control lines and reassess fuel load reduction practices.</p> <p>Fire and grazing excluded until the grasscover has increased to 50% using the methodology in the Land Manager’s Monitoring Guide as attached to the OAMP.</p>

Management action	How the action will be carried out	Where the action will be carried out	When the action will be carried out	Who will be carrying out the action	Progress/ measurable outcomes	Comments/ corrective actions
<b>Grazing</b>	<p>There is no set stocking rates as this region is subject to significant changes in grass cover with seasonal conditions.</p> <p>It is recognised that competition from non-native pasture species can have a negative effect on the establishment of brigalow communities. Grazing is therefore restricted as per these management actions to reduce the risk of high-intensity fires and to manage the levels of ground cover of the non-native pastures.</p>	<p>A new fence is to be established to exclude cattle from the Zamia Creek watercourse and another fence is to be established along the eastern boundary of the combined 490ha offset area, which includes this offset area.</p> <p>Stock will be grazed in the Offset Area for fuel reduction purposes only during the dry season.</p>	<p>As required when grass fuel loads exceed 50%. During the dry season.</p> <p>Establish the new fence by December 2016. The dry season is normally between April and October; however, if unseasonal rainfall should occur, then grazing is to be allowed only if there is no evidence of moisture in the bottom of the gilgais to ensure that no “pugging” of the soil occurs by livestock.</p>	Pastoral Manager	<p>The Landowner, at their discretion, may graze stock during the dry season, at rates and times necessary to reduce the fuel load in the Offset Area without lowering the grass cover to below 30% at the end of the dry season.</p> <p>No evidence of “pugging” is to occur.</p>	<p>The property Caretaker will undertake twice weekly inspections when stock are grazing the offset area. The Pastoral Manager will undertake monthly inspections of the property to ensure that cattle are not present when there is any evidence of moisture in the gilgai formations, thus preventing the risk of “pugging”.</p> <p>Fence lines are to be inspected weekly during grazing periods and along with Photo point and Terrestrial Habitat Quality Assessment results of grass cover and groundcover, grazing instances, stocking rates, timeframes and rainfall records are to be incorporated into the Annual Landholder Reports and the Compliance reports to BMC and the regulator/s.</p> <p><b>Corrective action:</b> grazing excluded until grass cover has increased to 50% using the methodology in the Land Manager’s Monitoring Guide as attached to the OAMP. If cattle are in the offset area when rainfall occurs, e.g., unscheduled or unauthorised incursion by cattle), they are to be removed within 24 hours and fencelines inspected to ensure security of the offset area.</p>



Management action	How the action will be carried out	Where the action will be carried out	When the action will be carried out	Who will be carrying out the action	Progress/ measurable outcomes	Comments/ corrective actions
<b>Pests</b>	<p><b>Pest Animal Management</b> Minimise the introduction of pest animals and control of existing populations of pest animals (wild pigs) within the Offset Area in accordance with the <i>Land Protection (Pest and Stock Route Management) Act 2002 (Qld)</i>.</p> <p>There is currently no incidence of foxes on the property. Wild pig and dog populations are transient and are infrequent and of short duration and impact due to the small numbers that occur.</p> <p>Current control of pigs and wild dogs is undertaken via an annual baiting programme on the property. Additional to this measure, the caretaker, during weekly inspections of the offset area is to shoot any wild pigs or wild dogs that are seen. If an increase in pig or dog activity is noted, an additional trapping and shooting programme is to be instigated until the increased activity has ceased.</p> <p>Research into methods of cane toad control/management is in its infancy. Cockatoo Coal has adjacent offset areas and will be exploring partnership opportunities with the University of Sydney with regards to commercial scale implementation. This would involve training of the local indigenous community and hence the Department of Aboriginal and Torres Strait Islander and Multicultural Affairs for training.</p> <p><a href="http://sydney.edu.au/science/biology/shine/canetoad_research/scientific-publications-cane-toad-control.shtml">http://sydney.edu.au/science/biology/shine/canetoad_research/scientific-publications-cane-toad-control.shtml</a></p>	Throughout the Offset Area.	As required.	Pastoral Manager, caretaker or suitable qualified person appointed by the Landowner.	Scrappings, wallow holes, tracks and visual incidents along with control measures are to be noted in the Annual Landholders Reports after weekly inspections by the caretaker and monthly inspections by the Pastoral Manager. This evidence is to be collected quarterly and included in the Monitoring and Reporting to the Regulator.	<p><b>Corrective action:</b> if an increase in pig or wild dog numbers is observed, the landholder will implement a pest animal management programme to control the feral animal population.</p> <p>If an increase in pig or wild dog activity is noted during regular landholder inspections of the offset area, then a programme of baiting and or pig trapping is to be instigated until the population and occurrence of these pests is reduced. This will have a greater impact if control measures are integrated with neighbouring properties.</p> <p>Potential cane toad management investigations to be incorporated into the first Annual Report and if a pragmatic training and scaled approach can be identified, incorporated into the Pest Animal Control Programme.</p>

Management action	How the action will be carried out	Where the action will be carried out	When the action will be carried out	Who will be carrying out the action	Progress/ measurable outcomes	Comments/ corrective actions
	<p><b>Weeds</b></p> <ol style="list-style-type: none"> <li>1. Keep the introduction, establishment and spread of non-native weeds including <i>Declared Pest Plants listed under the Land Protection (Pest and Stock Route Management) Act 2002 (Qld)</i> to less than 10% weed cover over the Offset Area.</li> <li>2. Control existing infestations of non-native weeds including Declared Pest Plants under the <i>Land Protection (Pest and Stock Route Management) Act 2002 (Qld)</i> to ensure that the non-native weeds cover is less than 10% of the Offset Area. e.g., Parthenium, mother of millions, and velvety tree pear.</li> <li>3. Buffel in this instance is recognised as being a threat to the ecological community/habitat however is not referred to as a weed. Control of buffel is best managed via grazing during the dry season and by increasing tree canopy cover. The dry season is normally between April and October; however, if unseasonal rainfall should occur, then grazing is to be allowed only if there is no evidence of moisture in the bottom of the gilgais to ensure that no "pugging" of the soil occurs.</li> <li>4. The use of broadscale herbicide is not recommended due to the potential impact on frog species in the creek and gilgai formations. This impact would lead to a negative impact on the ornamental snake population via the loss of frog species and population on which it is reliant.</li> <li>5. Spot spraying of patches of Parthenium and mother of millions is allowed as required.</li> <li>6. The rare occurrences of tree pear are to be treated as per the recommended advice at the time of treatment.</li> </ol>	Throughout the Offset Area.	Any weed control required will be undertaken as early as practicable within the natural regeneration process throughout the Offset Area and then periodically as required to treat the weeds at the optimum time in their life cycles to control and minimise the spread of the existing weed species.	Pastoral Manager, caretaker or suitable qualified person appointed by the Landowner.	Observations during routine property inspections by the caretaker (weekly) or by the Pastoral Manager (monthly). Incidence, observations and resultant control measures are to be recorded via photos and additionally by the photo point and Terrestrial Habitat Quality Assessment results of grass cover and non-native groundcover to be incorporated into the Annual Landholder Reports and the Compliance reports to BMC and the regulator.	<p><b>Corrective action:</b></p> <p>The level of weed infestation is low in the observed areas and spot spraying of small outbreaks observed during routine property inspections should suffice.</p> <p>Broadscale chemical spraying is NOT supported due to the potential negative effect on the native frog population thus impacting on the ornamental snake population due to ingestion of the chemicals and the reduction in the frog population.</p>

## 7 MONITORING AND REPORTING

Regular monitoring and reporting on the progress of the offset will be provided to the regulator with annual Landholder Records collected and annual photo point monitoring to be conducted. The property caretaker undertakes weekly inspections of the offset area and the whole property, with the Pastoral Manager inspecting the property on a monthly basis. Observations, subsequent corrective actions and incidences of fire, pests, weeds and grazing are to be recorded during these inspections along with rainfall records, and collated into the annual Landholder Records. These records will be combined with the annual photo point records taken during the first five years and included in the annual report to the regulator and BMC. The collation and submission of these reports is the responsibility of BMC.

Additionally, every five years for a 15 year period (until 30 June 2030), BioCondition assessments will be conducted at the same locations as the baseline measurements and the annual photo points. These are the same locations from which the baseline data was collected and incorporated into the EPBC Offset Calculator. The five year BioCondition monitoring will measure 13 attributes for ecological condition. Data for each of the attributes monitored will be collected at each site and reported on and presented in a sequential manner (including previous data collected) to quantify change from the benchmark collected in 2015. This will record the change in each attribute measured and hence the condition of the ecological community and the ornamental snake habitat, thus enabling a statistical comparison to previous years' data and the progression of the offset site condition and EPBC Offset Assessment Guide Calculator inputs. The monitoring and reporting requirements are detailed in sections 6 and 7 of the Offset Area Management Plan. For ease of reference, the relevant tables from those sections are shown in **Table 6** below, and the schedule of reporting is shown at **Table 7**.

**Table 6: Monitoring and Reporting Requirements**

Monitoring	Attributes monitored	Frequency	Method	Location/s
<b>Surveys undertaken by Ecologists</b>				
<b>Baseline monitoring</b>	Ecological Condition attributes (refer below in this table).	At commencement of Plan (year 0)	Field observations, vegetation assessment as per Queensland Terrestrial Habitat Quality Assessment methodology (using former BioCondition methodology).	BioCondition Site 1 and observation sites 23, 24 as listed at <b>Table 7</b> in the <i>Offset Area Management Plan at Schedule 1</i> .
<b>Ecological condition</b>	Recruitment of woody perennial species in EDL Native plant species richness - trees Native plant species richness - shrubs Native plant species richness - grasses Native plant species richness - forbs Tree canopy height Tree canopy cover Shrub canopy cover Native perennial grass cover Organic litter Large trees Coarse woody debris	<u>BioCondition site 1</u> At commencement (year 0) and then every 5 years to (and including) year 2030; reported every 5 years	Field observations, vegetation assessment as per Queensland Terrestrial Habitat Quality Assessment methodology.  Data for each of the ecological condition attributes monitored (BioCondition methodology) will be collected at each site listed in <b>Table 7</b> in the <i>Offset Area Management Plan at Schedule 1</i> and reported on and presented in a sequential manner (including previous data collected)	BioCondition Site 1 and observation sites 23, 24 as listed at <b>Table 7</b> in the <i>Offset Area Management Plan at Schedule 1</i> .

Monitoring	Attributes monitored	Frequency	Method	Location/s
	Non-native plant cover		to quantify change from the benchmark collected in 2015. This will record the change in each attribute measured and hence the condition of the ecological community and the ornamental snake habitat, thus enabling a statistical comparison to previous years' data and the progression of the offset site condition and EPBC Offset Assessment Guide Calculator inputs.	
<b>Landholder Records</b>				
<b>Photo Points</b>	Visual record of the change in the structure and composition of the ecological community over time.	Reported annually in April/May for the first 5 years and then every 5 years to (and including) year 2030	A sequence of photos taken annually from the same location (refer <b>Table 7</b> of the <i>Offset Area Management Plan at Schedule 1</i> ) and at the same time of year will record changes in ground cover, woody plant populations, and illustrate the long-term effects of management as well as short-term changes caused by seasonal conditions and the effects of grazing management thus enabling a direct comparison to previous years' photos and the progression of the offset site condition.	BioCondition Site 1 and observation sites 23, 24 as listed at <b>Table 7</b> in the <i>Offset Area Management Plan at Schedule 1</i> .
<b>Grazing</b>	Stocking rates and timing, incidence and extent		Pastoral Manager/landholder representative will undertake inspections of the offset area to observe and record grass cover levels, weed occurrence and any evidence of pest animal incursion. These records are to be collated and reported every year for the first 5 years. Subsequently, they are to be included in the five yearly reports along with the Terrestrial Habitat Quality Assessment reports.	Within Offset Area
<b>Fire</b>	Occurrence, control measures, timing and result of the control measures			
<b>Weeds</b>	Occurrence, control measures adopted, timing of the control measures and the result			
<b>Pest animals</b>	Occurrence, control measures adopted, timing of control measures and the result.			

**Table 7: Reporting Schedule**

Offset Year	Report Details	Date to be submitted
1	Offset Area Annual Report including Photopoint and Landholder Records collated and reported to the administrating authority.	1 <sup>st</sup> anniversary of offset being secured (2016)
2	Offset Area Annual Report including Photopoint and Landholder Records collated and reported to the administrating authority.	2 <sup>nd</sup> anniversary of offset being secured (2017)
3	Offset Area Annual Report including Photopoint and Landholder Records collated and reported to the administrating authority.	3 <sup>rd</sup> anniversary of offset being secured (2018)
4	Offset Area Annual Report including Photopoint and Landholder Records collated and reported to the administrating authority.	4 <sup>th</sup> anniversary of offset being secured (2019)
5	Offset Area Report summarising all monitoring defined in <i>Table 6</i> of the OAMP for the first 5 years of the offset	5 <sup>th</sup> anniversary of offset being secured (2020)
10	Offset Area Report summarising all monitoring defined in <i>Table 6</i> of the OAMP for years 6 to 10 of the offset	10 <sup>th</sup> anniversary of offset being secured (2025)
15	Offset Area Report summarising all monitoring defined in <i>Table 6</i> of the OAMP for years 11 to 15 of the offset	15 <sup>th</sup> anniversary of offset being secured (2030)

## 8 GOVERNANCE ARRANGEMENTS

The site will be managed as per the OAMP as attached at **Schedule 1**. The key risks and corresponding management and corrective actions from the management plan are detailed at Section 4 of the OAMP. The Monitoring and Reporting as detailed previously will be undertaken to verify the management actions have been undertaken and that the offset site is improving. The OAMP is attached to the title of the property via the Voluntary Declaration under the *Vegetation Management Act 1999 (Qld)*, which gives the State legislative powers to oversee the offset's implementation.

## **SCHEDULE 1: OFFSET AREA MANAGEMENT PLAN – ZAMIA CREEK (NORTHERN SECTION)**

Please see pdf file supplied separately.

## SCHEDULE 2: LEGAL SECURITY – ZAMIA CREEK

### Title search – Zamia Creek

#### CURRENT TITLE SEARCH

DEPT OF NATURAL RESOURCES AND MINES, QUEENSLAND

Request No: 20004395  
Search Date: 15/12/2014 10:34

Title Reference: 50887354  
Date Created: 30/07/2012

Previous Title: 40064696

#### REGISTERED OWNER

Dealing No: 714595075 30/07/2012

WOORABINDA ABORIGINAL SHIRE COUNCIL

DEED OF GRANT IN TRUST

THE GRANTEE TO HOLD THE SAID LAND IN TRUST FOR THE BENEFIT  
OF ABORIGINAL INHABITANTS AND FOR NO OTHER PURPOSE  
WHATSOEVER

#### ESTATE AND LAND

Estate in Fee Simple

LOT 18	CROWN PLAN BH164 County of BAUHINIA Local Government: WOORABINDA	Parish of BAUHINIA
LOT 9	CROWN PLAN BH194 County of BAUHINIA Local Government: WOORABINDA	Parish of BAUHINIA
LOT 5	CROWN PLAN KM135 County of KIMBERLEY Local Government: WOORABINDA	Parish of WALLBURY
LOT 39	CROWN PLAN KM148 County of KIMBERLEY Local Government: WOORABINDA	Parish of DUARINGA
LOT 1	CROWN PLAN LR146 County of LEURA Local Government: WOORABINDA	Parish of BALCOMBA
LOT 73	CROWN PLAN WNA156 County of WOOROONA Local Government: WOORABINDA	Parish of WOOROONA
LOT 135	SURVEY PLAN 241206 County of WOOROONA Local Government: WOORABINDA	Parish of WOOROONA
LOT 136	SURVEY PLAN 241206 County of WOOROONA Local Government: WOORABINDA	Parish of WOOROONA
LOT 137	SURVEY PLAN 241206 County of WOOROONA Local Government: WOORABINDA	Parish of WOOROONA
LOT 138	SURVEY PLAN 241206 County of WOOROONA Local Government: WOORABINDA	Parish of WOOROONA
LOT 139	SURVEY PLAN 241206 County of WOOROONA Local Government: WOORABINDA	Parish of WOOROONA
LOT 140	SURVEY PLAN 241206 County of WOOROONA	Parish of WOOROONA

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## CURRENT TITLE SEARCH

DEPT OF NATURAL RESOURCES AND MINES, QUEENSLAND

Request No: 20004395  
Search Date: 15/12/2014 10:34

Title Reference: 50887354  
Date Created: 30/07/2012

### ESTATE AND LAND

Local Government: WOORABINDA

For exclusions / reservations for public purposes refer to  
Plan CP BH164  
For exclusions / reservations for public purposes refer to  
Plan CP BH194  
For exclusions / reservations for public purposes refer to  
Plan CP KM135  
For exclusions / reservations for public purposes refer to  
Plan CP KM148  
For exclusions / reservations for public purposes refer to  
Plan CP LR146  
For exclusions / reservations for public purposes refer to  
Plan SP 241206

### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by  
Deed of Grant No. 30563185 (Lot 18 on CP BH164)  
(Lot 9 on CP BH194)  
(Lot 5 on CP KM135)  
(Lot 39 on CP KM148)  
(Lot 1 on CP LR146)  
(Lot 6 on CP WNA141)
2. LEASE No 601334269 (C524360) 28/10/1986  
OVER PART OF THE LAND  
TO ABORIGINES INLAND MISSION OF AUSTRALIA (PROPERTY  
HOLDING) PTY LIMITED  
ORIGINAL TERM 30 YEARS  
COMMENCING 01 NOV 1984  
UNDER SECTION 19 OF THE LAND ACT (ABORIGINAL AND ISLANDER  
LAND GRANTS) AMENDMENT ACT 1982-1986
3. LEASE No 601334270 (C524361) 28/10/1986  
OVER PART OF THE LAND  
TO THE CORPORATION OF THE SYNOD OF THE DIOCESE OF  
ROCKHAMPTON  
ORIGINAL TERM: 30 YEARS  
COMMENCING 01 NOV 1985  
UNDER SECTION 19 OF THE LAND ACT (ABORIGINAL AND ISLANDER  
LAND GRANTS) AMENDMENT ACT 1982-1986
4. TRANSFER No 701501586 19/08/1996 at 16:17  
LEASE: 601334270 (C524361 )  
WADJA WADJA ABORIGINAL CORPORATION FOR EDUCATION

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## CURRENT TITLE SEARCH

DEPT OF NATURAL RESOURCES AND MINES, QUEENSLAND

Request No: 20004395  
Search Date: 15/12/2014 10:34

Title Reference: 50887354  
Date Created: 30/07/2012

### EASEMENTS, ENCUMBRANCES AND INTERESTS

5. TRUSTEE LEASE No 713510506 11/10/2010 at 14:31  
LEOTED PTY LTD A.B.N. 28 378 468 287  
OF PART OF THE GROUND FLOOR (LEASE G)  
SO FAR AS RELATES TO LOT 6 ON WNA141  
TERM: 05/03/2010 TO 05/03/2014 OPTION NIL
6. TRANSFER No 713798057 07/04/2011 at 11:08  
TRUSTEE LEASE: 713510506  
TRUSTEE LEASE: 713510516  
DARYL PETER CATLIN  
BETTY THOMASINE CATLIN JOINT TENANTS
7. TRUSTEE LEASE No 713510516 11/10/2010 at 14:33  
LEOTED PTY LTD A.B.N. 28 378 468 287  
OF PART OF THE GROUND FLOOR (LEASE E)  
SO FAR AS RELATES TO LOT 6 ON WNA141  
TERM: 05/03/2010 TO 05/03/2014 OPTION NIL
8. TRUSTEE LEASE No 713852367 13/05/2011 at 14:44  
THE STATE OF QUEENSLAND  
(REPRESENTED BY DEPARTMENT OF COMMUNITIES)  
LEASES ZA - ZD ON SP232210, LEASE ZE ON SP232209, LEASE ZF  
ON SP232211, LEASE ZG ON SP232212, LEASE ZH ON SP232213,  
LEASE ZJ ON SP232214, LEASE ZK ON SP232215, LEASE ZL ON  
SP232216, LEASE ZM ON SP232219 AND LEASE ZN ON SP232220  
ALL SO FAR AS RELATE TO LOT 6 ON CP WNA141  
TERM: 15/07/2010 TO 14/07/2050 OPTION 40 YEARS
9. LEASE No 714400339 05/04/2012 at 11:16  
CENTRAL QUEENSLAND INDIGENOUS DEVELOPMENT LIMITED A.C.N. 110  
812 489  
OF LEASE F ON SP143252  
IN LOT 6 ON CP WNA141  
TERM: 01/10/2012 TO 01/09/2022 OPTION NIL

## CURRENT TITLE SEARCH

DEPT OF NATURAL RESOURCES AND MINES, QUEENSLAND

Request No: 20004395  
Search Date: 15/12/2014 10:34

Title Reference: 50887354  
Date Created: 30/07/2012

### EASEMENTS, ENCUMBRANCES AND INTERESTS

10. TRUSTEE LEASE No 714877005 09/01/2013 at 15:22  
THE STATE OF QUEENSLAND  
(REPRESENTED BY DEPARTMENT OF HOUSING AND PUBLIC WORKS)  
OF LEASES JN AND JM IN LOT 135 ON SP241206 ON SP251896,  
LEASES IIA TO IIE IN LOT 135 ON SP241206 ON SP251901,  
LEASES AA TO AK IN LOT 135 ON SP241206 ON SP253964, LEASES  
DA TO DJ IN LOT 135 ON SP241206 ON SP253965, LEASES DK TO  
DS IN LOT 135 ON SP241206 ON SP253966, LEASES DDG AND DDI  
TO DDO IN LOT 135 ON SP241206 ON SP253967, LEASES DDP TO  
DDU IN LOT 135 ON SP241206 ON SP253968, LEASES DT TO DZ IN  
LOT 135 ON SP241206 ON SP253969, LEASES DDA TO DDF IN LOT  
135 ON SP241206 ON SP253970, LEASES BBJ TO BBQ IN LOT 135 ON  
SP241206 ON SP253971, LEASES BBD TO BBI IN LOT 135 ON  
SP241206 ON SP253972, LEASES BX TO BZ AND BBA TO BBC IN LOT  
135 ON SP241206 ON SP253973, LEASES BP TO BW IN LOT 135 ON  
SP241206 ON SP253974, LEASES BH TO BO IN LOT 135 ON SP241206  
ON SP253975, LEASES BA TO BG IN LOT 135 ON SP241206 ON  
SP253976, LEASES EA TO EG IN LOT 135 ON SP241206 ON SP253977  
LEASES EH TO EJ AND FB IN LOT 135 ON SP241206 ON SP253978,  
LEASES DDV TO DDX IN LOT 135 ON SP241206 ON SP253979, LEASES  
HA TO HD IN LOT 135 ON SP241206 ON SP253980, LEASES HE TO HK  
IN LOT 135 ON SP241206 ON SP253981, LEASES IA TO IB AND II  
TO IL IN LOT 135 ON SP241206 ON SP253982, LEASES IC TO IG IN  
LOT 135 ON SP241206 ON SP253983, LEASES IM TO IZ IN LOT 135  
ON SP241206 ON SP253984, LEASES JA TO JL IN LOT 135 ON  
SP241206 ON SP253985  
TERM: 12/11/2012 TO 11/11/2052 OPTION NIL
11. TRUSTEE LEASE No 715194053 10/07/2013 at 11:23  
THE STATE OF QUEENSLAND  
(REPRESENTED BY DEPARTMENT OF HOUSING AND PUBLIC WORKS)  
OF LEASE KA TO KI IN LOT 135 ON SP241206 ON SP251909  
TERM: 16/05/2013 TO 15/05/2053 OPTION 40 YEARS
12. TRUSTEE LEASE No 715644870 10/03/2014 at 14:38  
HAZEL JEAN BOUNGHI  
CAMPBELL LEISHA JOINT TENANTS  
OF THE WHOLE OF LOT 73 ON WNA156  
TERM: 08/02/1990 TO IN PERPETUITY OPTION NIL
13. TRUSTEE LEASE No 715946140 11/08/2014 at 13:30  
THE STATE OF QUEENSLAND  
(REPRESENTED BY DEPARTMENT OF HOUSING AND PUBLIC WORKS)  
OF LEASES LA, LF, LH, LJ, LL, LN, LP, LR, LU, LV, LZ, LAB, LAD, LAG AND  
LAI ON SP264561 IN LOT 135 ON SP241206  
TERM: 26/05/2014 TO 25/05/2054 OPTION NIL

## CURRENT TITLE SEARCH

DEPT OF NATURAL RESOURCES AND MINES, QUEENSLAND

Request No: 20004395  
Search Date: 15/12/2014 10:34

Title Reference: 50887354  
Date Created: 30/07/2012

### ADMINISTRATIVE ADVICES

Dealing	Type	Lodgement Date	Status
711171527	VEG NOTICE VEGETATION MANAGEMENT ACT 1999	12/11/2007 14:42	CURRENT
711528269	VEG NOTICE VEGETATION MANAGEMENT ACT 1999	26/03/2008 14:46	CURRENT

UNREGISTERED DEALINGS - NIL

### CERTIFICATE OF TITLE ISSUED - No

Corrections have occurred - Refer to Historical Search

Caution - Charges do not necessarily appear in order of priority

\*\* End of Current Title Search \*\*

COPYRIGHT THE STATE OF QUEENSLAND (DEPT OF NATURAL RESOURCES AND MINES) [2014]  
Requested By: D APPLICATIONS CITEC CONFIRM

# Draft Request for Voluntary Declaration

Submit by Email

Print Form

Department of Natural Resources and Mines

## Request for a Voluntary Declaration

### Vegetation Management Act 1999

#### Section 1 - Proponent details

The proponent is the owner of the land and may comprise of more than one person where there is joint ownership of land -

Owner, of land includes -

- (a) for freehold land - the registered owner; or
- (b) for a lease, license or permit under the Land Act 1994 - the lessee, licensee or permittee; or
- (c) for indigenous land - the holder of title to the land; or
- (d) for any tenure under any other Act - the holder of the tenure.

Extra pages may be attached to list additional owners.

All correspondence will be directed to the 'contact person'.

Purpose(s) of declaration

- participating in a conservation incentives program(s)       carbon emission offsetting  
 to offset clearing associated with a development approval       other conservation purposes

Owner/s of land

Title	Family name	Given name
	Woorabinda Aboriginal Shire Council	

Name of Company/Organisation (if the owner is a company)

ACN (if applicable)

Contact person

Title	Family name	Given name
<input type="text"/>	<input type="text"/>	<input type="text"/>

Phone number

Mobile number

Fax number

Address

<input type="text"/>
Postcode

#### Section 2 - Property Description and Tenure

This is the property on which the voluntary declaration area is proposed. The vegetation management plan should indicate the specific location of the proposed declared area on the property.

Extra pages may be attached to list additional lots.

Tenure of property(ies) containing proposed declaration area.

Parcel (lot and plan)	Owner/s	Tenure (e.g. Freehold, Grazing Homestead Perpetual Lease)
Lot 9 BH194	Woorabinda Aboriginal Shire Council	Freehold

Great state. Great opportunity.



### Section 3 - Registered interest holders in proposed declaration area

A registered interest is one registered under the Land Act 1994 or the Land Title Act 1994.

Registered interests are mortgages, leases, subleases, covenants, profit a prendes, easements and building management statements.

A declaration may not be made unless the holder of a registered interest (other than the proponent) in the proposed declaration area has consented in writing to the making of the declaration.

NOTE: Section 3 only requires the recording of registered interest holders- consent of registered interest holders is not required as part of the request. The proponent will need to seek written consent to the declaration of all registered interest holders once the Department has considered the request, and prior to the making of any declaration.

Extra pages may be attached to list additional lots and/or registered interest holders.

Parcel (lot and plan)	Type of Registered Interest	Registered interest holder's name and contact details

### Section 4 - Type of declaration request

Specify the type of declaration that is requested, and the relevant criteria for the declaration. One or more of the criteria may be applicable to the area being sought for declaration.

The proponent must provide an explanation of how the declared area meets the criteria selected in this section. This explanation must be provided in the documents accompanying the request. The 'Guide to voluntary declarations under the *Vegetation Management Act 1999*' may be viewed for assistance in preparing a request.

- Area of high nature conservation value
- a wildlife refugium
  - a centre of endemism
  - an area containing a vegetation clump or corridor that contributes to the maintenance of biodiversity
  - an area that makes a significant contribution to the conservation of biodiversity
  - an area that contributes to the conservation value of a wetland, lake or spring.
  - another area that contributes to the conservation of the environment

OR

- Area vulnerable to land degradation
- soil erosion
  - rising water tables
  - the expression of salinity, whether inside or outside the area
  - mass movement by gravity of soil or rock
  - stream bank instability
  - a process that results in declining water quality

### Section 5 - Management Plan

The Management Plan must contain all the components identified in this section. The Management Plan is to refer to the area identified in section 2 of this form. The Management Plan may also include any other information the applicant considers will assist in the determination of the request. For more information on the Management Plan, consult the Guide to Voluntary Declarations and the Management Plan template.

A Management Plan must accompany all voluntary declaration requests. The attached Management Plan

- contains the proponent's signature
- includes enough information to allow the chief executive to map the boundary of the stated area
- states the proponent's management intent, and management outcomes proposed by the proponent, for the conservation of the high nature conservation value of the area or the prevention of land degradation in the area
- states the activities the proponent intends to carry out, or refrain from carrying out, to achieve the stated management outcomes
- states the restrictions, if any, to be imposed on the use of, or access to, the area by other persons to achieve the stated management outcomes

**Section 6 - Information privacy statement**

The Department of Natural Resources and Mines (DNRM) is collecting the information in this form and any attachments to process your request that the chief executive declare a stated area of land under the *Vegetation Management Act 1999*. The consideration of your request may involve consultation, and if so, details of your request and any attachments may be disclosed to third parties. These details will not otherwise be disclosed outside DNRM unless required or authorised by law.

**Section 7 - Signature/s**

The owner(s) of the land (proponent) must sign and date this section

If there are more than four owners, extra pages may be attached with a copy of the 'statement' with the signature(s).

A company

- may execute a document without using a common seal if the document is signed by two (2) directors of the company or a director and a company secretary; or for a proprietary company that has a sole director who is also the sole company secretary - that director; or
- with a company seal may execute a document if the seal is fixed to the document and the fixing of the seal is witnessed by two (2) directors of the company or a director and a company secretary; or for a proprietary company that has a sole director who is also the sole company secretary - that director.

Statement

I/We

- consent to the collection and use of the personal information in this form for the purposes of assessing this request for a voluntary declaration under the *Vegetation Management Act 1999*; and
- declare that the information provided by me/us is true and correct

Proponent (Owner's) signature

Date

Company seal (if applicable)

Proponent (Owner's) signature

Date

Proponent (Owner's) signature

Date

Proponent (Owner's) signature

Date

**Office use only**

Date received

Receiving officer

Reference number

**SCHEDULE 3: OFFSET CALCULATOR OUTPUTS**

**Offsets Assessment Guide**  
 For use in determining offsets under the Environment Protection and Biodiversity Conservation Act 1999  
 1 October 2012  
 This guide might not be being updated in your browser.

Matter of National Environmental Significance	
Name	Commonwealth Government
EPBC Act section	117(1)(b)
Annual probability of extinction	0.2%
Based on IUCN category definition	

Key to Cell Colours	
Blue	Has input required
Light blue	Dependent on
White	Calculated output
Grey	Not applicable to attribute

Impact calculator						
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Units	Information source	
<i>Ecological communities</i>						
Area of community	No		Area			
			Quality			
			Total quantum of impact	0.00		
<i>Threatened species habitat</i>						
Area of habitat	No	Habitat supporting <i>Macrotis lewinii</i>	Area	172	Hectares	
			Quality	5	Scale 0-10	Habitat supporting <i>Macrotis lewinii</i>
			Total quantum of impact	0.75	Adjusted hectares	
<i>Threatened species</i>						
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Units	Information source	
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
<i>Threatened species</i>						
Birth rate e.g. Change in nest success	No					
Mortality rate e.g. Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

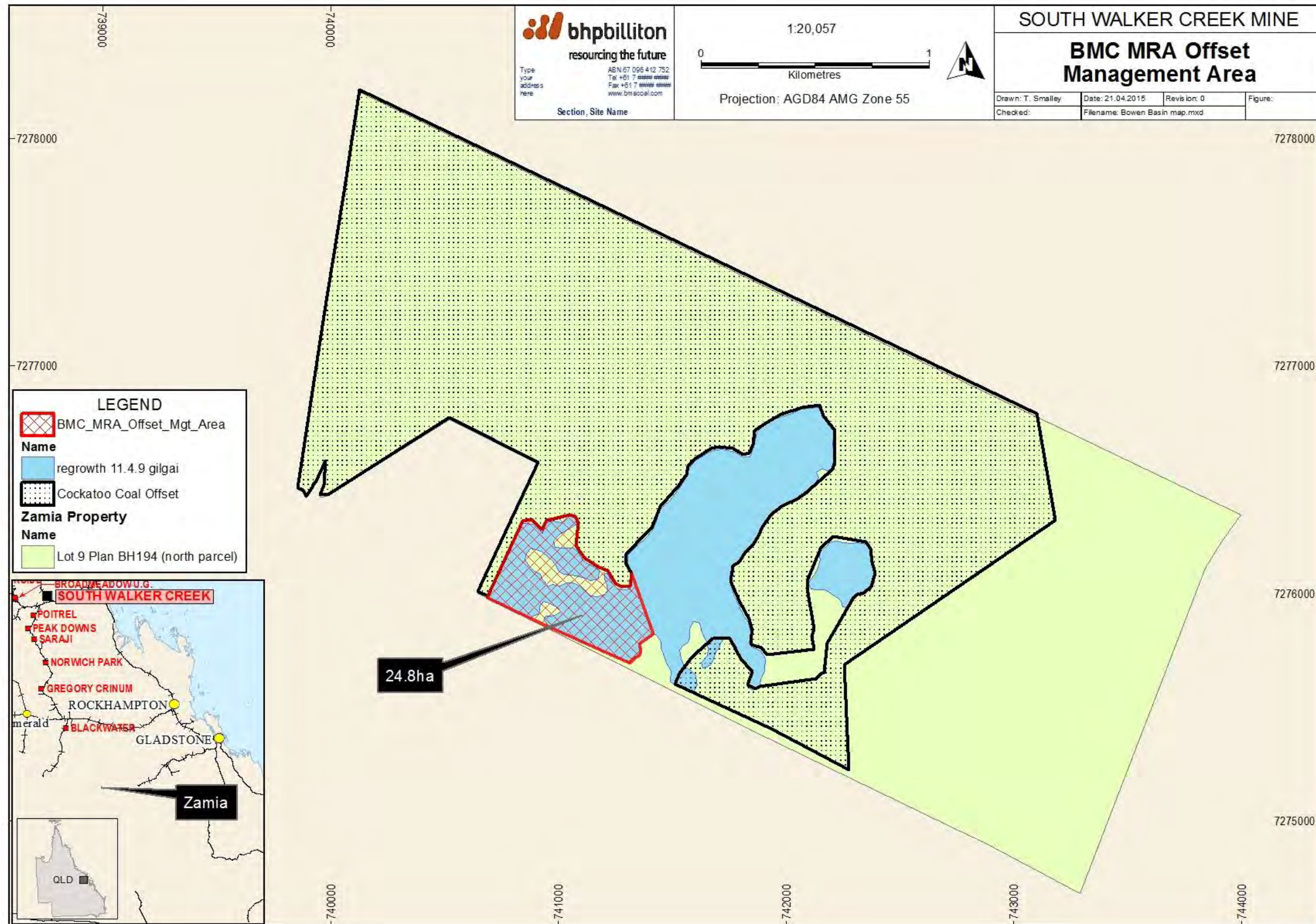
Offset calculator																	
Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)	Start area and quality	Future area and quality without offset	Future area and quality with offset	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	% of impact offset	Minimum (90%) direct offset requirement m <sup>2</sup>	Cost (\$ total)	Information source	
<i>Ecological Communities</i>																	
Area of community	No				Risk offset time horizon (max. 20 years)	Start area (hectares)	Risk of loss (%) without offset	Risk of loss (%) with offset									
							Future area without offset (adjusted hectares)	Future area with offset (adjusted hectares)									
							Time until ecological benefit	Start quality (scale of 0-10)	Future quality without offset (scale of 0-10)	Future quality with offset (scale of 0-10)							
<i>Threatened species habitat</i>																	
Area of habitat	No	0.75	Adjusted hectares	Habitat supporting <i>Macrotis lewinii</i>	Time over which loss is averted (max. 20 years)	Start area (hectares)	Risk of loss (%) without offset	Risk of loss (%) with offset	90%	10%	14.00	75%	12.00	13.33	0.95	102.32%	762
							Future area without offset (adjusted hectares)	Future area with offset (adjusted hectares)	2.0	18.0							
							Time until ecological benefit	Start quality (scale of 0-10)	Future quality without offset (scale of 0-10)	Future quality with offset (scale of 0-10)	4	7	5.00	75%	4.50	4.41	
<i>Threatened species</i>																	
Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)	Start value	Future value without offset	Future value with offset	Raw gain	Confidence in result (%)	Adjusted gain	Net present value	% of impact offset	Minimum (90%) direct offset requirement m <sup>2</sup>	Cost (\$ total)	Information source	
Number of features e.g. Nest hollows, habitat trees	No																
Condition of habitat Change in habitat condition, but no change in extent	No																
<i>Threatened species</i>																	
Birth rate e.g. Change in nest success	No																
Mortality rate e.g. Change in number of road kills per year	No																
Number of individuals e.g. Individual plants/animals	No																

Summary							
Protected matter attributes	Quantum of impact	Net present value of offset	% of impact offset	Direct offset adequate?	Cost (\$)		
					Direct offset (\$)	Other compensatory measures (\$)	Total (\$)
Birth rate	0				\$0.00		\$0.00
Mortality rate	0				\$0.00		\$0.00
Number of individuals	0				\$0.00		\$0.00
Number of features	0				\$0.00		\$0.00
Condition of habitat	0				\$0.00		\$0.00
Area of habitat	0.75	\$95	102.32%	Yes	\$0.00	\$95	\$0.00
Area of community	0				\$0.00		\$0.00
					\$0.00	\$0.00	\$0.00

BMC\_Mulgrave\_Pit\_Ornamental Snake Offset Calculations 17052012

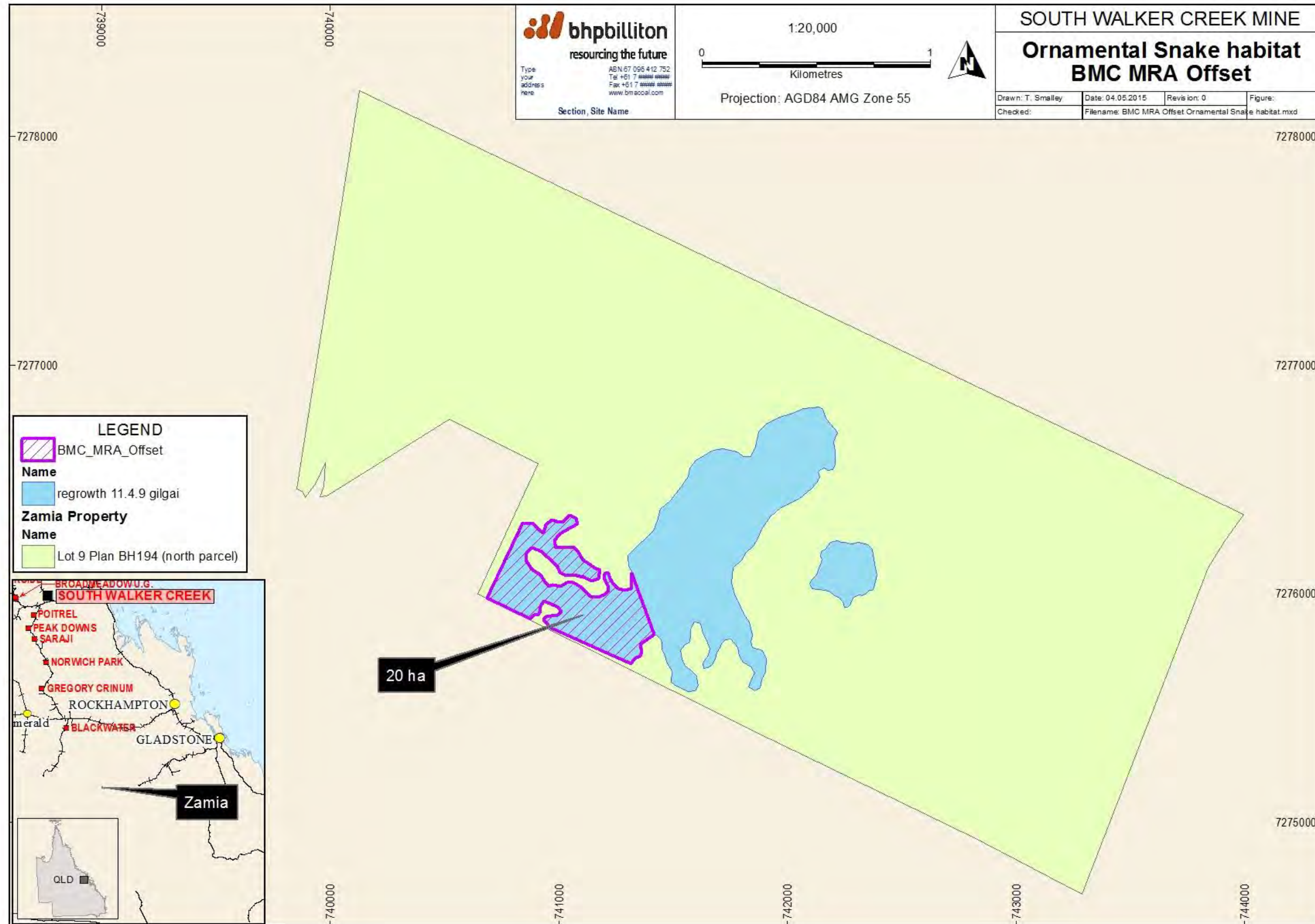
**APPENDIX A: OFFSET MAPPING**

**A1: Offset Management Area**

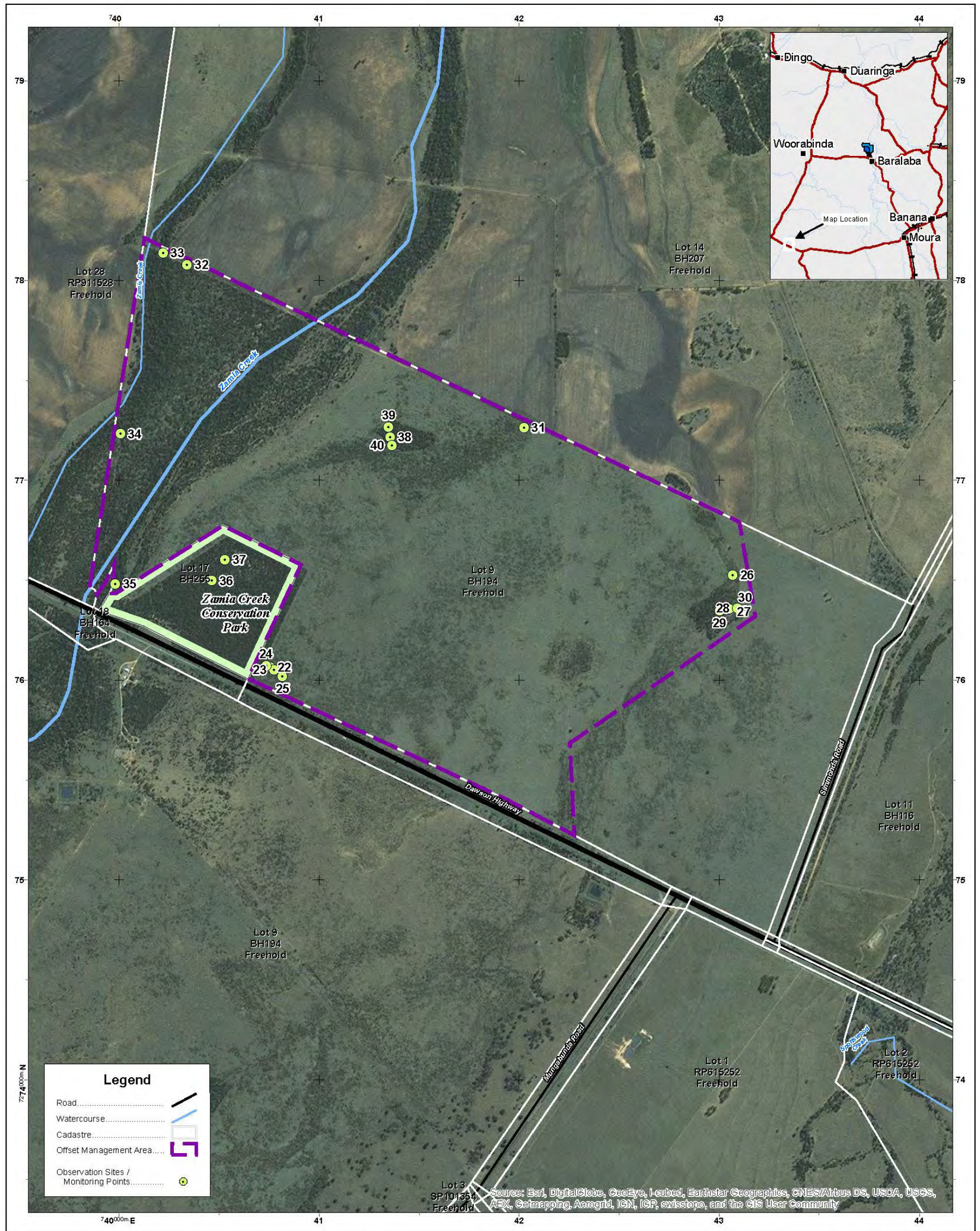




**A2: Ornamental Snake Offset Area**



A3: Offset Area Monitoring Points

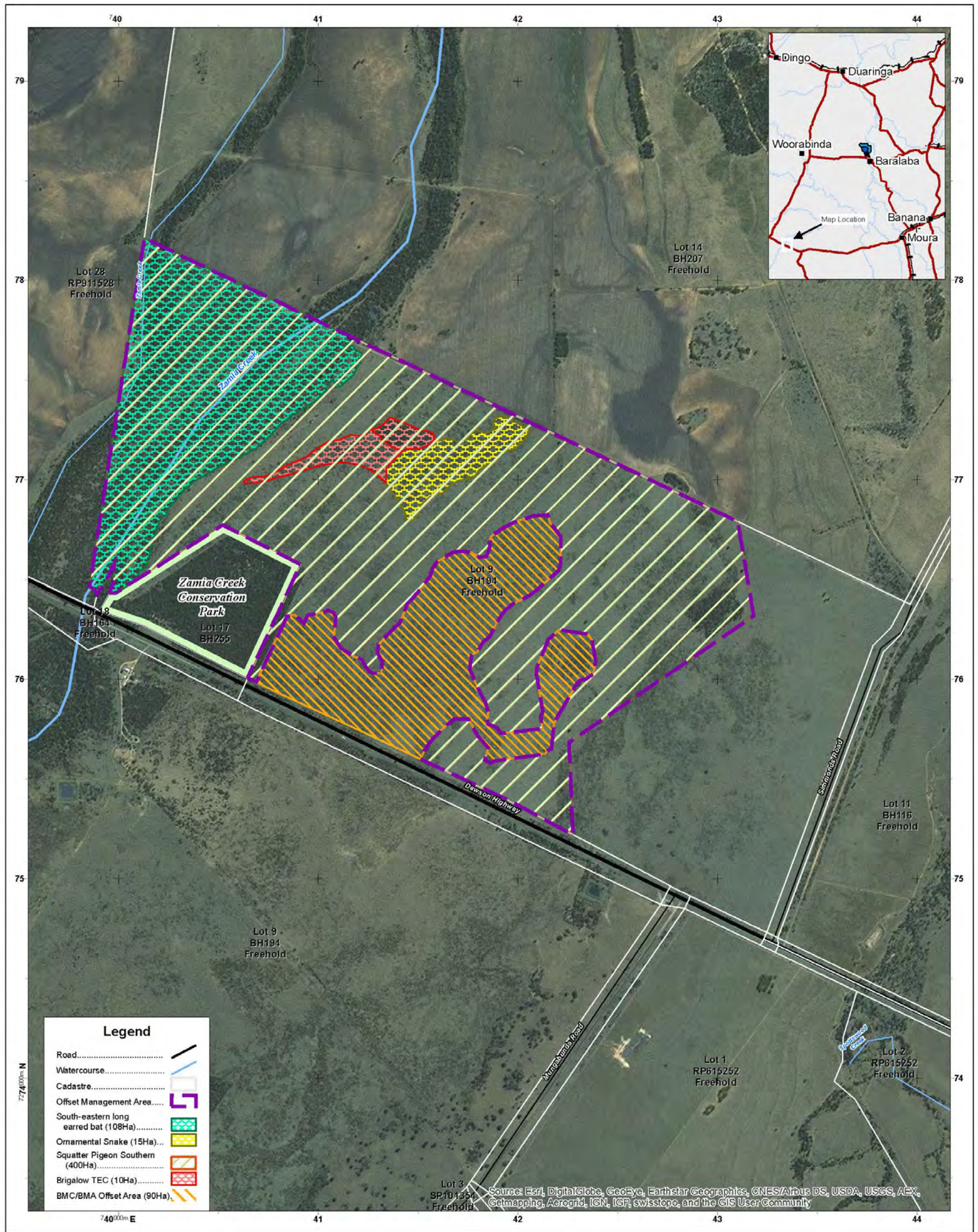


<b>PROJECT</b> <b>'ZAMIA' OFFSET AREA MANAGEMENT PLAN</b>		<small>DISCLAIMER:</small> Cookatoo Coal Ltd has exercised all due care in the production of this map. Cookatoo Coal Ltd makes no warranty or representation to the client or third parties (expressed or implied) in respect to the information conveyed on this map, particularly with regard to any commercial investment decision made on the basis of this map. Use of this map by the client or third parties shall be at their own risk, and extracts from the map may only be published with the permission of Cookatoo Coal Ltd.				<small>DATA SOURCES:</small> VECTOR DATA: © DERM - LAND & PROPERTY DATA © GEOSCIENCE AUSTRALIA  PUBLICLY ACCESSIBLE DATA HAS BEEN INCORPORATED INTO THIS MAP (AC CREDITED ABOVE). COOKATOO COAL PROVIDES NO WARRANTY TO THE ACCURACY, COMPLETENESS OR CURRENCY OF THIS DATA.																						
<b>TITLE</b> <b>Figure 4 Offset Area Monitoring Points</b>		<table border="1"> <thead> <tr> <th>REV</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Original map output</td> <td>06/02/15</td> </tr> <tr> <td>1</td> <td>Text Updates</td> <td>10/02/15</td> </tr> </tbody> </table>	REV	DESCRIPTION	DATE	0	Original map output	06/02/15	1	Text Updates	10/02/15	<table border="1"> <thead> <tr> <th>SCALE</th> <th>CURRENT ISSUE SIGNATURES</th> </tr> </thead> <tbody> <tr> <td>1:17,500</td> <td></td> </tr> <tr> <td>SIZE A3</td> <td>DRAWN MJS</td> </tr> <tr> <td>DATUM GDA 94</td> <td>CHECKED VM</td> </tr> <tr> <td>PROJECTION MGA Zone 55</td> <td>APPROVED VM</td> </tr> </tbody> </table>	SCALE	CURRENT ISSUE SIGNATURES	1:17,500		SIZE A3	DRAWN MJS	DATUM GDA 94	CHECKED VM	PROJECTION MGA Zone 55	APPROVED VM	<table border="1"> <tr> <td colspan="2">STATUS <b>DRAFT</b></td> </tr> <tr> <td>PROJECT NO BARALABA</td> <td>DRAWING NO BAR-091-08-01-150210</td> </tr> </table>		STATUS <b>DRAFT</b>		PROJECT NO BARALABA	DRAWING NO BAR-091-08-01-150210
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PROJECTION MGA Zone 55	APPROVED VM																											
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PROJECT NO BARALABA	DRAWING NO BAR-091-08-01-150210																											

Path: N:\Baralaba\Baralaba\_Overview\PROJECTS\1501\BAR\_091\_150212\_Zamia\_Offset\_Area\_MPI\BAR\_091\_08\_01\_150210\_Offset\_Site\_Monitoring\_Pts\_A3P.mxd



A4: Co-located Offsets on Zamia Creek (North Section)

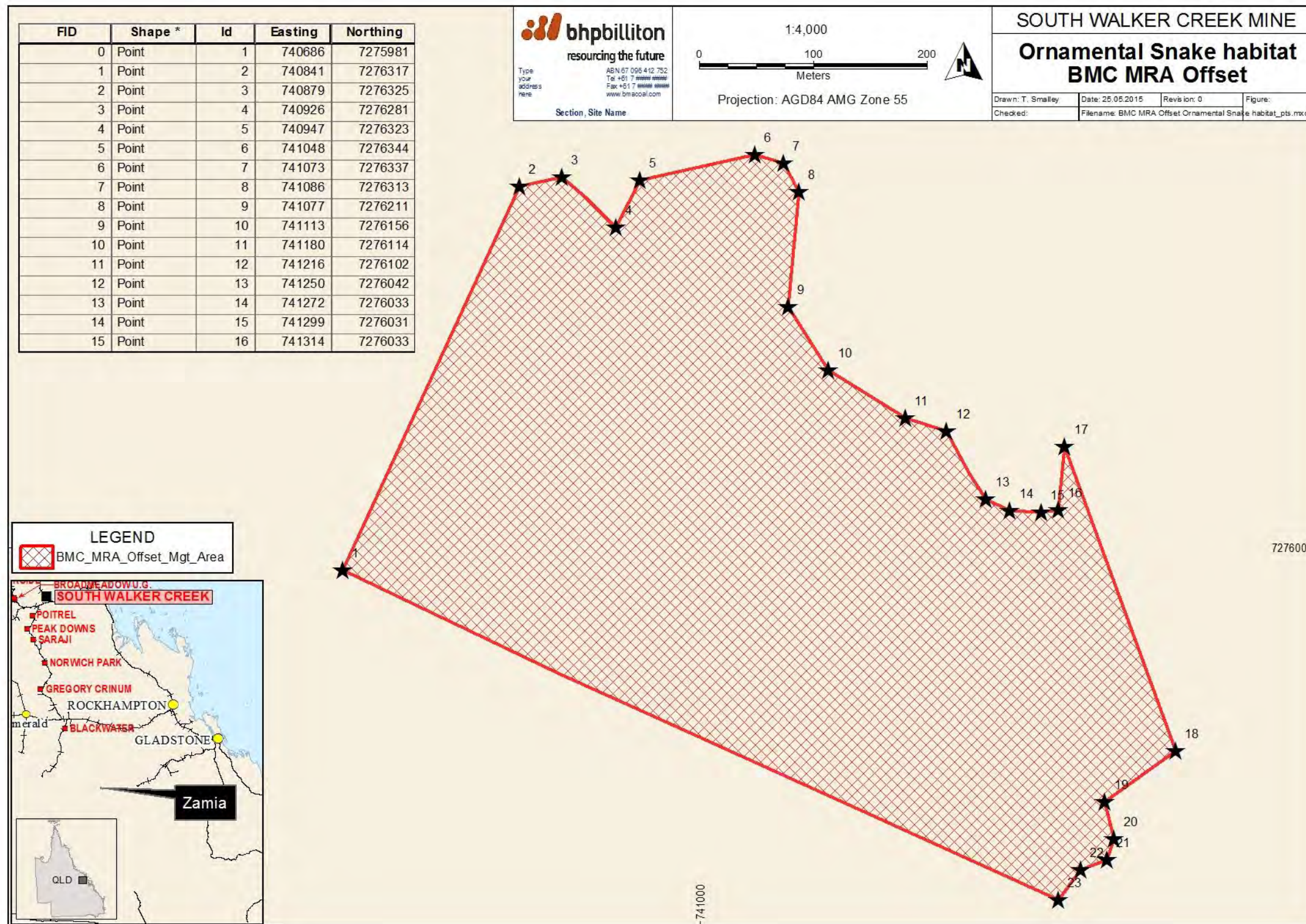


<b>PROJECT</b> <b>'ZAMIA' OFFSET AREA MANAGEMENT PLAN</b>		<b>DISCLAIMER:</b> Cockatoo Coal Ltd has exercised all due care in the production of this map. Cockatoo Coal Ltd makes no warranty or representation to the client or third parties (expressed or implied) in respect to the information conveyed on this map, particularly with regard to any commercial investment decisions made on the basis of this map. Use of this map by the client or third parties shall be at their own risk, and extracts from this map may only be published with the permission of Cockatoo Coal Ltd.		<b>DATA SOURCES:</b> VECTOR DATA © DERM - LAND & PROPERTY DATA © GEOSCIENCE AUSTRALIA.			
<b>TITLE</b> <b>Figure 3C BNCOP Offset Area</b>		SCALE <b>1:17,500</b>		CURRENT ISSUE SIGNATURES		<b>STATUS</b> <b>DRAFT</b>	
		0 250 500 750 Metres		DRAWN: <b>MJS</b> CHECKED: <b>VM</b> APPROVED: <b>VM</b>		PROJECT NO: <b>BARALABA</b> DRAWING NO: <b>BAR-091-07-03-150210</b>	
		REV 0 Original map output 05/02/15 REV 1 Update Area 25/02/15		DATUM: <b>GDA 94</b> PROJECTION: <b>MGA Zone 55</b>			

Path: N:\Baralaba\Baralaba\_Overview\PROJECTS\1501\BAR\_091\_150122\_Zamia\_Offset\_Area\_M\PIBAR\_091\_07\_03\_150210\_BNCOP\_Offset\_Area\_A3P.mxd



A5: Offset Area boundary points



Point	Easting	Northing
1	740686	7275981
2	740841	7276317
3	740879	7276325
4	740926	7276281
5	740947	7276323
6	741048	7276344
7	741073	7276337
8	741086	7276313
9	741077	7276211
10	741113	7276156
11	741180	7276114
12	741216	7276102
13	741250	7276042
14	741272	7276033
15	741299	7276031
16	741314	7276033
17	741320	7276089
18	741417	7275822
19	741355	7275777
20	741363	7275745
21	741357	7275727
22	741334	7275718
23	741314	7275692

## **APPENDIX B: FIELD REPORTS**

### ***Appendix B1: Threatened Terrestrial Fauna Species Assessment Report for Mulgrave Pit Expansion Project –Footprints Environmental Consultants, June 2013.***

Please refer to the pdf file supplied separately.

### ***Appendix B2: Investigation and Assessment of Potential Biodiversity Offsets – Baralaba North Project and Associated Infrastructure – Footprints Environmental Consultants, December 2014.***

Please refer to the pdf file supplied separately.

### ***Appendix B3: Baralaba North – Biodiversity Offset Investigation, Lot 9 Zamia Targeted Ornamental Snake Surveys- Footprints Environmental Consultants, February 2015.***

Please refer to the pdf file supplied separately.

## APPENDIX C: WILDNET ONLINE REPORT – ZAMIA CREEK



**Queensland  
Government**

### Wildlife Online Extract

Search Criteria: Species List for a Specified Point  
Species: All  
Type: All  
Status: All  
Records: All  
Date: Since 1980  
Latitude: -24.623725  
Longitude: 149.3557  
Distance: 10  
Email: thomas.key@earthtrade.com.au  
Date submitted: Monday 15 Dec 2014 11:31:02  
Date extracted: Monday 15 Dec 2014 11:40:26

The number of records retrieved = 88

### **Disclaimer**

As the DSITIA is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used.

The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through independent means as to the accuracy and completeness of this information.

No statements, representations or warranties are made about the accuracy or completeness of this information. The State of Queensland disclaims all responsibility for this information and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Acanthizidae	<i>Acanthiza nana</i>	yellow thornbill		C		2
animals	birds	Accipitridae	<i>Haliastur sphenurus</i>	whistling kite		C		1
animals	birds	Anatidae	<i>Chenonetta jubata</i>	Australian wood duck		C		1
animals	birds	Anatidae	<i>Cygnus atratus</i>	black swan		C		1
animals	birds	Anatidae	<i>Anas superciliosa</i>	Pacific black duck		C		1
animals	birds	Anhingidae	<i>Anhinga novaehollandiae</i>	Australasian darter		C		1
animals	birds	Artamidae	<i>Cracticus tibicen</i>	Australian magpie		C		5
animals	birds	Artamidae	<i>Artamus personatus</i>	masked woodswallow		C		1
animals	birds	Artamidae	<i>Strepera graculina</i>	pied currawong		C		1
animals	birds	Artamidae	<i>Cracticus torquatus</i>	grey butcherbird		C		1
animals	birds	Artamidae	<i>Cracticus nigrogularis</i>	pied butcherbird		C		3
animals	birds	Cacatuidae	<i>Eolophus roseicapillus</i>	galah		C		1
animals	birds	Cacatuidae	<i>Nymphicus hollandicus</i>	cockatiel		C		3
animals	birds	Campephagidae	<i>Coracina papuensis</i>	white-bellied cuckoo-shrike		C		1
animals	birds	Climacteridae	<i>Climacteris picumnus</i>	brown treecreeper		C		2
animals	birds	Columbidae	<i>Ocyphaps lophotes</i>	crested pigeon		C		3
animals	birds	Columbidae	<i>Geopelia humeralis</i>	bar-shouldered dove		C		1
animals	birds	Columbidae	<i>Geopelia striata</i>	peaceful dove		C		2
animals	birds	Corvidae	<i>Corvus coronoides</i>	Australian raven		C		1
animals	birds	Corvidae	<i>Corvus sp.</i>					2
animals	birds	Corvidae	<i>Corvus orru</i>	Torresian crow		C		5
animals	birds	Estrildidae	<i>Taenopygia bichenovii</i>	double-barred finch		C		2
animals	birds	Falconidae	<i>Falco cenchroides</i>	Nankeen kestrel		C		1
animals	birds	Falconidae	<i>Falco berigora</i>	brown falcon		C		1
animals	birds	Maluridae	<i>Malurus lamberti</i>	variegated fairy-wren		C		3
animals	birds	Maluridae	<i>Malurus cyaneus</i>	superb fairy-wren		C		4
animals	birds	Megaluridae	<i>Megalurus timoriensis</i>	tawny grassbird		C		1
animals	birds	Meliphagidae	<i>Lichmera indistincta</i>	brown honeyeater		C		2
animals	birds	Meliphagidae	<i>Plectorhyncha lanceolata</i>	striped honeyeater		C		3
animals	birds	Meliphagidae	<i>Melithreptus albogularis</i>	white-throated honeyeater		C		1
animals	birds	Meliphagidae	<i>Manorina melanocephala</i>	noisy miner		C		2
animals	birds	Meliphagidae	<i>Meliphaga lewinii</i>	Lewin's honeyeater		C		1
animals	birds	Meliphagidae	<i>Entomyzon cyanotis</i>	blue-faced honeyeater		C		1
animals	birds	Meliphagidae	<i>Gavicalis virescens</i>	singing honeyeater		C		1
animals	birds	Monarchidae	<i>Myiagra rubecula</i>	leaden flycatcher		C		1
animals	birds	Monarchidae	<i>Grallina cyanoleuca</i>	magpie-lark		C		4
animals	birds	Nectariniidae	<i>Dicaeum hirsutinaceum</i>	mistletoebird		C		2
animals	birds	Pachycephalidae	<i>Pachycephala rufiventris</i>	rufous whistler		C		2
animals	birds	Pardalotidae	<i>Pardalotus striatus</i>	striated pardalote		C		1
animals	birds	Phalacrocoracidae	<i>Microcarbo melanoleucos</i>	little pied cormorant		C		1
animals	birds	Phasianidae	<i>Coturnix ypsilophora</i>	brown quail		C		1
animals	birds	Pomatostomidae	<i>Pomatostomus temporalis</i>	grey-crowned babbler		C		1
animals	birds	Psittacidae	<i>Trichoglossus haematodus moluccanus</i>	rainbow lorikeet		C		1
animals	birds	Ptilonorhynchidae	<i>Ptilonorhynchus maculatus</i>	spotted bowerbird		C		1
animals	birds	Rhipiduridae	<i>Rhipidura albiscapa</i>	grey fantail		C		2
animals	birds	Rhipiduridae	<i>Rhipidura leucophrys</i>	willie wagtail		C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Threskiornithidae	<i>Platalea regia</i>	royal spoonbill		C		1
animals	birds	Threskiornithidae	<i>Platalea flavipes</i>	yellow-billed spoonbill		C		1
fungi	sac fungi	Parmeliaceae	<i>Parmotrema praesorediosum</i>			C		2/2
plants	higher dicots	Aizoaceae	<i>Tetragonia tetragonoides</i>	New Zealand spinach		C		1/1
plants	higher dicots	Amaranthaceae	<i>Alternanthera</i>			C		1/1
plants	higher dicots	Amaranthaceae	<i>Alternanthera denticulata</i>	lesser joyweed		C		1/1
plants	higher dicots	Apiaceae	<i>Centella asiatica</i>			C		1/1
plants	higher dicots	Asteraceae	<i>Centipeda minima subsp. minima</i>			C		2/2
plants	higher dicots	Asteraceae	<i>Parthenium hysterophorus</i>	parthenium weed	Y			1/1
plants	higher dicots	Asteraceae	<i>Gnaphalium polycaulon</i>		Y			1/1
plants	higher dicots	Asteraceae	<i>Xanthium occidentale</i>		Y			1/1
plants	higher dicots	Asteraceae	<i>Aster subulatus</i>	wild aster	Y			1/1
plants	higher dicots	Asteraceae	<i>Soliva anthemifolia</i>	dwarf jo jo weed	Y			1/1
plants	higher dicots	Boraginaceae	<i>Heliotropium indicum</i>		Y			1/1
plants	higher dicots	Brassicaceae	<i>Rorippa eustylis</i>			C		1/1
plants	higher dicots	Caesalpinaceae	<i>Senna barclayana</i>			C		1/1
plants	higher dicots	Chenopodiaceae	<i>Einadia nutans subsp. linifolia</i>			C		1/1
plants	higher dicots	Chenopodiaceae	<i>Sclerolaena tetracuspis</i>	brigalow burr		C		1/1
plants	higher dicots	Chenopodiaceae	<i>Einadia polygonoides</i>	knotweed goosefoot		C		1/1
plants	higher dicots	Chenopodiaceae	<i>Atriplex semibaccata</i>	creeping saltbush		C		1/1
plants	higher dicots	Euphorbiaceae	<i>Euphorbia hyssopifolia</i>		Y			1/1
plants	higher dicots	Fabaceae	<i>Glycine tabacina</i>	glycine pea		C		1/1
plants	higher dicots	Fabaceae	<i>Desmodium varians</i>	slender tick trefoil		C		1/1
plants	higher dicots	Fabaceae	<i>Tephrosia leptoclada</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Sesbania cannabina var. cannabina</i>			C		1/1
plants	higher dicots	Lamiaceae	<i>Basilicum polystachyon</i>			C		1/1
plants	higher dicots	Onagraceae	<i>Ludwigia peploides subsp. montevidensis</i>			C		1/1
plants	higher dicots	Solanaceae	<i>Solanum elaeagnifolium</i>			E		1/1
plants	higher dicots	Verbenaceae	<i>Glandularia aristigera</i>		Y			1/1
plants	higher dicots	Verbenaceae	<i>Stachytarpheta jamaicensis</i>	Jamaica snakeweed	Y			1/1
plants	lower dicots	Papaveraceae	<i>Argemone mexicana</i>	prickly poppy	Y			1/1
plants	monocots	Alismataceae	<i>Damasodium minus</i>	starfruit		C		1/1
plants	monocots	Alismataceae	<i>Caldesia oligococca</i>			C		1/1
plants	monocots	Cyperaceae	<i>Cyperus pygmaeus</i>	dwarf sedge		C		2/2
plants	monocots	Cyperaceae	<i>Fimbristylis aestivalis</i>			C		1/1
plants	monocots	Juncaginaceae	<i>Cynogeton dubius</i>			C		1/1
plants	monocots	Najadaceae	<i>Najas tenuifolia</i>	water nymph		C		1/1
plants	monocots	Poaceae	<i>Chloris gayana</i>	rhodes grass	Y			1/1
plants	monocots	Poaceae	<i>Walwhalleya subxerophila</i>			C		1/1
plants	monocots	Poaceae	<i>Eragrostis trichophora</i>		Y			1/1
plants	monocots	Poaceae	<i>Sporobolus elongatus</i>			C		1/1
plants	monocots	Poaceae	<i>Astrelba squarrosa</i>	bull mitchell grass		C		1/1



QES

Y indicates that the taxon is introduced to Queensland and has naturalised.

Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*. The codes are Extinct in the Wild (PE), Endangered (E), Vulnerable (V), Near Threatened (NT), Least Concern (C) or Not Protected ( ).

Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*. The values of EPBC are Conservation Dependent (CD), Critically Endangered (CE), Endangered (E), Extinct (EX), Extinct in the Wild (XW) and Vulnerable (V).

ords – The first number indicates the total number of records of the taxon for the record option selected (i.e. All, Confirmed or Specimens).

s number is output as 99999 if it equals or exceeds this value. The second number located after the f indicates the number of specimen records for the taxon  
s number is output as 999 if it equals or exceeds this value.