Annual Offset Condition Report

Ellensfield Property, Coppabella, Central Queensland

24000518

20 September 2023

KLEINFELDER
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10/156 Boundary Street, West End,
QLD 4101

Phone +61 7 4957 5036

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Ellensfield Property, Coppabella, Central Queensland

Kleinfelder Project: 24000518

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Prepared for:
Anglo American

Lot 11 Goonyella Road
Moranbah QLD 4744

Prepared by:
Kleinfelder Australia Pty Ltd

Suite 5.02, Level 5, 390 St Kilda Road, Melbourne VIC 3004
Phone: +61 2 4949 5200
ABN: 23 146 082 500

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Kevin Wormington	Howard Rogers	Howard Rogers

EXECUTIVE SUMMARY

Kleinfelder was commissioned by Earthtrade Pty Ltd on behalf of Anglo American Metallurgical Coal (Anglo American) to conduct a baseline BioCondition Assessment in the Ellensfield property Offset Area (Offset Area), which is associated with offsets for the Grosvenor Coal Mine Enforceable Undertaking (EU). As detailed in the Offset Management Plan, this baseline assessment will be used as a benchmark for the interim and completion targets for the Offset Area.

Kleinfelder undertook a field assessment in July 2023 to quantify the habitat quality as a baseline from which to measure any future conservation gain against, and to identify any potential risks to the target biodiversity features of the offset area.

The Offset Area comprises Narrow-leaved Ironbark (*Eucalyptus crebra*) *Woodlands* regrowth over coarse grained sedimentary rocks with poor soils. It is considered a suitable offset for:

- Squatter Pigeon (*Geophaps scripta scripta*) – Vulnerable (Queensland and Commonwealth).
- Koala (*Phascolarctos cinereous*) – Endangered (Queensland and Commonwealth).
- Greater Glider - (Queensland and Commonwealth)

The Biocondition index results across the Offset Area are reflective of a degraded remnant ecosystem and this initial assessment indicates that the biodiversity is likely to increase through management as recommended in the Grosvenor Mine EU OMP.

This report details the results of the Biocondition Assessment and includes general observations on potential threatening processes and additional significant observations. Recommendations have been included to mitigate potential threats and to support the long term improvement of the target biodiversity features of the Offset Area.

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1 INTRODUCTION

1.1 BACKGROUND

The Offsets Management Plan (OMP) for the Grosvenor Coal Mine Project Enforceable Undertaking (Grosvenor EU) describes how Anglo American proposes to secure and manage biodiversity offsets as part of the Enforceable Undertaking issued under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) on 15 December 2021. Part of the significant residual impacts to Matters of National Environmental Significance (MNES) at Grosvenor will be offset consistent with the EPBC Act Environmental Offsets Policy and the Enforceable Undertaking (EU) in the Ellensfield property Offset Area (Offset Area).

Kleinfelder Australia Pty Ltd (Kleinfelder) was engaged by Earthtrade Pty Ltd to undertake a BioCondition assessment of the Offset Area to determine the baseline values. The baseline values will be used to measure the level improvement in the target ecological values of the Offset Area in future monitoring events to determine if the Offset Area is meeting the compliance targets set in the OMP.

1.2 SITE DESCRIPTION

The Offset Area, on the Ellensfield property, is centred at latitude -21.76316º S and longitude 148.29537º E, approximately 20 km north-north-east of the Project impact area (**Figure 1**). The Offset Area is in the Isaac Regional Council jurisdiction of Central Queensland on Lot 13 SP178466. The Offset Area is approximately 565ha. The Offset Area is within a Statewide Biodiversity Corridor.

The landform of the Offset Area is sandstone ranges and scarps with low fertility soils from coarse grained sedimentary rocks. Runoff from the Offset Area flows via non-perennial watercourses and Carborough Creek into the Connors River via Walker Creek, Bee Creek and Funnel Creek (Fitzroy River Catchment).

1.3 LEGISLATION

This project was undertaken in accordance with, and/or consideration of, the following Acts and Regulations:

Commonwealth:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- *EPBC Act Environmental Offsets Policy 2012.*

State:

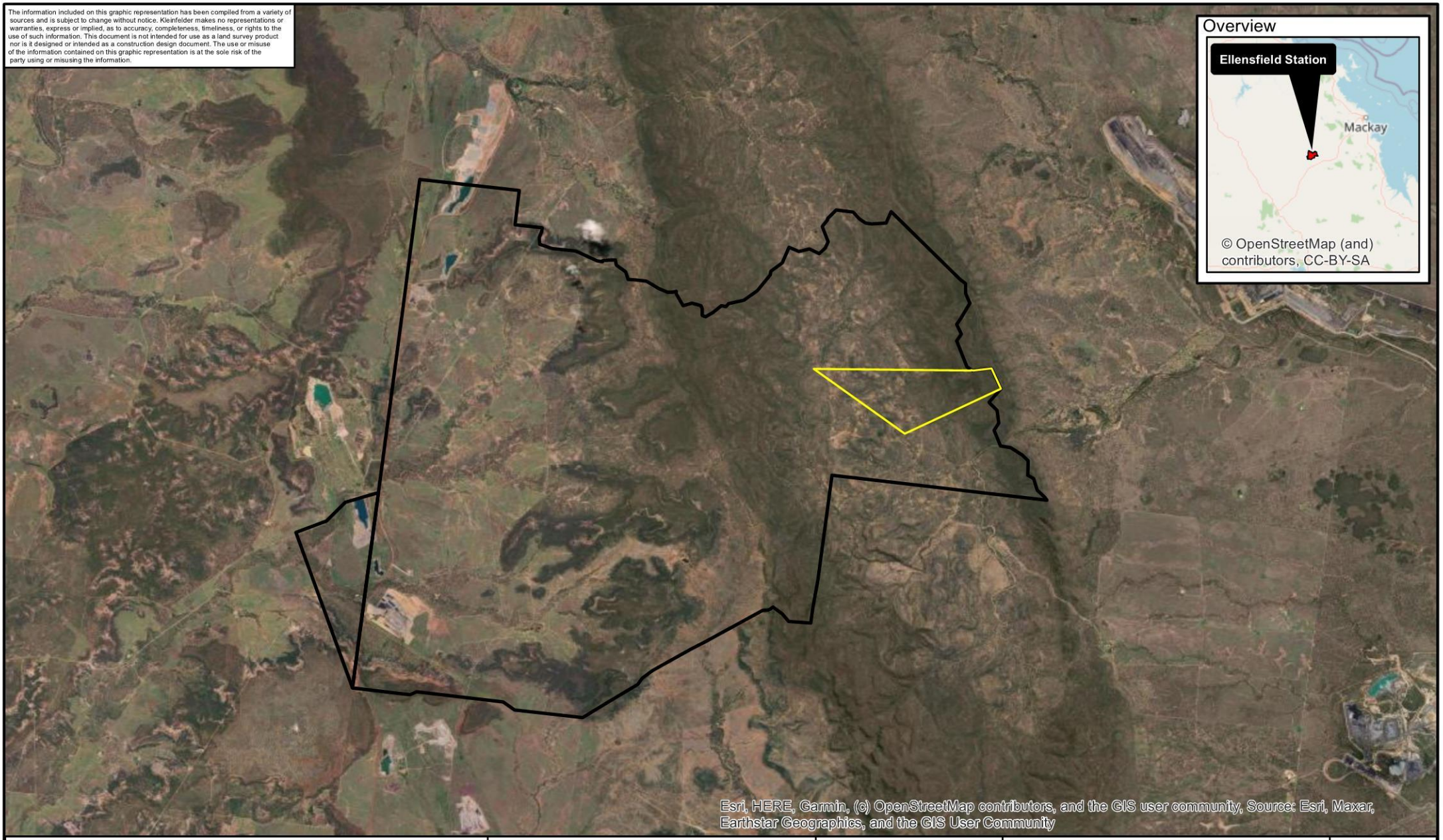
- *Nature Conservation Act 1992* (NC Act)
  - *Nature Conservation (Plants) Regulation 2020* (NC(P)R)
  - *Nature Conservation (Animals) Regulation 2020* (NC(A)R)
- *Biosecurity Act 2014* (Biosecurity Act)
- *Vegetation Management Act 1999* (VM Act)
- *Environmental Offsets Act 2014* (EO Act)
  - *Environmental Offsets Regulation 2014* (EOR).

1.4 OFFSET AREA

The MNES significant residual impacts for the Disturbance Areas at the Project, i.e. Squatter Pigeon (*Geophaps scripta scripta*), Koala (*Phascolarctos cinereus*) and Greater Glider (*Petauroides volans*) are listed in **Table 1**. The offset requirements calculated in the Offset Assessment Guide (OAG) at Ellensfield property for the Project are also listed.

Table 1: MNES Significant Residual Impacts and Offset

Protected Matter	Maximum Disturbance Limit (ha)	OAG Calculation Output (ha)	Offset Area (ha)
Squatter Pigeon	75.4	325	565
Koala	131	565	
Greater Glider	131	565	



Legend

- Ellensfield Station
- Offset Area

0 750 1,500 3,000 4,500 6,000

Scale 1:150,000 (A4) Metres

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PROJECT REFERENCE: 24000518

DATE DRAWN: 7/25/2023 Version 1

DRAWN BY: PQuartararo

DATA SOURCE:
ESRI - 2023

Locality

Anglo American
EU OMP Ellensfield Offset
Burton QLD 4743

FIGURE:

1

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2 METHODOLOGY

2.1 LITERATURE REVIEW

Literature reviewed as part of this project included:

- Grosvenor Coal Mine Enforceable Undertaking - Offset Management Plan Grosvenor OMP) (Anglo American 2022).
- Baseline Offset Assessment Report: Ellensfield Offset Investigation Area (e2m 2021)
- Ellensfield Quarterly Report 2022-23 (Landholder 2023).
- BioCondition: A condition assessment framework for terrestrial biodiversity in Queensland - Assessment Manual V2.2 (Eyre *et al.* 2015).
- BioCondition Benchmarks (Queensland Government 2023).
- EPBC Act 1999 Environmental Offsets Policy (DSEWPC 2012).
- Queensland Environmental Offsets Policy V 1.12 (DES 2022).
- Guide to Determining Terrestrial Habitat Quality V 1.3 (DES 2020).

2.2 FIELD SURVEY

2.2.1 Overview

All field survey methods (outlined below) were consistent with the methods outlined in the BioCondition Assessment Framework and the Guide to Determining Terrestrial Habitat Quality V 1.3, as required under the Queensland Environmental Offset Policy.

BioCondition field assessments were undertaken at six locations established on the 11-13 July 2023. Biocondition plot locations were recorded at the start and centre points in GDA94 Zone 55 projection. The assessment locations and details are provided in **Figure 2** and **Appendix A**. The assessment locations were used to undertake habitat and photo condition assessments, along with observations of significance including any potential threats. Field observations of relevance to the Scope were also collected throughout the local area.

2.2.2 BioCondition assessments

2.2.2.1 Habitat Quality Assessment

The key indicators used to determine habitat quality included:

- Site condition: a general condition using a Site-based Attributes assessment of vegetation compared to a benchmark.
- Landscape-scale Attributes: an analysis of the site in relation to the surrounding environment.
- Species Habitat Index: the ability of the site to support any matters relating to fauna.

Each of the key indicator Site-based Attributes were assessed and scored against BioCondition Benchmarks in conjunction with the Landscape-scale Attributes to determine a BioCondition Score. The Site-based Attributes and Landscape-scale Attributes assessed, and their highest possible scores, are detailed in **Table 2** below. The Species Habitat Index was calculated by two methods. The first by using the Site-based Attributes from the BioCondition Assessment and the second by using the Species Habitat Attributes from the Guide to Determining Terrestrial Habitat Quality. Habitat relative to the Squatter Pigeon, Koala and Greater Glider, including seed availability, grass cover, cracking clays and water proximity, were used. The full list is provided in **Appendix B**.

Table 2 Key indicator attributes and their highest possible scores

Site Based Attributes		Landscape-Scale Attributes		Species Habitat Attributes	
Large trees	15	Size of patch	10	Threats to species	2.5
Tree canopy median height	5	Connectedness	5	Quality and availability of food and foraging habitat	2.5

Site Based Attributes		Landscape-Scale Attributes		Species Habitat Attributes	
Recruitment of woody perennial species	5	Context	5	Quality and availability of shelter and breeding habitat	2.5
Tree canopy cover	5	Distance to permanent watering point	NA	Species mobility capacity	2.5
Shrub canopy cover	5	**Subtotal**	**20**	**Subtotal**	**10**
Coarse woody debris length	5				
Trees—species richness	5				
Shrubs—species richness	5				
Grasses—species richness	5				
Forbs—species richness	5				
Non-native plant cover	10				
Native perennial grass cover	5				
Litter Cover	5				
Subtotal (woodland/forest)	**80**				

NA – Not applicable for the Offset Area region.

2.2.2.2 Photo monitoring

Photo monitoring was conducted at each location. Photo monitoring provides a visual representation of changes in vegetation over time. Photos were taken at the centre point of each BioCondition plot, from 1.5 m in height above ground level in the direction of north, south, east and west. A record of the photos was taken and marked with GPS coordinates.

2.2.3 Biosecurity matters

To assess and provide guidance for the management of weeds and feral animals across the Offset Area, Kleinfelder assessed the general area at each monitoring point location and opportunistically when traversing throughout the Offset Area to identify and record any weeds of significance or evidence of feral animal activity.

Weeds of Significance include all Restricted Matter under the Biosecurity Act, Weeds of National Significance (WoNS), and any environmental weed with the potential to cause degradation or exacerbate threats to the Offset Area (e.g., bushfire fuel loads). Density attribution (where relevant) was recorded in the BioCondition assessment.

2.2.4 Fauna Survey

To determine if the Offset Area had any resident threatened fauna, in particular the Squatter Pigeon, Koala and Greater Glider. Bird species were recorded during the BioCondition surveys and incidentally while travelling between sites. When threatened species were observed the location was recorded on the field GPS and the number was recorded. Trees at the Biocondition Sites and incidentally in the riparian zones were searched for Koala or Greater Glider scratches. A spotlighting survey of the Offset Area riparian zones was carried out to determine if there were Koalas or Greater Gliders in the Offset Area.

2.2.5 Erosion, bushfire, grazing and other

Additional observations were recorded on the following subjects:

- Erosion or subsidence events within the Offset Area or in proximity to the area where it may cause immediate or future impacts.
- Bushfire, including evidence of recent fire (since 2018), fire containment lines, and asset protection zones (ecological and infrastructure).
- Evidence of grazing regimes within the Offset Area.

- Additional observations relevant to the establishment of the Offset Area (e.g., fencing).

2.2.6 Plant Identification

Most species were identified on site, where possible, but if required, other specimens were photographed or collected for confirmation in the laboratory using several plant identification references, including:

- Plants of Central Queensland (Anderson 2003).
- Plants of Capricornia (Melzer and Plumb 2007).
- Australian Tropical Rainforest Plants (Zitch, F. A. *et al.* 2020).
- Euclid: Eucalypts of Australia (Slee, A. V. *et al.* 2019).
- WATTLE, Interactive Identification of Australian Acacia (Maslin, B. R. 2018).
- Weeds of Central and Northern Queensland(WSQ 2019)

2.3 MAPPING

All desktop assessment and vegetation mapping were produced using ArcMap Desktop V10.8.2. Either high resolution aerial images from Anglo American and/or ESRI World Imagery were used for the assessment.

2.4 ADDITIONAL INFORMATION

Appendix F of the Grosvenor OMP and the e2m Baseline Offset Assessment Report are an assessment of the Ellensfield property to determine its offsets values. The baseline assessment included 57 BioCondition sites across a larger area of the property, intended to supply multiple offset areas. None of these sites were inside the Offset Area for the Project but there were three Biocondition sites in analogous vegetation (RE 11.10.7 / 11.10.4a) within close vicinity (<1 km) to the Offset Area. There were two Squatter Pigeon records, eight Koala records (scratches on trees) and three Greater Glider records observed on the Ellensfield property. However, none of these were in the Offset Area.

2.5 WEATHER CONDITIONS

The field survey was completed on 11-13 July 2023. Weather conditions during the survey period are provided in **Table 3**. For the survey period, the region had experienced below average rainfall and above average temperatures during the day but below average temperatures during the night.

Table 3 Weather conditions during the survey period.

Date	Days	Temps		Rain (mm)
		Min (°C)	Max (°C)	
11-13 July 2023	3	7.5	28.0	0
Mean July		10.5	24.3	40* / 29.9#

Source: Bureau of Meteorology 2023 Station 34035 (Moranbah). *denotes total monthly rainfall, # denotes July Average.

3 RESULTS

3.1 FIELD ASSESSMENT

3.1.1 Survey Effort

The field survey was conducted on the 11-13 July 2023. The survey effort included 6 BioCondition sites, bird searches, spotlighting at night and opportunistic observations (**Figure 2**).

3.1.2 Biocondition Results

The Offset Area had one Assessment Unit (AU1) which was based on Regional Ecosystem (RE) 11.10.7 (**Table 4** and **Figure 2**). RE 11.10.7 is described as "*Eucalyptus crebra woodland on coarse-grained sedimentary rocks'*. AU1 contained open woodlands (up to 14 m in height) of Narrow-leaved ironbark (*Eucalyptus crebra*) and Ghost Gum (*Corymbia dallachiana*) in the canopy layer, a sub-canopy layer of Whitewood (*Atalaya hemiglauca*) and Red Ash (*Alphitonia excelsa*), a shrub layer of Dog's Balls (*Grewia retusifolia*) and Coffee Bush (*Breynia oblongifolia*) and a ground cover of mainly native grasses including Dark Wiregrass (*Aristida calycina var. holathera*) and Black Speargrass (*Heteropogon contortus*).

The vegetation in AU1 had a Bio-condition average Score of 7 giving a moderate to high value (**Table 4**). The Biocondition Score using the Site Based Attributes for the Squatter Pigeon, Koala and Greater Glider was 7. These figures provide the baseline values for comparison to measure BioCondition improvement and compliance in future monitoring.

The evaluation of habitat by using the Species Habitat Attributes were comparable to the Site-based Attributes, i.e. 7, 6 and 7 respectively for the Squatter Pigeon, Koala and Greater Glider (**Table 4**).

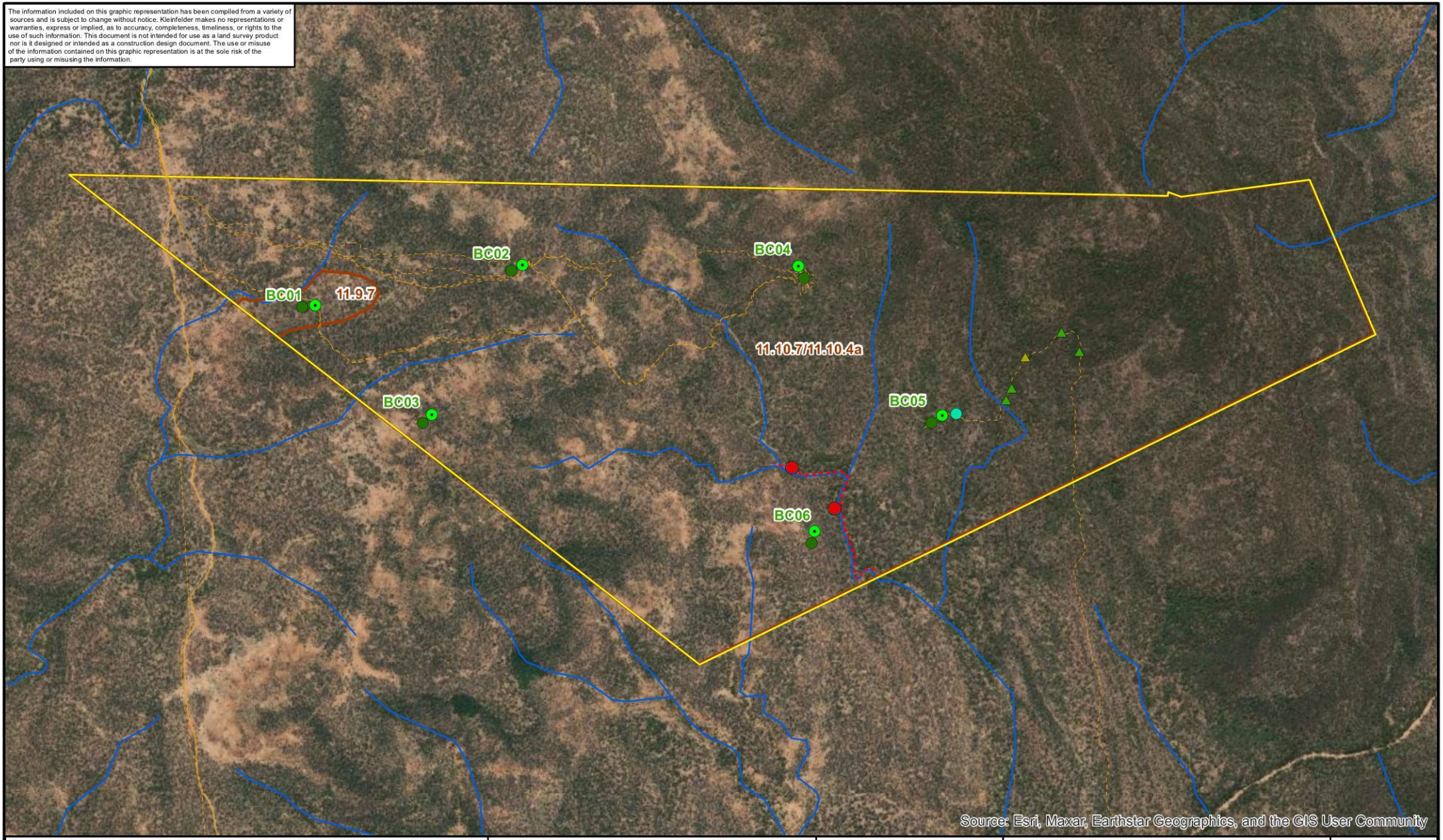
Previous Vegetation Mapping by **e2m** (**Figure 2**) had mapped most of the Offset Area as RE 11.10.7/11.10.4a and a small patch of RE 11.9.7. RE 11.9.7's dominant tree species is Poplar Box (*Eucalyptus populnea*), and in RE 11.10.4a has Yellowjacket (*Corymbia aureola*) and Lancewood (*Acacia shirleyi*) as sub-dominant species to Narrow-leaved Ironbark. One Biocondition site, BC01, was placed in the area mapped as RE 11.9.7, but it was dominated by Narrow-leaved Ironbark and was determined to be RE 11.10.7. BC05 did contain Yellowjacket as an associated species but not any Lancewood. At this stage it has been nominated as RE 11.10.7. However, there were some Points to the east of BC05 where Lancewood was dominant or sub dominant to Narrow-leaved Ironbark (**Figure 2**). A survey to determine the extent of the Yellowjacket and Lancewood to determine the appropriate REs may be required.

There was also a narrow patch of Forest Red Gum (*Eucalyptus tereticornis*) along the watercourse where the spotlighting occurred. It ran from the southern boundary of the Offset Area to the first fork in the watercourse.

Table 4 Vegetation types available for Offsets

AU/RE	Sites	Dominant Native Plant Species - dominance in layer	Status	BVG	BioCondition Score/Area (ha)	SHA Score/Area (ha)	Image
1/11.10.7	BC01 BC02 BC03 BC04 BC05 BC06	Canopy height: 8.5-14.2m Trees: T1 – Narrow-leaved Ironbark d, Ghost Gum s; T2 – Quinine Tree (*Petalostigma pubescens*) d,s, Whitewood a, Red Ash a and Ironwood (*Acacia excelsa*) a. Shrubs: Dog's Balls s, Coffee Bush s, Current Bush (*Carissa ovata*) s Grasses: Dark Wiregrass d, Black Speargrass s, Kangaroo Grass (*Themeda triandra*) s and Barbwire Grass (*Cymbopogon refractus*) a. Forbs and others: Glycine Pea (*Glycine tabacina*) a, Woolly Glycine (*Glycine tomentella*) and Rock Fern (*Cheilanthes sieberi*) a.	Q-LC	10 - 12a	V – 3/167.93 Squatter Pigeon / Koala / Greater glider – 7/565	Squatter Pigeon 7/565 Koala 6/565 Greater Glider 7/565	  

BVG = 5M - 1M. Dominance: d = dominant; c = co-dominant; s = sub-dominant; a = associated. BioCondition Score: V = vegetation; REs MR = mature regrowth; LR = low regrowth; SPA = Species Habitat Attributes.



Legend

- Offset Area
- Regional Ecosystem
- Watercourse
- Track Lines
- Spotlighting

BioCondition Point

- Start Point
- Mid Point
- Krefft's Glider
- Lancewood Dominant
- NL Ironbark/Lancewood

Scale 1:20,000 (A4)

0 100 200 400 600 800 Metres

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DATA SOURCE: ESRI - 2023	

BioCondition Sites

Anglo American
EU OMP Ellensfield Offset
Burton QLD 4743

FIGURE:

2

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3.1.3 Threatened Species

Offsets for the Squatter Pigeon, Koala and Greater Glider are required in the Offset Area and having these species in the area enhances its value for this purpose. These species have previously been recorded on the Ellensfield property but not in the Offset Area. However, the Squatter Pigeon was observed during this survey at BC05. The other two species were not observed (**Figure 2**). There were two observations of the Krefft's Glider (*Petaurus notatus*) made during the spotlighting which uses similar microhabitat (hollows) as the Greater Glider.

3.1.4 Biosecurity Matters

Under the Biosecurity Act 2014 (B Act) Category 3 Restricted species landholders must not distribute or dispose of the restricted matter unless the distribution or disposal meets the criteria in Section 43 of the B Act. The strategies for Weeds of National Significance (WONS) are designed to:

- Prevent spread and new infestations.
- Reduce adverse impacts of existing infestations.
- Establish and maintain national commitment.
- Coordinate management at a national level.
- Increase community awareness.

The draft Isaac Region Biosecurity Plan (IRBP) sets operational guides to control priority weeds in the Isaac Region.

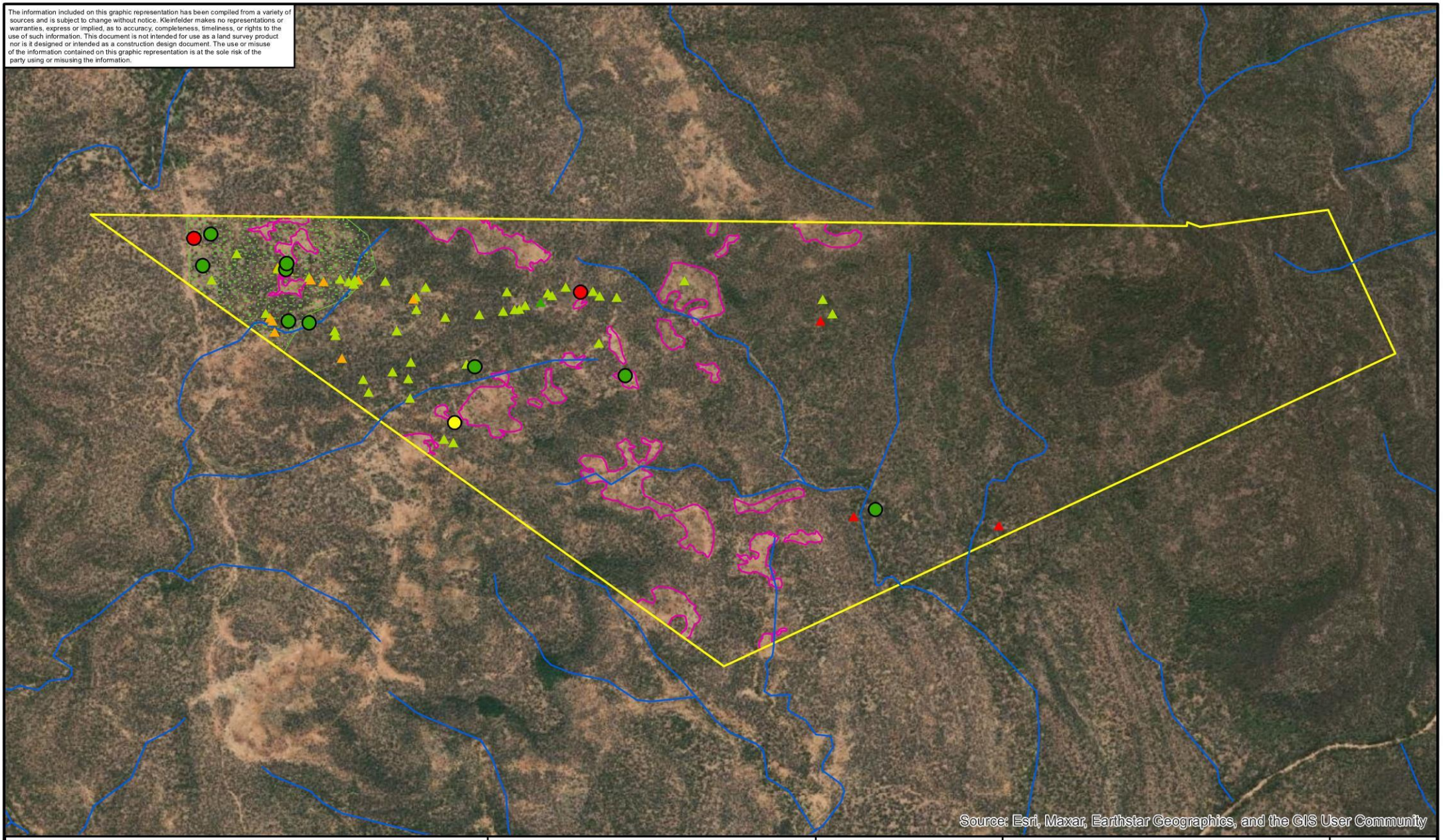
Three restricted plant species were observed and evidence of three restricted fauna pest species were observed in the Offset Area (**Table 5** and **Figure 3**). Restricted weeds were recorded at sites BC01, BCO4 and BC05. All species, excluding Buffel Grass are classified as Category 3 Restricted Invasive Plants and two are classified as Weeds of National Significance. Buffel Grass was included due to its high level of invasiveness and its ability to suppress native grasses. Buffel Grass is a a preferred pasture grass of cattle, was in low density and would require monitoring to determine if it is increasing in dominance, but the low nutrient levels of the soil should help prevent it's spread.

At present, the density of the restricted weeds is low, and the *Opuntia spp* were showing signs of *Cactoblastis cactorum* attack (**Table** 5 and **Figure 3**). However, monitoring of the extent of the Restricted Plants will be required in the future to determine if infestations are stable or are reducing within the Offset Area or to determine if targeted management will be required.

Feral Pig (*Sus scrofa*) tracks and digs were prevalent in the Offset Area, but no pigs were observed (Table 5 and Figure 3). The signs of other feral animals (Wild Dog *Canis lupus dingo/familiaris* and European Rabbit *Oryctolagus cuniculus*) occurred in low numbers in the Offset Area. However, all three species are highly mobile and Feral Pigs and Rabbits could cause damage to vegetation, and Feral Pigs and Wild Dogs could predate threatened animals within the Offset Area. Monitoring in the Offset Area should include assessment of damage caused by the feral animals a to determine if targeted management is required.

Table 5: Weed species requiring control within the Offset Area

Scientific Name	Common Name	Category	WONS	Priority IRBP	Location	Density
Weeds						
Harrisia tortuosa	Harrisia cactus	3, Restricted Invasive	-	X	BC03, BC06 Offset Area	Scattered
Opuntia stricta	Prickly Pear	3, Restricted Invasive	X	X	Offset Area	Scattered
Opuntia tomentosa	Velvety Tree Pair	3, Restricted Invasive	X	X	Offset Area	Scattered
Cenchrus ciliaris	Buffel Grass	-	-	-	At BC04	Low
Feral Animals						
Oryctolagus cuniculus	Rabbit	3, 4, 5, 6, Invasive	-		Offset Area	Low
Sus scrofa	Feral Pig	3, 4, 6, Restrictive Invasive	-		Offset Area	High
Canis lupus dingo/familiaris	Wild dog	3, 4, 6, Restrictive Invasive	-	X	Offset Area	Low



Legend

- Offset Area
- Erosion Areas
- Overgrazed Area
- Watercourse

Weed Species

- Opuntia Sp.
- Prickly Pear
- Harrisia Cactus
- Velvet Tree Pear

- Feral Dog Evidence
- Feral Pig Evidence
- Rabbit Evidence

0 100 200 400 600 800

Scale 1:21,514.45 (A4) Metres

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PROJECT REFERENCE:	24000518
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DATA SOURCE: ESRI - 2023	

Land Management

Anglo American
EU OMP Ellensfield Offset
Burton QLD 4743

FIGURE:

3

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3.1.5 Erosion and land slips

There were several discrete erosion areas (totalling 33.6ha) but no land slips on the slopes were noted within the Offset Area during the survey (**Figure 3**). It appears that the soils in the western section of the Offset Area are most likely sodic and prone to dispersion. This erosion will need to be monitored to determine if the extent of erosion is increasing. It is likely intervention may become necessary.

3.1.6 Bushfire

There was no evidence of bushfire, such as blackened tree stems or charred logs, observed on site during the survey. Historical imagery was interrogated back to 2002 and no evidence or fire scars were detected over that time (Queensland Globe Imagery and Google Earth).

3.1.7 Grazing and Fencing

Evidence of grazing was recorded within the Offset Area, with cattle and their scats observed frequently in the eastern section of Offset Area. There was no fencing around the perimeter of the Offset Area but it is partly fenced within a larger area that extends beyond the perimeter of the Offset Area. If cattle are introduced into the larger area there is no protection for the Offset Area. However, it is noted that this Offset Area occurs within a larger area intended to be used for multiple other offsets, with subsequent offset areas adjoining each other and forming a much larger area under complimentary management programs.

4 DISCUSSION

4.1 HABITAT CONDITION

The below subsections discuss points of interest from the results of the BioCondition assessments in relation to compliance with the OMP. Functionality is discussed in relation to the condition scores which are presented from score 1 (low functionality) to score 10 (high functionality) with score 5 being considered as of moderate function.

4.1.1 Vegetation

Vegetation that was assessed across the Offset Area, appears to be consistent with RE 11.10.7 (*Eucalyptus crebra* woodland on coarse-grained sedimentary rocks). This ecosystem is classified as least concern under the VMA Act and is not classified under the EPBC Act. There is a noticeable height difference in the Narrow-leaved Ironbark across the sites with BC01 and BC03 on the western side of the Offset Area having a lower canopy height than the rest. These sites did have hollow-bearing trees indicating the maturity of the vegetation, which may mean there is a lower water availability in the western section of the Offset Area resulting in less vigorous growth and shorter trees.

The Offset Area produced positive scores for recruitment, organic litter, shrubs and grasses. The impact of Buffel Grass was low in the Offset Area, which is most likely due to the low soil nutrient levels. The initial assessment suggests that the threat from Buffel grass is low but will need to be monitored.

Overall, the Offset Area averages a BioCondition score of 7 which is considered as moderate to high functionality. The current functionality may be difficult to improve given the age and maturity of the ecosystem. Importantly, the Offset Area is a very large area and is within a regional biodiversity corridor as described under Queensland's regional biodiversity network mapping which awarded the maximum score of 20 for the Landscape Scale Attributes. The most likely gain in the Biocondition score will be through the management of the impacts of agricultural activities, in particular erosion and invasive species, discussed further in **Section 4.2.2.4.**

4.1.2 Squatter Pigeon, Koala and Greater Glider

The Offset Area provides habitat that can be considered as suitable for the:

- Squatter Pigeon, due to the high cover and the height of grass cover that provides seeds and shelter and the distance to the nearest known permanent water in a dam just over 3 km north of the Offset Area, the high Habitat Index value for the Squatter Pigeon is justified. Squatter Pigeons were observed inside and to the south of the Offset Area. There were water pools in the watercourses within the Offset Area but the watercourses are described as perennial and may not hold water over a longer period, although one waterhole did appear to be permanent just below the southern boundary.
- Koala, due to the dominant tree species in the Offset Area being a Koala feed tree (Narrow-leaved Ironbark) in Central Queensland, the high Habitat Index value for the Koala is justified.
- Greater Glider, due to the dominant tree species in the Offset Area being a Greater Glider feed tree (Narrow-leaved Ironbark) in Central Queensland and the range of hollow-bearing trees in the Offset Area, the high Habitat Index value for the Koala is justified.

Threats to the three threatened species within the Offset Area include habitat degradation through Feral Pig excavations, and predation by Feral Pigs and Wild Dogs. The weed cover, which is low, is unlikely to impact on foraging for the threatened species, but present densities indicate a potential for more significant impact without active intervention.

The Habitat Index (Site-based Attributes) score of 7 in AU1 indicates the Offset Area is of moderate to high function for the Squatter Pigeon, Koala and Greater Glider. However, this can be expected to increase somewhat as the management objectives are put in place to increase and protect the biodiversity onsite and reduce the likelihood and impacts of threatening processes.

An evaluation of the Habitat Index by using the Species Habitat Attributes was positive based on comparable values to the Site-based Attributes, i.e. 8 (**Table 4**). However, the use of the Species Habitat Attributes for habitat evaluation will need to be assessed and revised before it can be used successfully as a measure.

4.2 RISKS OR POTENTIAL THREATS

4.2.1 Weeds

4.2.1.1 Cacti

Harrisia spp. (Harrisia Cactus) was found scattered throughout the Offset Area. Harrisia Cactus can form dense clumps in the understorey and produces large amounts of viable seed in a succulent edible fruit which are eaten by frugivorous birds and non-volant mammals, dispersing the seed through their droppings. Harrisia Cactus can also reproduce vegetatively if it is displaced. It is a common weed of Central Queensland communities and notably develops under roost sites from bird droppings. Large populations could displace the natural understorey through competition/shading resulting in a negative impact on terrestrial fauna movement. Harrisia Cactus are biologically controlled by two species a stem-boring longicorn beetle (*Alcidion cereicola*) and a mealy bug (*Hypogeococcus festerianus*). There was no evidence of these in the Harrisia Cactus, but the scattered distribution of the plants at the time of the survey would indicate some control by these insects.

Opuntia spp. were observed scattered throughout the Offset Area. *Opuntia also* produce a large amount of seed which is dispersed by birds and water courses. The *Opuntia* species observed were affected by the Cactoblastis Moth (*Cactoblastis cactorum*). Opuntia species are classified as Restricted Matter and WoNS. However, the confirmed presence of the biological control moth suggests that *Opuntia* cacti should not considered to be a significant threat to the Offset Area.

4.2.1.2 Buffel Grass

Buffel Grass (*Cenchrus ciliaris*) was observed in low cover at BC04 within the Offset Area reflecting the sites poor soils. Buffel Grass is a highly adaptive plant producing large numbers of seeds which are dispersed by fauna, wind and water. A suitable mechanism for the control of Buffel Grass in this situation involves the strategic and combined distribution of different herbicides to reduce Buffel Grass populations to promote the expansion of increased native ground cover, without providing long term residual impacts to native grass species. However, the low cover of Buffel grass in the Offset Area would suggests that monitoring is required but control would only be required if the cover increases to unacceptable levels.

4.2.2 Feral Animals

4.2.2.1 Feral Pigs

Traces of Feral Pigs were observed at several locations during the assessment. Pigs contribute to the overall degradation of gilgai, damp areas and other native species habitat. Damage occurs through wallowing, rooting for food and selective feeding; they are omnivorous and therefore impact flora and fauna simultaneously. Feral Pigs reproduce very successfully and sites often require treatment to manage localised populations. Suitable control methods for Feral Pigs are baiting as well as trapping, with the former being more effective on large infestations. The level of Feral Pig activity indicates that active control is required.

4.2.2.2 Rabbits

Scratching's and droppings of *Oryctolagus cuniculus* (European Rabbit) were observed in the Offset Area at one location. High population densities of rabbits could impact recruitment of native plant species through selective grazing, which can also have long term effects on biodiversity and ecosystem development if key indicator species are excluded by their grazing. Extensive burrowing by rabbits may also lead to erosion concerns.

Rabbits are classified as Restricted Matter in Queensland. However, they are not considered to be a significant threat as widespread plant species known to be impacted by rabbit occurrence are not present across the Offset ecosystems. Future monitoring should consider monitoring the presence of this animal, and any notable increase in density may require a thorough abundance and impact assessment.

4.2.2.3 Wild Dogs

Wild Dogs could predate on the Squatter Pigeons and Koalas if numbers are high, and one individual was sighted in the Offset Area. If signs of predation on threatened wildlife are observed in the Offset Area or Ellensfield property, a management program would be required.

4.2.2.4 Erosion

The large patches of erosion (total 33.6ha) in the western section of the Offset Area appear to reflect the result of grazing activities on sodic soils but could be partly attributed to natural erosion exacerbated by cattle activity over a long period. Some of the patches have regrowth and may be recovering. If the erosion is a result of grazing,

the Offset Area may need to be fenced to limit cattle entering the area and extending the existing erosion. Further investigation in subsequent surveys is required.

4.2.3 Other Potential Threats

Cattle were observed within the wider Ellensfield property and the Offset Area. Considering the extent of erosion in the Offset Area, cattle exclusion may be required for an extended period to determine if the erosion extent slows or ceases, and to determine if the vegetation in those area starts to recover. Comparison with subsequent monitoring results is necessary to determine the trend of erosion impacts.

Bushfires are possible due to the presence of high grass cover. RE 11.10.7 is not a fire sensitive community, but fuel loads in the Offset Area should be monitored and managed to mitigate the impacts of bushfire on the Offset Area. The fuel loads in AU1 were around 5,000 kg/ha. A ground layer biomass of 5,000 kg/ha is required in the OMP to reduce erosion, however a reduction may be required in wet periods to prevent the fuel load building up to a level that could make it a fire hazard.

5 CONCLUSIONS

The results of the 2023 assessment identified that the Ellensfield property Offset Area was moderate to highly functional for the vegetation (specifically RE 11.10.7) and for habitat for the Squatter Pigeon, Koala and Greater Glider. Importantly, opportunity exists to increase the value of the offset through appropriate management measures, particularly improved grazing management and invasive species control.

The Biocondition results support the conclusion that the site is a suitable and viable offset for Squatter Pigeon, Koala and Greater Glider. The Offset Area exhibits positive habitat qualities for its development in conservation gain.

Recommendations to increase the value of the area include:

- The strategic exclusion of cattle and associated grazing to reduce erosion, in the event erosion increases under the current stocking rates.
- The monitoring and management of the Cacti species and Buffel Grass to support the sites biodiversity values and manage the risk of bushfire.
- The monitoring and management of feral pigs, particularly in the western portion of the Offset Area.

6 LIMITATIONS

6.1 STATEMENT OF LIMITATIONS

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APPENDIX A: RAW DATA

Biocondition Sites

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
Date			11/07/2023	11/07/2023	12/07/2023	12/07/2023	13/07/2023	13/07/2023
Observer			JM/PQ	JM/PQ	JM/PQ	JM/PQ	JM/PQ	JM/PQ
Location			Ellensfield	Ellensfield	Ellensfield	Ellensfield	Ellensfield	Ellensfield
Bioregion			11					
Datum			GDA94					
Zone			55					
Easting (add from GIS)	Plot Origin (100x50m)		633967	632870	634539	634032	632509	632045
Northing			7593345	7593350	7592749	7592287	7592752	7593190
Easting	Plot Centre (100x50m)		633989	632825	634497	634019	632473	631994
Northing			7593298	7593329	7592720	7592240	7592719	7593183
Plot Bearing	Degrees		156	254	236	196	225	262
Locality Description	Lot/Plan or Lease		L 13 SP178466	L 13 SP178466	L 13 SP178466	L 13 SP178466	L 13 SP178466	L 13 SP178466
RE / Tree heights								
Habitat Description			Ironbark Woodland	Ironbark Woodland	Ironbark Woodland	Ironbark Woodland	Ironbark Woodland	Ironbark Woodland
RE			11.10.7a	11.10.7a	11.10.7a	11.10.7a	11.10.7a	11.10.7a
Tree Canopy Hgt (EDL)	m median		14.2	11.1	16.7	11.8	8.5	10.4
Subcanopy Hgt	m		4.5		4.8		7	3.6

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
Emergent Hgt	m							
50x20m Area								
Coarse Woody Debris	m							
			1.5	1.7	2.0	0.9	7.1	2.8
			1	2.2	2.0	1.3	2.6	4.5
			2.5	0.9	1.5	4.2	7.4	4.7
			7	1.3	7.0	7.2		2.2
				1.1	3.0	1.5		5
					7.0	1.8		7.7
					4.0	0.6		1.1
					1.8			
					2.1			
Total	**m**		**12**	**7.2**	**30.4**	**17.5**	**17.1**	**28**
100x50m Area								
EDL spp recruitment	100%		100	100	100	100	66	100
Plant Species (Layer e=emergent,t1-tree1, t2=tree2, s1=shrub1, s2=shrub2, g=ground)	**Common name** d=dom, C=co-dom, s=dub-dom, A = assoc							
Native Tree species Rich			**4**	**6**	**9**	**10**	**10**	**7**
Acacia excelsa	Ironwood			T2a			t2c	t2s
Acacia leiocalyx	Black Wattle				sd	ta		

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
Alphitonia excelsa	Red Ash		T2a	T2a	T2c	T2s		
Archidendropsis basaltica	Dead Finish			T2a		T2a		
Atalaya hemiglauca	Whitewood			T2s		T2d	t2c	t2d
Corymbia dallachiana	Ghost Gum		T1a	T1a		T1a	t1s	t1s
Corymbia sp.	Yellowjacket					T1a		
Cupaniopsis anacardioides	Tuckeroo					T2a		
Ehretia membranifolia	Weeping Koda (Peach Bush)						sc	
Eucalyptus crebra	Narrow-leaved Ironbark		T1d	T1d	Td	T1d	t1d (no bud to confirm)	t1d photo of bud cap
Geijera parviflora	Wilga							
Geijera salicifolia	Scrub Wilga						t2a	sa
Grevillea parallela	Silver Oak				T2a			
Melaleuca quinquenervia	Broad-leafed Teatree				T2s			
Petalostigma pubescens	Quinine Tree		T2d		T2c	T2s	t2s	t2a
Psydrax attenuata	Myrtle							
Santalum lanceolatum	Sandalwood							
Terminalia oblongata	Yellowwood							
Ventilago viminalis	Supplejack							
	Narrow leaf geebung				T2a			
	Bloodwood sample tree 15m tall				Ts			

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
	Don't know if funky fruit on ground decomposed fruit still in large tree looks like Clarkson see photo				Ts			
	Drooping glaucoma leaf sample for fun sandelwood?					T2s		
	vine tree						t1c	t2a
	acacia sample fissured bark, long straight leaf 3m tall						t2a	
	fissured bark box like, thick leathery leaf sample, maybe Alectryon						t2a	
	glossy leaf sample							
50x10m Area								
Shrub spp. richness			**6**	**5**	**6**	**7**	**6**	**5**
Plant Species	Common name							
Breynia oblongifolia	Coffee Bush		Ss	Ss	Ss			sa
Carissa ovata	Currant Bush					Ss	sa	sa
Eremophila mitchellii	False Sandalwood					Sd	sc	
Erythroxylum australe	Erythroxylum		Ss		Ss		ss	
Grewia retusifolia	Dog's Balls		Ss	Sa	Sa	Ss	ss	sc
	Furry leaf with ball fruit sample		Ss		Sa	Sa		
	Denhamia geijera sample		Ss		Sa			

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
	The plant from 11.4.9 gro looks like eromophilia look up denhamia			Sd				
	Bipennate acacia sample, can grow 5m found on last site pp			Sa		Ss	if tree species sa	
	Acacia seedling sp			Sa				
	Phyllanthes sample 1m				Sa			
	Opposite leaf purple stem flower looking new leag					Sa		
	Dodonea triq		Ss			Sa		
	soft shrub white dots on stem furry on under side leaf sample						sa	
	plant from gro 11.4.9 sample in bc03							sc
	glossy green leaf bark motled and flaky, has that terminalia look with leafs on end of curved branchlets about 7-8m tall no obvious fruit sampled							sa
Grass spp. richness			**5**	**8**	**7**	**7**	**11**	**8**
Plant Species	Common name							
Aristida calycina var. *holathera*	Dark Wiregrass (purple aristida)		Gs	Gd	Gs	Gd	gs	gd
Aristida latifolia	Feathertop Wiregrass						ga	gs
Calyptochloa gracillima	Tableland Couch						gs	
Cymbopogon refractus	Barbwire Grass					Ga	gd	ga
Enneapogon gracilis	Slender Bottle-washers					Gs	gs	gs

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
Enneapogon polyphyllus	Nine Awn Bottlewasher						ga	
Heteropogon contortus	Black Speargrass		gs	Gs	Ga	Gs		ga
Paspalidium caespitosum	Brigalow Grass						ga	
Themeda triandra	Kangaroo Grass		Gs	Ga		Gs	ga	
	Cymbopogon sample		Gs	Ga				
	Eragrostis spend seed this time of yr			Ga				
	Panicum sample			Ga				
	Bunch eragrostis sample				Gd			
	Cyperus or poverty sample				Ga			
	Panicum with large seed head and wiggly axis ones seed drop hairy leaf base two samples in bag				Ga			
	1.5m tall rats tail with lime green leaf sample				Ga			
	Broad spreading love grass sample					Ga		
	Panicum sample 2					Ga		
	lovegrass sample						ga	ga
	short green stiff leaf sheeth full rap around stem boot height sample						ga	ga
	panicum sample						gs	

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
	bunched lovegrass							ga
	Cyperus small			Ga				
	Poverty grass sample at 26m			Ga				
	Carex sample				Ga			
Forb & other spp richness			**5**	**4**	**3**	**3**	**2**	**1**
Plant Species	Common name							
Cheilanthes sieberi	Rock Fern		ga		Gs			
Enchylaena tomentosa	Ruby Salt Bush						ga	
Eustrephus latifolius	Wombat Berry vine		Ga					
Glycine tabacina	Glycine Pea		Ga	Ga		Ga	ga	ga
Glycine tomentella	Woolly Glycine		ga	Ga				
Lomandra longifolia	Spiny Mat Rush		Ga					
Could be supplejack	Vine tree looks like a giant leichardt tree					T1a		
	Small bottle cleaner			Gs				
	Vine with yellow cluster flower			Ga		Ga		
	Alternanthera 2 samples in bay one young one old				Ga			
	Reserection plant				Gs			
Native spp richness			**16**	**17**	**16**	**26**	**23**	**23**
Non-native Cover %	0.1--0.9 or 1--100		**45**	**5.4**	**36**	**11**	**21.7**	**9.3**
Plant Species	Common name							

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
Achyranthes aspera	Devil's Horsewhip						1	
Cenchrus ciliaris	Buffel Grass		5					
Harrisia tortuosa	Harrisia cactus	Restricted						0.5
Melinis repens	Red Natal Grass		30		30	5	15	5
Opuntia stricta	Prickly Pear	WoNS, Restricted		1				
Opuntia tomentosa	Velvety Tree Pair	WoNS, Restricted	5		2			
Sida cordifolia	Flannel Weed		4	3	2			
Stylosanthes scabra	Shrubby Stylo		1	0.5	2	3	2	2
	Blue sida						1	
	Polymeria			0.5		2	0.2	
	Windmill chloris			0.4			1	0.5
	Appressed lead to stem phyllanthes					0.5		
	Milky sap vine dull leaf					0.5		
	windmill chloris							
	soft rolly						0.4	
	spiked sida						0.6	1
	fuzzy weed gro						0.2	0.3
	portulaca pigweed						0.3	
Five x 1m plots	%							
Groundcover								

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
Native perennial (decreaser) grass Cover	**Total**		**8.4**	**34.8**	**35**	**19.6**	**7**	**11**
1			30	25	10	3	10	40
2			10	49	60	15		
3				40	40	35	7	10
4				25	60	20	3	3
5			2	35	5	25	15	2
Native other grass (if relevant)	**Total**		**0**	**0**	**0**	**0**	**0**	**0**
1								
2								
3								
4								
5								
Native forbs and other	**Total**		**0.4**	**2.2**	**0.4**	**2.8**	**1.6**	**0.4**
1				1	2	3	2	1
2						5	2	
3			1	5		1	1	1
4			1	1		3	2	
5				4		2	1	
Native shrubs (<1m	**Total**		**1**	**0**	**0.8**	**0.4**	**0**	**1.4**
1					1			
2								3

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
3								4
4			5		3			
5						2		
Non-native grass	**Total**		**17**	**0**	**8**	**1.8**	**0**	**0**
1			10		30	1		
2						1		
3			10		5			
4			30					
5			35		5	7		
Non-native forbs and shrubs	**Total**		**0.4**	**2.6**	**0**	**0**	**0.2**	**0.2**
1				5			1	
2			1	2				
3			1					
4				2				1
5				4				
Litter	**Total**		**36.2**	**55**	**43.8**	**37**	**9.2**	**53.6**
1			5	69	49	68	17	30
2			69	59	38	39	5	50
3			52	33	50	32	5	1
4			54	57	32	27	10	92
5			1	57	50	19	9	95

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
Rock	**Total**		**10**		**0**	**7**	**46.4**	**1.6**
1			50				30	
2						10	30	
3						10	67	3
4				4		15	75	2
5							30	3
Bare Ground	**Total**		**27.4**	**6.4**	**12**	**31.4**	**35.6**	**31.6**
1	10		5		10	25	40	29
2	20		20			30	63	47
3	40		40	22	5	22	20	80
4	10		10	10	5	35	10	2
5	20		62		40	45	45	
Cryptograms	**Total**		**0**	**0**	**0**	**0**	**0**	**0.2**
1	10							
2	10							
3								1
4								
5	30							
Total			**100.8**	**101**	**100**	**100**	**100**	**100**
100x50m area	Benchmark							
Eucalypt large tree DBH (cm)			44	44	*44*	*44*	*44*	44

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
No. large eucalypts			**4**	**0**	**7**	**1**	**0**	**1**
Non-eucalypt large tree DBH (cm)			25	25	*25*	*25*	*25*	25
No. large non-eucalypts			**0**	**0**	**0**	**0**	**1**	**0**
Total			**4**	**0**	**7**	**1**	**1**	**1**
100m Transect								
Canopy	**Total**		**55.9**	**53.6**	**130.4**	**47.9**	**33.8**	**57.6**
			10.1	5.3	9.9	2.7	3.4	3.4
			0.7	4.5	4.3	1.6	1.2	2.7
			3.2	15.1	0.6	9.2	10.7	6.3
			1.7	2.6	0.5	14	1.3	2.4
			4.1	1.8	0.9	4.4	3	5.4
			12.5	1.3	1.6	1.5	4.4	2.6
			5	3.6	0.2	0.9	2	0.9
			2.4	4	3.1	6.7	7.8	1.9
			6.1	6.5	3.1	6.9		0.2
			1.8	4.3	1.7			10.3
			1.6	4.6	2.2			9.1
			1.3		12.7			9.9
			0.9		4.4			2.5
			1.4		6.1			
			3.1					

Site ID		Status	BC04	BC02	BC05	BC06	BC03	BC01
Native Shrub	**Total**		**16.4**	**2.3**	**4.65**	**4.6**	**9**	**3.2**
			6.3	0.7	1.1	0.9	0.3	0.1
			0.8	0.9	1.8	1.9	0.8	0.6
			0.6	0.7	1.6	0.9	0.6	0.1
			1.7		0.05	0.5	0.1	0.2
			5.9		0.1	0.4	0.5	0.7
			1.1				0.7	0.3
							1	0.7
							0.4	0.5
							2	
							0.6	
							2	

Species Habitat Attributes

Site	BC04	BC02	BC05	BC06	BC03	BC01
Food and Foraging Habitat						
Plant species	3	2	2	3	3	4
Prey species	3	3	2	2	3	3
Grass seeds	4	3				
Flowering/fruiting plants	5	5	5	5	5	5
Termite mounds						
Watercourses	3	2	1	3	2	2
Pemanent Water Proximity	1	1	1	1	1	1
Habitat shelter/breeding						
HBTs (largest hollow ≤6cm)					2	
HBTs (largest hollow ≤12cm)	5	3	3	1	1	2
HBTs (largest hollow ≤22cm)		1	1			1
HBTs (largest hollow >22cm)	1					
Grass Cover	2	2	4	3	4	5
Logs	2	1	3	1	2	1
Log piles						
Caves						
Large shady Trees	5	3	3	2	1	2
Cracking Clays						
Gilgai						
Rocky outcrops						

Site	BC04	BC02	BC05	BC06	BC03	BC01
Rocks	3	2	0	1	5	2
Rock piles						
Habitat for mobility						
Vegetation structure	3	3	3	3	3	3
Vegetation compositon	3	3	3	3	3	3
Vegetated corridors	5	5	5	5	5	5
Dead trees	2	1	3	1	3	2
Riparian vegetation	5	0	0	0	0	0
Severity of Threats (reverse order)_						
Weeds	4	4	4	4	4	4
Clearing	5	5	5	5	5	5
Pest Species	3	5	2	2	3	3
Fire Regime	5	5	5	5	5	5
Erosion	2	2	2	2	2	2
Competition for Habitat	3	3	3	3	3	3
Native Predators	1	3	3	3	3	3
Disease of Pathogens	4	4	4	4	4	4
Barriers to Movement	5	5	5	5	5	5
Area of AU (Ha)	565	565	565	565	565	565
Squatter Pigeon Habitat						
Food and Foraging	1.3	1.0	0.5	0.7	0.7	0.8
Habitat and Shelter	1.8	1.3	1.8	1.3	1.3	1.8

Site	BC04	BC02	BC05	BC06	BC03	BC01
Habitat for Mobility	1.8	1.8	1.8	1.8	1.8	1.8
Severity of Threats	1.8	2.0	1.8	1.8	1.9	1.9
Total	**7**	**6**	**6**	**6**	**6**	**6**
AU Average	**6**					
Koala						
Food and Foraging	1.5	1.0	0.8	1.5	1.3	1.5
Habitat and Shelter	2.5	1.5	1.5	1.0	0.5	1.0
Habitat for Mobility	1.8	1.8	1.8	1.8	1.8	1.8
Severity of Threats	1.8	2.1	1.9	1.9	2.0	2.0
Total	**8**	**6**	**6**	**6**	**6**	**6**
AU Average	**6**					
Greater Glider						
Food and Foraging	2.0	1.8	1.8	2.0	2.0	2.3
Habitat and Shelter	2.5	1.5	1.5	0.8	0.5	1.0
Habitat for Mobility	1.8	1.7	1.5	1.8	1.7	1.7
Severity of Threats	1.8	2.0	1.8	1.8	1.9	1.9
Total	**8**	**7**	**7**	**6**	**6**	**7**
AU Average	**7**					

APPENDIX B: BIOCONDITION SITE PHOTOGRAPHS

In order of North South, East and West

BC01

BC02

BC03

BC04

BC05

BC06

APPENDIX C: BIOCONDITION CALCULATIONS

RE / Assessment Unit		BC04	AU1			BC02	AU1			BC05	AU1		
Attribute	Weighting	Field	Bench.	%	Score	Field	Bench.	%	Score	Field	Bench.	%	Score
Large trees	15	8	25	32	5	0	25	0	0	14	25	56	10
Tree canopy median height	5	14.2	19	75	5	11.1	19	58	3	16.7	19	88	5
Recruitment of woody perennial species%	5	100	100	100	5	100	100	100	5	100	100	100	5
Tree canopy cover %	5	55.9	36	155	5	53.6	36	149	5	130.4	36	362	3
Native shrub canopy cover %	5	16.4	8	205	3	2.3	8	29	3	4.65	8	58	5
Coarse woody debris length m	5	120	526	23	2	72	526	14	2	304	526	58	5
Native plant spp richness													
Trees	5	4	5	80	2.5	6	5	120	5	9	5	180	5
Shrubs	5	6	5	120	5	5	5	100	5	6	5	120	5
Grasses	5	5	5	100	5	8	5	160	5	7	5	140	5
Forbs and other	5	5	6	83	2.5	4	6	67	2.5	3	6	50	2.5
Non-native plant cover	10	45	0	45	3	5.4	0	5	5	36	0	36	3
Native perennial grass cover %	5	8.4	25	34	1	34.8	25	139	5	35	25	140	5
Litter Cover %	5	36.2	55	66	5	55	55	100	5	43.8	55	80	5
Sub-Score	**80**				**49**				**50.5**				**65.5**
Landscape Scale Attributes													
Patch size	10				10				10				10
Connectivity	5				5				5				5
Context	5				5				5				5

RE / Assessment Unit		BC04	AU1			BC02	AU1			BC05	AU1		
Subscore	**20**				**20**				**20**				**20**
Total Point Score	100				**69**				**70.5**				**85.5**
Biocondition Score Site					7				7				9
Biocondition Score AU1 Average					**7**								
Habitat Index Score - Site Based Attributes					6				6				8
Habitat Index Score AU1 Average					**7**								
Habitat Index - Species Habitat Attributes (Site)													
Squatter Pigeon					7				6				6
Squatter Pigeon AU1 Average					**6**								
Koala					8				6				6
Koala AU1 Average					**6**								
Greater Glider					8				7				7
Greater Glider AU1 Average					**7**								

RE / Assessment Unit		BC06	AU1			BC03	AU1			BC01	AU1		
Attribute	Weighting	Field	Bench.	%	Score	Field	Bench.	%	Score	Field	Bench.	%	Score
Large trees	15	2	25	8	5	2	25	8	5	2	25	8	5
Tree canopy median height	5	11.8	19	62	3	8.5	19	45	3	10.4	19	55	3
Recruitment of woody perennial species%	5	100	100	100	5	66	100	66	3	100	100	100	5
Tree canopy cover %	5	47.9	36	133	5	33.8	36	94	5	57.6	36	160	5
Native shrub canopy cover %	5	4.6	8	58	5	9	8	113	5	3.2	8	40	3
Coarse woody debris length m	5	175	526	33	2	171	526	33	2	280	526	53	5
Native plant spp richness													
Trees	5	10	5	200	5	10	5	200	5	7	5	140	5
Shrubs	5	7	5	140	5	6	5	120	5	5	5	100	5
Grasses	5	7	5	140	5	11	5	220	5	8	5	160	5
Forbs and other	5	3	6	50	2.5	2	6	33	2.5	1	6	17	0
Non-native plant cover	10	11	0	11	5	21.7	0	22	5	9.3	0	9	5
Native perennial grass cover %	5	19.6	25	78	3	7	25	28	1	11	25	44	1
Litter Cover %	5	37	55	67	5	9.2	55	17	3	53.6	55	97	5
Sub-Score	**80**				**55.5**				**49.5**				**52**
Landscape Scale Attributes													
Patch size	10				10				10				10
Connectivity	5				5				5				5
Context	5				5				5				5
Subscore	**20**				**20**				**20**				**20**

RE / Assessment Unit		BC06	AU1			BC03	AU1			BC01	AU1		
Total Point Score	**100**				**75.5**				**69.5**				**72**
Biocondition Score Site					8				7				7
Habitat Index Score - Site Based Attributes					7				6				7
Habitat Index - Species Habitat Attributes (Site)													
Squatter Pigeon					6				6				6
Koala					6				6				6
Greater Glider					6				6				7
Patch Area					**>2,000 ha**