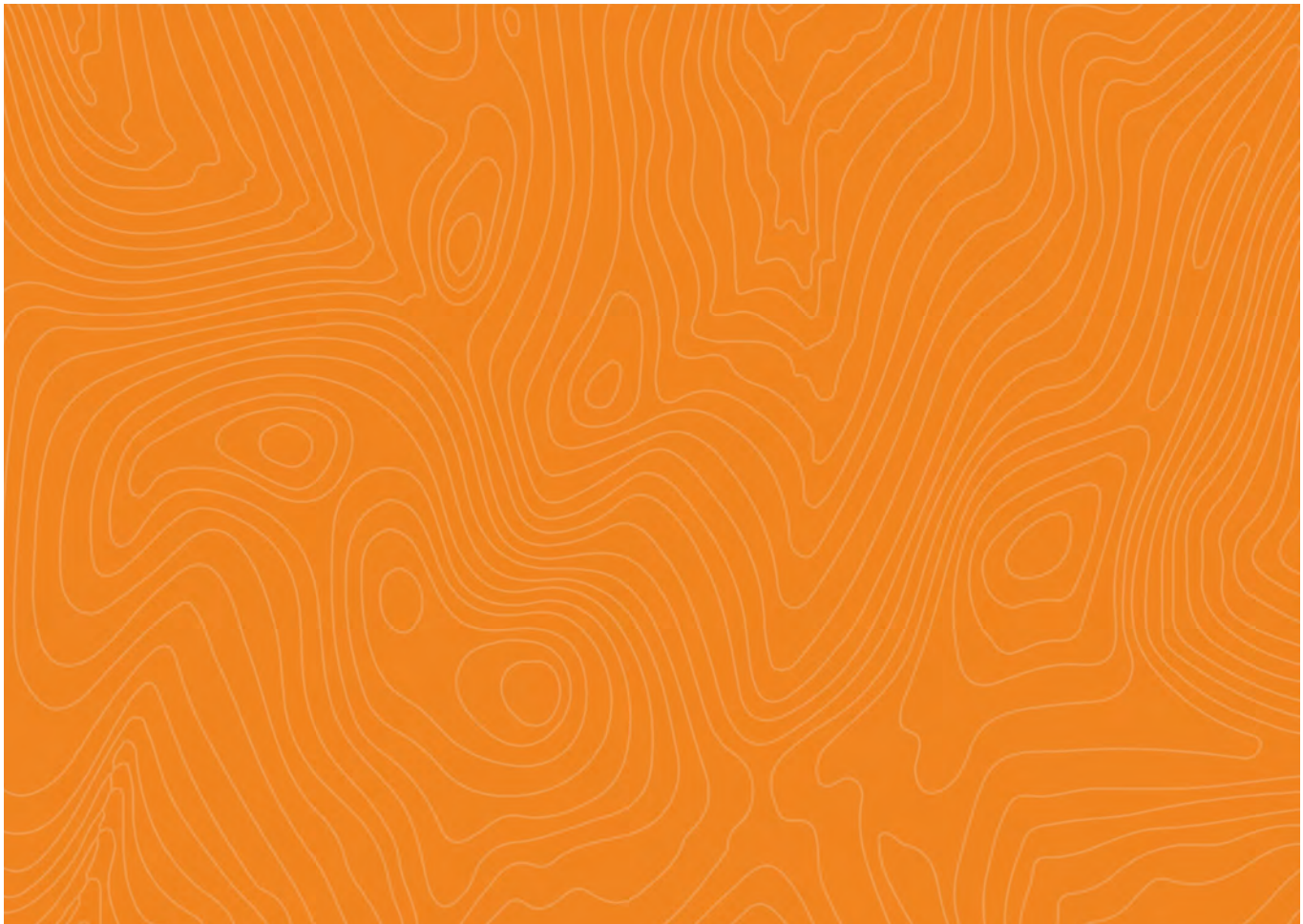
MIWF and OHTL Offset Area Management Plan – Collin Offset

EPBC 2202/8756 and 2020/8759

Prepared for:

ACCIONA Energy Australia Pty Ltd

30 April 2024



Document information

DOCUMENT	MIWF and OHTL Offset Area Management Plan – Collin Offset
ATTEXO REF	ACC-005-021
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PREPARED BY	Selina Carruthers / Ella Cathcart-van Weeren / Matthew Whitehouse
REVIEWED BY	Jeromy Claridge

Quality information

REVISION	DATE	DETAILS	AUTHORISATION	
			Name/Position	Signature
1	30-04-2024	Issued for use	Jeromy Claridge Principal Environmental Scientist	

Prepared by:
Attexo Group Pty Ltd
attexo.com.au
ABN 75 637 138 008

Contents

Figures

Tables

1.0 Introduction

This Offset Area Management Plan (OAMP) has been prepared for the Collin property, which will be managed to offset impacts associated with the MacIntyre Wind Farm (MIWF) Project (EPBC 2020/8756) and the Overhead Transmission Line (OHTL) Project (EPBC 2020/8759). This OAMP is required by the conditions of approval for the MIWF and the OHTL Projects (EPBC 2020/8756 and EPBC 2020/8759, Condition 3) and has been prepared to address requirements set out in the *Environment Protection and Biodiversity Act 1999* (EPBC Act) and the EPBC Act Environmental Offsets Policy (DSEWPC 2012).

1.1 Project description

The approval holder, ACCIONA Energy Australia Global Pty Ltd (ACCIONA), is responsible for the construction and operations of the MIWF and OHTL Projects. The Projects are located approximately 40 km southwest of the township of Warwick and 70 km southwest of Toowoomba, Queensland, within the Toowoomba Regional Council, Southern Downs Regional Council and Goondiwindi Regional Council Local Government Areas (LGAs).

The Project's offset liabilities are proposed to be offset using the Collin offset property (the offset site). This offset site is located within the MIWF Project Area, see **Figure** 1-1. The offset management area encompasses a total area of 3,30.1 ha and will be secured as a direct, land-based offset to acquit the Project's offset obligations. Further detail on how the offset site addresses requirements set out in the Offsets Policy Principles of the EPBC Act Environmental Offsets Policy are provided in **Section 13.0.**

1.2 Impact Area description – residual impacts to protected matters (Condition 6a)

The MIWF Project is located immediately south of Durikai State Forest. It retains large stands of Eucalypt woodland that provide habitat for a range of flora and fauna including conservation significant species. This area contains low undulating hills ranging from 500 - 650 m above sea level and is intersected through the centre to south-east of the Project area by the MacIntyre Brook and its associated tributaries. The MIWF Project area consists primarily of agricultural land that has been extensively cleared and fragmented over generations of intensive sheep grazing. Despite this, the MIWF Project area retains large patches of remnant and regrowth vegetation of varying maturity. The MIWF Project Area, which includes this Project's footprint (i.e. maximum area of disturbance), is 2,789.1 ha in size (GHD 2021a).

The OHTL Project is located immediately north-west of the MIWF Project area. The OHTL Project area contains a mix of open sheep grazing and several large areas of intact remnant Eucalypt woodland that provide habitat for a range of flora and fauna including conservation significant species. The OHTL Project footprint, which includes this Project's Impact Area, is 425.8 ha in size (GHD 2021b).

The impact area for relevant Matters of National Environmental Significance (MNES) prescribed under the EPBC Act for the MIWF Project and the OHTL Project (GHD 2021a; GHD 2021b) have been provided in **Table** 1-1 and **Table** 1-2 respectively.

As presented in the Offset Strategies for the MIWF and OHTL (Attexo 2021a; 2021b), in Preliminary Documentation submitted and approved during the assessment of these Projects, habitat quality assessments and BioCondition surveys were undertaken in January 2021. A total of 41 survey sites were assessed within the MIWF impact area and 40 sites were assessed within the OHTL impact area within relevant Assessment Units (see location of AUs and BioCondition sites on **Figure** 1-2). Impact area habitat quality scoring for these MNES has also been provided **Table** 1-1 and **Table** 1-2 for the MIWF and OHTL Projects respectively. Detailed impact area weighted habitat scoring, associated data and calculations are provided in **Appendix C.** For the purposes of this OAMP, the MIWF and OHTL Project areas have been combined to produce a single weighted habitat quality score for each MNES value. A summary of the combined area and weighted scores has been provided in **Table** 1-3.

150°50' 151° 151°10' 151°20' 151°30' 151°40' 151°50' 152° 152°10' 152°20'

-27°50' -28° -28°10' -28°20' -28°30' -28°40'

Gore Highway
Millmerran
Gore Highway
Clifton
New England Highway
Allora
Cunningham Highway
Cunningham Highway
Warwick
New England Highway
Killarney
Inglewood
Cunningham Highway
Stanthorpe

Toowoomba Brisbane
Warwick
Goondiwindi

0 km 500

MacIntyre Wind Farm
Overhead Transmission Line
Collin Offset Site
Town
High Voltage Transmission Line
Highway
Watercourse
Protected areas of Queensland

MACINTYRE WIND FARM
Project Area

Attexo

REVIEWED: JC **DRAWN:** TOD **SCALE (A3):** 1:500,000 **DATE:** 24/04/2024 **DWG No:** ACC-005_189[B]

FIGURE 1.1

C:\Users\FanMo\Attexo Group\Attexo - Documents\Projects\ACCIONA Energy\ACC-005 MIWF Offsets Delivery\5. GIS\4.7 Working\31_Consolidated_OAMP

151°25' 151°30' 151°35' 151°40' 151°45' 151°50'

-28°20'

-28°25'

-28°30'

Cunningham Highway

Millmerran
Clifton
Allora
Warwick
Stanthorpe

0 km 2.5

MacIntyre Wind Farm
Habitat Scoring Site
Biocondition Site
Watercourse
Roads
Property Boundary

Impact Area Assessment Units
13.11.3
13.11.5
13.11.6
13.11.8

Non-remnant

MACINTYRE WIND FARM
Impacted MNES Habitat

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FIGURE 1.2

Table 1-1 MIWF Project MNES values, Impact Area and habitat quality scores (Attexo, 2021a)

MNES	Impact Area (ha)	Habitat Quality Score
Koala	498.10	5.78
Grey-headed Flying-fox	498.10	5.79
Greater Glider	156.65	6.10
Squatter Pigeon	136.69	7.64
Regent Honeyeater	8.06	7.44

Table 1-2 OHTL Project MNES values, Impact Area and habitat quality scores (Attexo, 2021b)

MNES	Impact Area (ha)	Habitat Quality Score
Koala	236.51	7.16
Grey-headed Flying-fox	236.51	5.96
Greater Glider	88.90	6.69
Squatter Pigeon	126.65	7.14
Regent Honeyeater	4.67	7.20

Table 1-3 Combined MIWF and OHTL Project areas and weighted habitat quality scores

MNES	Combined Impact Area (ha)	Weighted habitat quality scores / value used in calculator
Koala	734.61	6.22 / 6
Grey-headed Flying-fox	734.61	5.83 / 6
Greater Glider	245.55	6.32 / 6
Squatter Pigeon	263.34	7.40 / 7
Regent Honeyeater	12.73	7.35 / 7

Weighted habitat quality calculations and all associated inputs are provided in **Appendix C**.

2.0 OAMP Approval Conditions

This OAMP has been developed to address relevant EPBC Act approval conditions (EPBC 2020/8756 and 2020/8759) that specify environmental offset requirements. Relevant EPBC Act approval conditions and where they have been addressed in this document are presented in **Table** 2-1.

Table 2-1 EPBC Act approval conditions for this OAMP (from EPBC 2020/8756 and 2020/8759)

Condition Number	Condition Requirement	Where condition is address in OAMP
3	To compensate for the total **clearance** of habitat for **EPBC Act listed threatened species** not including ***Macrozamia conferta* habitat** up to the limits as specified in condition 1, the approval holder must provide an environmental offset in accordance with the principles of the **Environmental Offsets Policy** to the satisfaction of the **Minister**.	This OAMP provides a description of the proposed offset area, corresponding management actions, monitoring, and reporting requirements to achieve the offset outcomes. **Section 13.0** of this document outlines how the offset is in accordance with the offset policy principles in the *EPBC Act Environmental Offsets Policy*.
4	The approval holder must implement the **Interim Offset Area Management Plan (IOAMP**) upon the **commencement of the action** and until the **Minister** has approved an Offset Area Management Plan (OAMP).	This OAMP supersedes the MIWF Interim Offset Area Management Plan (Rev 3, 6 Feb 2022) and the OHTL Interim Offset Area Management Plan (Rev 3, 6 Feb 2022) that has been implemented since the action commenced and will be applicable for the duration of the respective EPBC approvals.
5	The approval holder must submit an OAMP prepared by a **suitably qualified ecologist** to the **department** three months after the **commencement of the action** for the written approval of the **Minister**. The approval holder must not **commission** until the OAMP has been approved in writing by the **Minister**. The approval holder must implement the approved OAMP.	This OAMP was prepared and reviewed by suitably qualified ecologist (**Section 15.0**). The draft OAMP was submitted to DCCEEW on 7 July 2022 (three months after commencement of the action). Commissioning will not occur until the OAMP has been approved in writing by the minister.
6	**The OAMP must include:**	n/a
6a	**a)** a summary of the residual **impacts** to **protected matters** that will be compensated for by the offset. This summary must include the area(s) of habitat for **protected matters** and its condition and quality at all **impact** sites which the particular offset is to address;	A summary of impacts to protected matters is discussed in **Section 1.2**.
6b	**b)** a table of commitments made in the OAMP to achieve the ecological benefits for relevant **protected matters**, and a reference to where the commitments are detailed in the OAMP;	A summary of the commitments made in this OAMP to achieve the nominated ecological benefits for the relevant MNES has been provided in **Section 16.0**
6c	**c)** a description of the offset site(s), including location, size, condition, environmental values present and surrounding land uses;	A description of the offset sites, including location, size, condition, environmental values present and surrounding land uses is provided in **Section 3.0**.

Condition Number	Condition Requirement	Where condition is address in OAMP
6d	**d)** baseline data, including results from field validation surveys, and quantifiable ecological data on **site habitat quality**, and other supporting evidence, that documents: i. that suitable habitat for each **EPBC Act listed threatened species** will be present within the offset site(s); ii. the quality and condition of habitat for each **EPBC Act listed threatened species** within the offset site(s); iii. the presence of **Koala** individuals within the offset site(s); iv. the presence of **Greater Glider** within the offset site(s) or within the home-range of **Greater Glider** in adjacent, connected **Greater Glider habitat**; and v. the nature and extent of any weeds and feral animals at the offset site(s).	Baseline data, including results from field validation, surveys, and quantifiable ecological data on site habitat quality and other supporting evidence that documents: i. that suitable habitat for each EPBC Act listed threatened species will be present within the offset sites (**Section 3.4.2**); ii. the quality and condition of habitat for each EPBC Act listed threatened species within the offset sites (**Section 4.0**); iii. the presence of Koala individuals within the offset sites (**Section 3.4.2** and **Figure** 3-5); iv. the presence of Greater Glider within the home-range in adjacent, connected Greater Glider habitat (**Section 3.4.2** and **Figure** 3-7); and v. the nature and extent of any weeds and feral animals at the offset sites (**Section 3.4.1**). Additional habitat quality scoring sheets and raw data are provided in **Appendix B**.
6e	**e)** an assessment of site habitat quality for each habitat feature;	Site habitat quality for each species-specific habitat features are presented in **Section** 4.0.
6f	**f)** details of how the offset site(s) will provide connectivity with **habitat features** outside the offset site/s and biodiversity corridors for each **EPBC Act listed threatened species**;	Offset details including information in the connectivity with species specific habitat features and biodiversity corridors are presented in **Section 3.2**.
6g	**g)** maps and **shapefiles** that clearly define the location and boundaries of the offset site(s), accompanied by **offset attributes**;	Maps of the Offset site and relevant Assessment Unit areas are provided in **Figure** 3-1 and **Figure** 3-4. Offset attributes are discussed in **Section 3.4**. Associated shape files will be attached at the time of OAMP submission.
6h	**h)** specific offset completion criteria derived from the **site habitat quality** scores to demonstrate the improvement in the quality of habitat for each **EPBC Act listed threatened species** within the offset site(s) over the period of effect of this approval to the satisfaction of the **Minister**;	Specific completion criteria to demonstrate the improvement in quality of habitat for relevant habitat features for each MNES matter have been developed and provided in **Table** 6-1. Targeted site-specific and species-specific attributes for improvement have been discussed in **Table** 6-2 and **Table** 6-3.
6i	**i)** details of the management actions, and timeframes for implementation, to be undertaken to achieve the offset completion criteria, including but not limited to; i. control of grazing stock within the offset site(s); ii. control of grazing within **riparian zones** of the offset site(s); iii. establishment of the typical range of tree species native to the Nandewar Bioregion, in particular local *Eucalyptus* species; iv. measures to protect juvenile trees from grazing by native and invasive species; v. weed and feral animal management; and	Management actions and relevant timeframes for completion criteria are provided in **Section 7.0**: i. control of grazing stock within the offset sites is discussed in **Section 0**; ii. control of grazing within riparian zones of the offset sites is discussed in **Section 0**; iii. establishment of the typical range of tree species native to the Nandewar Bioregion, in particular local *Eucalyptus* species is discussed in **Section 9.0**; iv. measures to protect juvenile trees from grazing by native and invasive species is presented in **Section 0** and **Section 0**; v. weed and feral animal management is discussed in **Section 7.2** and **Section 0**; and

Condition Number	Condition Requirement	Where condition is address in OAMP
	vi. a commitment to maintain or improve the key **habitat features** within the offset sites(s) for the duration of the approval.	vi. a commitment to maintain or improve the key habitat features within the offset sites for the duration of the action in **Section 16.0**.
6j	**j)** interim milestones that set targets at 5-yearly intervals for progress towards achieving the offset completion criteria;	Interim milestones that set targets at 5-yearly intervals for progress towards achieving the offset completion criteria are provided in **Section 6.0**.
6k	**k)** details of the nature, timing and frequency of monitoring to report progress against achieving the 5-yearly interim milestones and maintaining improvements of **site habitat quality**. The frequency of monitoring must be sufficient to track progress towards each set of milestones, and sufficient to determine whether the environmental offset is likely to achieve those milestones in adequate time to implement all necessary corrective actions;	Monitoring details, including the timing and frequency required to achieve 5-yearly interim milestones and maintaining site habitat quality are provided in **Section 8.0**.
6l	**l)** timing for the submission of interim monitoring reports which provide evidence demonstrating whether the interim milestones and offset completion criteria are likely to be achieved and subsequently have been achieved;	The timing for submission of interim monitoring reports, which meet these requirements, is outlined in **Section 8.0**.
6m	**m)** timing for the implementation of corrective actions if monitoring activities indicate the interim milestones are unlikely to be, or have not been, achieved.	Corrective actions, and the timing for their implementation, to be undertaken if monitoring indicates interim milestones are unlikely to be achieved are presented in **Section 9.0**.
6n	**n)** a risk analysis and a risk management and mitigation strategy for all risks to the successful implementation of the OAMP and timely achievement of the offset completion criteria, including a rating of all initial and post-mitigation residual risks in accordance with the **risk assessment matrix**.	A risk analysis and risk management and mitigation strategy for all risks to successful implementation of the OAMP is provided in **Section 10.0**.
6o	**o)** evidence of how the management actions and corrective actions take into account relevant **approved conservation advices** and are consistent with relevant **recovery plans** and **threat abatement plans** and where applicable, other relevant documents; and	Management and corrective actions for this OAMP were developed using relevant approved conservation advice and are consistent with relevant recovery plans and threat abatement plans, and other supporting literature for each MNES value. A summary of the documents used is provided in **Section 11.0**.
6p	**p)** details of the legal mechanism for **securing** the environmental offset, such that legal security remains in force over the offset site(s) for at least the period of effect of this approval.	Details of the legal mechanism for securing the environmental offset, such that legal security remains in force over the Offset site for at least the period of effect of this approval is provided in **Section 12.0**.
7	The approval holder must **secure** the offset site(s) specified in the approved OAMP within 12 months of the date that the OAMP is approved in writing by the **Minister**. The approved OAMP must be attached to the legal mechanism used to **secure** the environmental offset.	**Section 12.0** provides the legal security mechanism for the proposed offset site prior to approval. The offset site will be secured within 12 months of the approval of this OAMP, and that the OAMP will be attached to the legal mechanism.

Condition Number	Condition Requirement	Where condition is address in OAMP
8	The offset completion criteria as specified in the approved OAMP must be achieved within 20 years of the **commencement of the action** and then be maintained or exceeded for the duration of the approval. The approval holder must regularly analyse the results of monitoring so as to be able to anticipate any likely failure to achieve the interim milestones and completion criteria and, so as to avoid such failure, promptly propose improved or additional management measures and/or offset site(s) in one or more revised versions of the OAMP and seek **Minister** approval of any such revised OAMP.	This OAMP has been developed to achieve the completion criteria discussed in **Section 6.0**, within 20 years, after which they will be maintained for the duration of the action. Regular monitoring (see **Section 8.0**) will be undertaken to direct management (see **Section 7.0**) and corrective actions (see **Section 9.0**). Following the submission of the 5-yearly monitoring reports, this OAMP will be reviewed to incorporate recommended changes and ensure that completion criteria can be met (see **Section 14.0**).
9	If the offset completion criteria specified in the approved OAMP are not met within 20 years of the **commencement of the action**, the approval holder must, within 10 **business days** of the 20th anniversary of the **commencement of the action**:	n/a
9a	a) notify the **department** which offset completion criteria have not been met, by how much, and the likely cause(s) of the completion criteria not being met; and	This has been included as an additional corrective action in **Section 9.1**.
9b	b) submit to the **department** within 4 months of the 20th anniversary of the **commencement of the action** a Supplementary Offset Area Management Plan (SOAMP) for the approval of the **Minister**.	This has been included as an additional corrective action in **Section 9.1**.
10	If required under condition 9, the SOAMP must detail the additional and revised management measures and/or offset site(s) that will be implemented and offset site(s) secured to compensate, to the satisfaction of the **Minister**, for the non-achievement of offset completion criteria specified in the approved OAMP.	This has been included as an additional corrective action in **Section 9.1**.
11	The approval holder must **secure** any offset site(s) specified in the approved SOAMP within 12 months of the date that the SOAMP is approved in writing by the **Minister**. The approved SOAMP must be attached to the legal mechanism used to **secure** the offset site(s) specified in the approved SOAMP.	This has been included as an additional corrective action in **Section 9.1**.
12	The approval holder must notify the **department** within 5 **business days** of the mechanism to secure each offset site having been executed.	This has been included as an additional corrective action in **Section 9.1**.

3.0 Offset site description and habitat assessment (Condition 6c)

3.1 Offset site description

3.1.1 Site location and size

The offset site as shown in **Figure** 3-1 is located on the Collin property in the Nandewar subregion of the New England Tablelands bioregion. The property is approximately 10 km south-east of Gore on Hunter's Hill Road and 40 km to the north-west of Stanthorpe. The offset management area covers an area of 3,330.1 ha.

3.1.2 Surrounding land use

The predominant land use for the region surrounding the offset and within the MIWF and OHTL Project areas is sheep grazing with some timber harvesting activities. These land uses are consistent with land use in the region, however anecdotal reports indicate that grazing across the offset site has not occurred for several years.

3.2 Connectivity (Condition 6f)

The offset site is well connected at a landscape scale and provides linkage between Durikai State Forest (east of the site) and the important riparian corridor associated with MacIntyre Brook (west of the offset site) (**Figure** 3-2). The offset site is adjacent to major state and regional biodiversity corridors and will help to improve the connectivity between them. Within the offset site itself, there are numerous riparian corridors and ground-truthed regional ecosystems (both remnant and regrowth) that currently provide limited connectivity between these regional corridors (see **Figure** 3-3). As the offset site matures and these communities expand into the predominantly cleared patches between them, the connectivity of the site will improve further.

The suitability of the mapped habitat within the offset site and its connectivity to known records for each MNES value, including relevant habitat features for each MNES species are discussed in **Table** 3-1**.**

Table 3-1 Summary of offset site connectivity for species-specific habitat features

MNES	Discussion on connectivity for relevant habitat features
Koala	The offset site contains a mixture of *Eucalypt* and *Corymbia* dominated vegetation communities (see **Section 3.3**). Large relic trees are present throughout the offset site, in both remnant, regrowth and predominantly cleared vegetation that can facilitate the movement of Koalas and provide refuges during dispersal. Numerous historical records of Koala are located within the Durikai State Forest to the east and north of the offset site (see **Section 3.4.2**). Increasing the connectivity of the surrounding landscape will allow resident populations to move more freely throughout the region and increase their access to suitable habitat along Macintyre Brook (the largest watercourse in the region). The establishment of the offset site will facilitate the long-term suitability of Koala habitat in the region.

MNES	Discussion on connectivity for relevant habitat features
Grey-headed Flying-fox	Grey-headed Flying-fox can travel more than 50 km in one evening to seasonally variable foraging areas. The connectivity of vegetation communities does not necessarily limit their ability to forage throughout the landscape (DAWE, 2021). The availability of suitable foraging resources for this species can however be increased by improving the connectivity of the mature, nectar producing vegetation communities. Increasing landscape connectivity will increase the available foraging resources that Grey-headed Flying-fox could utilise. There are currently no historical records of this species within the MIWF or OHTL Project areas or the offset site (see **Section 3.4.2**), indicating that these areas are currently not in use, too fragmented to be considered as a viable foraging location or due to the seasonable variability of food resources this species has just not been observed utilising these areas. As the offset site matures and connectivity improves, it is likely that these vegetation communities will become more attractive to regional Grey-headed Flying-fox populations and may become utilised.
Greater Glider	The offset site is dominated by a mixture of *Eucalypt* and *Corymbia* vegetation communities (see **Section 3.3**). Large relic hollow-bearing trees (>50cm DBH) which are listed as one of the key limiting factors listed for this species in its Approved Conservation Advice (DCCEEW, 2022), are present within the offset site, in both remnant, regrowth and predominantly cleared vegetation. Significant areas of the offset site are currently mapped by Eyre et. al (2022) *Guide to greater glider habitat in Queensland* as supporting greater glider habitat (see **Figure 3-7**). The Offset Site was identified by Norman and Mackey (2023) *Priority areas for conserving greater gliders in Queensland, Australia* as currently supporting greater glider habitat and also occurring within an optimum connective pathway for greater gliders (see **Figure 3-7a**) Greater Glider records are comparatively abundant in the adjacent Durikai State Forest and connecting remnant vegetation. Records within the Durikai State Forest have a mean spatial separation of 2.5 km and this compares favourably with the nearest recent record to the offset site which is located approximately 1,600 m from vegetation within the offset that currently supports appropriately sized hollows. The establishment and enhancement of the offset, will improve habitat connectivity, provide further dispersal opportunities for the Greater Glider into areas with reduced predation threats and result in the improvement of areas identified by Norman and Mackey (2023) as priority habitat for Greater Glider. The offset site will ultimately also provide additional connections to vegetation associated with the tributaries of Macintyre Brook to the west.
Regent Honeyeater	Regent Honeyeater being highly nomadic and mobile, capable of traveling large distances in search of seasonal available food resources, the connectivity of vegetation communities does not necessarily limit their ability to forage throughout the landscape (DoE, 2015a). The availability of suitable foraging resources for this species can however be increased by improving the connectivity of the mature, nectar producing vegetation communities. Increasing landscape connectivity will increase the available foraging resources that this species could utilise. Whilst no Regent Honeyeater records were observed within the offset site, or the impact site, the abundance of historical records in the surrounding landscape indicates that local populations have historically been present and may periodically utilise habitat within the offset site (see **Section 3.4.2**). As the offset site matures, habitat condition and connectivity improves, it is likely that these vegetation communities will become more attractive to regional Regent Honeyeater populations and may become utilised more frequently.
Squatter Pigeon	The offset site contains a mixture of *Eucalyptus* and *Corymbia* dominated vegetation communities which are listed as the dominant types of open forests and open woodlands communities that Squatter Pigeons are known to forage within (DoE, 2022). Whilst no records of this species were identified within the offset site, several records were identified in the broader MIWF Project area, and in adjacent vegetation to the east (see **Section 3.4.2**). This species is typically wide ranging and is therefore likely to sporadically occur throughout the regional landscape. Improving the connectivity of vegetation within the offset site, and with adjacent vegetation will increase the availability of suitable foraging habitat for this species.

151°28' 151°30' 151°32' 151°34' 151°36' 151°38' 151°40' 151°42' 151°44' 151°46'

-28°18' -28°20' -28°22' -28°24' -28°26' -28°28'

KARARA
GORE
GREYMARE
CEMENT MILLS
PALGRAVE
TERRICA
GOLDFIELDS
PASSCHENDAELE

Columba Road
Road
Dungorm Road
Cunningham Highway
Mountain Maid Road
Durikai State Forest
Rabbit Fence Road
Forestry Road
Cement Mills Road
Hunters Hill Road
Carbean Road
Valhalla Road
Snake Ridge Road
Luna Road
Pikedale Road
Spring Creek Road
Goldfields Link Road
Goldfields Road
Mount Janet Road
Inverary Road
Lobma

Clifton
Allora
Warwick
Texas

0 km 5

Collin Offset Site
Roads
Watercourse
Property Boundary
Protected areas of Queensland

MACINTYRE WIND FARM
Offset Location (condition 6g)

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FIGURE 3.1

150°50' 151° 151°10' 151°20' 151°30' 151°40' 151°50' 152° 152°10' 152°20'

-28° -28°10' -28°20' -28°30' -28°40' -28°50'

Gore Highway
Cunningham Highway
Inglewood
Allora
Warwick
New England Highway
Killarney
Stanthorpe
Texas
Wallangarra
Jennings

Toowoomba
Brisbane
Warwick
Goondiwindi

0 km 25

MacIntyre Wind Farm
Overhead Transmission Line
Collin Offset Site
Riparian centrelines
State Corridor Buffer
Regional Corridor Buffer
Town
High Voltage Transmission Line
Highway
Protected areas of Queensland

MACINTYRE WIND FARM
Regional Offset Connectivity

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FIGURE 3.2

151°32' 151°33' 151°34' 151°35' 151°36' 151°37' 151°38' 151°39' 151°40' 151°41' 151°42'

-28°20' -28°21' -28°22' -28°23' -28°24' -28°25'

Hunters Hill Road
Carbean Road
Rabbit Fence Road
Forestry Rd
CEMENT MILLS
PALGRAVE
GREYMARE
GOLDFIELDS
TERRICA

Clifton
Allora
Warwick
Texas

0 km 2.5

Collin Offset Site
Remnant
Regrowth
Predominantly Cleared
Riparian centrelines
State Corridor Buffer
Regional Corridor Buffer
Watercourse
Roads
Property Boundary

MACINTYRE WIND FARM
Local Connectivity within the Offset Site

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REVIEWED: DM **DRAWN:** DC **SCALE (A3):** 1:50,000 **DATE:** 29/04/2024 **DWG No:** ACC-005_192[D]

FIGURE 3.3

3.3 Description of Assessment Units

In accordance with methodologies set out in the Queensland *BioCondition Assessment Manual Version 2.2* (Eyre *et al* 2015), the offset site has been stratified into eight Assessment Units (AUs) which provided suitable habitat for the relevant MNES (**Table** 3-2, **Figure** 3-4). A total of 25 permanent BioCondition and habitat quality scoring sites were established across these AUs to ensure that future assessments could be repeated consistently. Note that the same methodology was used to develop AUs for the impact area.

A summary of the area, regional ecosystem and condition of each AU is presented in **Table** 3-2.

Table 3-2 Offset site AUs, areas and monitoring sites

Assessment Unit	Regional Ecosystem	Area (ha)	No. Survey Sites	Site Reference
AU1	13.11.3 (remnant)	1,083.49	6	BC09, BC12, BC18, BC19, BC23, BC24
AU2	13.11.3 (regrowth)	398.71	4	BC15, BC16, BC20, BC22
AU3	13.11.5 (remnant)	41.2	1	BC07
AU4	13.11.6 (remnant)	44.95	2	BC11, BC21
AU5	13.11.8 (remnant)	101.12	2	BC10, BC27
AU6	13.11.3 (sparse regrowth)	728.46	3	BC01, BC04, BC05
AU7	13.11.8 (regrowth)	93.75	3	BC02, BC14, BC35
AU8	13.11.8 (sparse regrowth)	838.46	4	BC03, BC06, BC17, BC31
Total		**3,330.14**	**25**	

The dominant vegetation communities present within the offset site are characterised by open grassy woodland of Narrow-leaved ironbark (*Eucalyptus crebra*), Tumbledown red gum (*E. dealbata*) and White-box (*E. albens*) associated with RE 13.11.3. Scattered throughout the offset site are smaller patches of Mugga ironbark (*E. sideroxylon*) and Red ironbark (*E. fibrosa*) woodland associated with RE 13.11.5. Lower slopes and drainage lines within the offset site are dominated by woodlands of Yellow-box (*E. melliodora*), Narrow-leaved ironbark and Grey box (*E. moluccana*). More detail on the REs that occur within the offset site are provided in **Table** 3-3.

151°32' 151°33' 151°34' 151°35' 151°36' 151°37' 151°38' 151°39' 151°40' 151°41' 151°42'

-28°20' -28°21' -28°22' -28°23' -28°24' -28°25'

BC01 BC07 BC14 BC19 BC18 BC04 BC03 BC20 BC27 BC31 BC02 BC15 BC21 BC35 BC12 BC22 BC23 BC11 BC05 BC24 BC10 BC06 BC16 BC09 BC17

Hunters Hill Road

Carbean Road

Rabbit Fence Road

Forestry Rd

CEMENT MILLS

PALGRAVE

GREYMARE

GOLDFIELDS

TERRICA

Millmerran Clifton Allora Warwick Stanthorpe

0 km 2.5

Collin Offset Site

Habitat Scoring Site

Remnant 13.11.3

Regrowth 13.11.3

Predominantly Cleared 13.11.3

Remnant 13.11.5

Remnant 13.11.6

Remnant 13.11.8

Regrowth 13.11.8

Predominantly cleared 13.11.8

Watercourse

Roads

Property Boundary

MACINTYRE WIND FARM

Offset Site AUs and BioCondition Survey Sites

Attexo

REVIEWED: JC **DRAWN:** TOD **SCALE (A3):** 1:50,000 **DATE:** 24/04/2024 **DWG No:** ACC-005_193[C]

FIGURE 3.4

Table 3-3 Regional ecosystem descriptions within the offset site

RE	Description
13.11.3	*Eucalyptus crebra, E. dealbata, E. albens* grassy woodland. Occurs on Mesozoic to Proterozoic moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.
13.11.5	*Eucalyptus sideroxylon* +/- *E. fibrosa subsp. nubilis* shrubby open forest. Occurs on Mesozoic to Proterozoic moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.
13.11.6	*Corymbia citriodora* subsp. *variegata*, *Eucalyptus crebra, E. dealbata* open forest. Occurs on Mesozoic to Proterozoic moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.
13.11.8	Woodland of *Eucalyptus melliodora* and/or *Eucalyptus microcarpa/E. moluccana*. Other Eucalypts that are often present include *E. albens, E. dealbata, E. crebra* and *E. melanophloia. Eucalyptus blakelyi* can be an important component in the east. Understorey is generally grassy but a sparse to mid-dense shrub layer can also develop. Occurs on rolling hills, depressions and lower slopes around drainage lines.

3.4 Offset site habitat assessment

3.4.1 Nature and extent of weeds and feral animals

The offset site contains two main weed species, both of which are listed as restricted matters under the *Biosecurity Act 2014* and are recognised as Weeds of National Significance (WoNS):

- Velvet Prickly Pear (*Opuntia tomentosa*); and
- Common Prickly Pear (*Opuntia stricta*).

Weeds occur across the offset site as isolated plants in low densities.

Several pest fauna were identified as likely to occur and/or occurring within or in the vicinity of the offset site, and include:

- Wild dog (*Canis lupis familiaris*);
- Feral cat (*Felis catus*);
- Foxes (*Vulpes vulpes*);
- Feral pigs (*Sus scrofa*); and
- Rabbits (*Oryctolagus cuniculus*).

3.4.2 Suitable habitat for each EPBC listed threatened species (Condition 6d-I, 6d-iii, 6g)

Baseline ecology surveys conducted across the offset site confirmed the presence of existing habitat for MNES values listed in the MIWF and OHTL EPBC approvals. The area of available habitat and a description of that habitat for each MNES is provided in **Table** 3-4.

Table 3-4 Summary of existing habitat for each EPBC listed species within the offset site

EPBC Act listed threatened species	Existing Habitat Area	Future Habitat Area (Collin Offset Site)	Description of the existing and future habitat for each EPBC Act listed threatened species in the offset site
Koala	3,330.1 ha	3,330.1 ha	• The Approved Conservation Advice (DoE, 2014a) describes koala habitat as eucalypt forests and woodlands, as well as acacia woodlands (with emergent food trees) in both riparian and non-riparian environments (DoE 2014). Inland koala habitat also includes small, patchy or sparsely distributed woodlands, shrublands and forest in highly modified, agricultural-grazing landscapes (DoE 2014). Koala habitat was mapped according to the following habitat types: o Remnant and non-remnant forest and woodland; o Patchy and sparsely distributed woodland (including scattered trees along linear corridors); and o Shrubland with emergent koala food trees. • Existing Koala habitat was identified within each AU (see **Figure 3-5**) • These MNES Assessment Reports identified numerous historical Koala observations within the three Project areas and in the region surrounding these Projects, particularly in the Durikai State Forest to the east (GHD 2021a; 2021b), with Koala scats found within the offset area (see **Figure 3-5**). • It is anticipated that the future condition of the entire offset site will provide suitable habitat for the Koala. This determination has been based upon several factors including: o All the currently mapped REs within the offset site (see **Figure 3-4**) are dominated by or contain known koala food trees. o It is anticipated that during the development and management of the offset site, the abundance of mature trees and Non-Juvenile Koala Habitat Trees (NJKHTs), particularly in the "Predominantly Cleared RE 13.11.3" AU, will reach a density sufficient to connect the entire offset site with suitable habitat. o Measures increasing the availability and connectedness of suitable habitat and excluding predators will counterbalance two of the key threatening processes documented for this species in the Approved Conservation Advice (DoE, 2014a).

EPBC Act listed threatened species	Existing Habitat Area	Future Habitat Area (Collin Offset Site)	Description of the existing and future habitat for each EPBC Act listed threatened species in the offset site
Grey-headed Flying-fox	3,330.1 ha	3,330.1 ha	• The definition of habitat for Grey-headed Flying-fox is provided within the National Recovery Plan (DECCW 2009) for the species, being the habitat on which it relies as a continuous sequence of productive foraging habitats, the migration corridors or stopover habitats that link them, and suitable roosting habitat within nightly commuting distance of foraging areas (Fleming and Eby 2003). Further, foraging habitat critical to the survival of the species includes Eucalypt woodland that is productive in winter and spring, when foraging bottlenecks have been identified (Parry-Jones and Augee 1991, Eby et al. 1999). • Grey-headed Flying-fox habitat is defined as woodland habitats represented by the following REs: RE 13.3.4; RE 13.3.5; RE 13.11.3; RE 13.11.5; and RE 13.11.8. In accordance with the National Recovery Plan for this species (DAWE, 2021), foraging habitat for this species was mapped throughout the MIWF and OHTL Project areas as patches of mixed Eucalypt woodland/forest containing *Eucalyptus tereticornis, E. albens, E. crebra, E. fibrosa* or *E. melliodora*. • Existing Grey-headed Flying-fox habitat was identified within each AU (see **Figure 3-6**). • No recent or historical records of Grey-headed Flying-fox were identified within a 10 km buffer of the MIWF or the OHTL Project areas in the MNES Assessment Reports (GHD 2021a; GHD 2021b). • Since these MNES Assessment reports were drafted, two subsequent records have been identified in proximity to the offset site, both of which in the Durikai State Forest (from 2022 and 2017 respectively). • There are no known Nationally Important Flying Fox camps in the vicinity of the Project or the offset site. • No Grey-headed Flying-fox were identified during surveys across the respective Project areas or the offset. • It is anticipated that the future condition of the entire offset site will provide suitable foraging habitat for the Grey-headed Flying-fox. This determination has been based upon several factors including: o All the currently mapped REs within the offset site (see **Figure 3-4**) are dominated by or contain important winter and spring food trees for the Grey-headed Flying-fox. o It is anticipated that as the offset site matures and becomes more connected, it will provide more suitable foraging habitat and/or dispersal habitat for Grey-headed Flying-fox to utilise. o As discussed in the National Recovery Plan (DAWE, 2021) for this species, seasonal variability in available food resources (i.e. nectar and seeds), plays a key role in the definition of suitable foraging habitat for this species. Given the food resources currently available within the offset site, the value of this area will improve with maturity.

EPBC Act listed threatened species	Existing Habitat Area	Future Habitat Area (Collin Offset Site)	Description of the existing and future habitat for each EPBC Act listed threatened species in the offset site
Greater Glider	3,330.1 ha	3,330.1 ha	• The SPRAT profile identifies central greater glider habitat as Eucalypt forests and woodlands, occurring in highest abundance in taller, montane, moist Eucalypt forests with relatively old trees and abundant hollows (Andrews et al., 1994; Kavanagh, 2000; Eyre, 2004). In south Queensland, the species requires 2 – 4 live den trees for every 2 ha of suitable forest habitat (Eyre, 2002). There is approximately 1,539 ha of forest within the offset area that currently supports greater than 2 suitable hollows per ha and within that there is 323 ha of forest that have a high abundance of suitable hollows. • Norman and Mackey (2023) identified a range of woodland regional ecosystems which are known to provide habitat for Greater Gliders, these include the dominant ecosystems present within the Offset site, REs 13.11.3, 13.11.5, 13.11.6 and RE13.11.8. • Existing Greater Glider habitat identified within the offset is shown in **Figure 3-7**, the offset includes area with suitable denning habitat along with less mature forest capable of providing foraging resources for the Greater Glider. • During a desktop assessment, historical Greater Glider records were identified in the Durikai State Forest from 1994-2007. • Field surveys confirmed the presence of Greater Gliders within the MIWF Project area from scats collected at three locations. No individuals were physically observed during spotlighting activities undertaken across the respective Project areas. • It is anticipated that the entire offset site will provide suitable foraging and/or denning habitat for the Greater Glider. This determination has been based upon several factors including: o The remnant vegetation mapped across the offset site (see **Figure 3-4**), whilst currently fragmented, indicates that with targeted management actions to improve site condition and habitat features specific for greater glider (see **Section 6.0**) it will be connected and provide substantial foraging and denning habitat for the Greater Glider in the future. This Offset area also has the potential to form an important connectivity between the large area of remnant vegetation to the east that connects with Durikai State Forest and vegetation communities along Macintyre Brook. o Whilst no Greater Gliders were recorded within the offset site, their presence within the immediately adjacent remnant vegetation indicates that as the offset site habitat condition improves, and as the adjacent population expands, they will be able to utilise this habitat for foraging and denning. o As the vegetation communities present within the offset site mature, it has been assumed that the availability of tree hollows will also increase. The occurrence of large hollows (diameter > 6 cm) within older trees will provide potential denning habitat for the Greater Glider (DCCEEW, 2022). o Also, as stated in the Approved Conservation Advice for this species (DCCEEW, 2022), it is likely that only a proportion of forest in potential habitat areas is suitable for the species as the structural attributes of the forest overstory and forage quality it relies on varies considerably across the landscape. Consequently, large areas of suitable habitat for this species, such as the offset site, will provide habitat with the variability needed for adjacent populations to expand into and utilise.

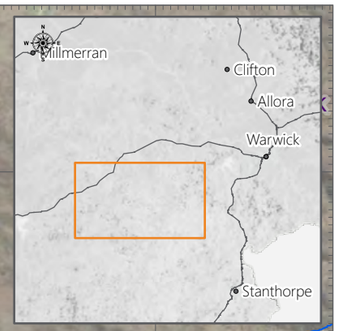
EPBC Act listed threatened species	Existing Habitat Area	Future Habitat Area (Collin Offset Site)	Description of the existing and future habitat for each EPBC Act listed threatened species in the offset site
Regent Honeyeater	268.8 ha	268.8 ha	• The criteria used to map Regent Honeyeater habitat within the offset site was provided within the approved MIWF and OHTL MNES Assessment Reports (GHD 2021a, GHD 2021b). In these assessments, Regent Honeyeater habitat was derived from the Approved Conservation Advice and the National Recovery Plan for this species (DoE, 2015a & DoE, 2016 respectively). • Existing habitat was broken up into two categories: High Quality Habitat and Potential Habitat. The key distinctions between these two habitat types were based around the percentage of old growth vegetation, dominant species composition or the occurrence of drooping needle-leaf mistletoe in box woodlands adjacent top open patches as preferred by the Regent Honeyeater. • Existing Regent Honeyeater habitat identified within the vicinity of the offset site has been shown on **Figure 3-9**. • Historical species records from 1995-2008 were documented both within and surrounding the MIWF Project area. • Whilst this species has not been recorded in any of the surveys undertaken within the MIWF or the OHTL Project areas, the abundance of local recent records suggests that the Regent Honeyeater has been present in the past. • It is anticipated that the future condition of AUs that contain watercourses will provide suitable foraging and potential nesting habitat for the Regent Honeyeater (as shown on **Figure 3-9**). This determination has been based upon several factors including: o In accordance with the Approved Conservation Advice and the National Recovery Plan for this species (DoE, 2015a & DoE, 2016 respectively), preferred habitat for this species is associated with remnant Box/Ironbark communities which equates to the following REs found within the offset site: RE 13.11.3, RE 13.11.5 and RE 13.11.8. o The future suitable habitat for the Regent Honeyeater within the offset site has been identified as each of the AUs containing watercourses. o Given that nectar from Eucalypts and Needle-leaved mistletoe can make up 10-90% of the Regent Honeyeater's diet, more foraging resources will become available as the offset site matures and contains more mistletoe. o The Regent Honeyeater is a highly mobile species, only occurring irregularly in most sites and in variable numbers, often with long periods of few observations. This behaviour is a common response to the availability of foraging resources and climatic conditions and may indicate why there have been so few records observed within the MIWF Project area.

EPBC Act listed threatened species	Existing Habitat Area	Future Habitat Area (Collin Offset Site)	Description of the existing and future habitat for each EPBC Act listed threatened species in the offset site
Squatter Pigeon	3330.14 ha	3330.14 ha	• Mapping of squatter pigeon breeding and foraging habitat was based on the habitat description outlined in the Commonwealth listing advice (DAWE 2021) and utilised the following locally occurring RE communities that are identified by the Queensland Government essential habitat mapping framework as essential habitat factors for the squatter pigeon (southern) as a basis for mapping, these include: o 13.11.3 *Eucalyptus crebra, E. dealbata, E. albens grassy woodland*, and o 13.11.8 *Eucalyptus melliodora and/or Eucalyptus microcarpa/ E. moluccana woodland* on metamorphics. • Breeding habitat: restricted to stony rises adjacent to Macintyre Brook and around permanent dams near that location (within 1 km of these permanent water sources); and • Surveys confirmed the presence of existing foraging habitat for the Squatter Pigeon within the offset site, with breeding habitat identified in adjacent vegetation patches to the west (see **Figure 3-10**) • Several historical Squatter Pigeons records were identified around the Durikai State Forest, Karara and Gore all recorded between 2005 and 2017. • Squatter Pigeons were confirmed to be present from numerous locations within the MIWF and OHTL Project areas, however none were recorded within the offset site. • Whilst no observations were made within the offset site, this species is wide ranging, and is therefore likely to sporadically occur throughout the offset site as it contains suitable habitat. • Based on the forest associations that occur within the offset site most of the site will provide suitable foraging habitat for the Squatter Pigeon (see **Figure 3-10**). This determination has been based upon several factors including: o In accordance with the Approved Conservation Advice (DoE, 2022), suitable habitat for this species is defined as open forests to sparse, open woodlands and scrub that are mostly dominated by *Eucalyptus*, *Corymbia*, *Acacia* or *Callitris* species. This definition goes on to describe suitable habitat as inclusive of remnant, regrowth and partly modified vegetation communities which meets the description of all REs mapped within the offset site. The final component of suitable habitat for the Squatter Pigeon is that these vegetation communities must occur within 3 km of a permanent water body of which, 4 (landholder dams) have been located within the vicinity (see **Figure 3-10**). o Using these definitions, the future suitable foraging habitat for the Squatter Pigeon the offset site is not anticipated to contain any breeding habitat for this species. o Squatter Pigeon forage over a wide range of habitat in the region and are likely to utilise the entire offset area as suitable foraging habitat.

151°26' 151°28' 151°30' 151°32' 151°34' 151°36' 151°38' 151°40' 151°42' 151°44' 151°46' 151°48'

-28°16' -28°18' -28°20' -28°22' -28°24' -28°26' -28°28'

KARARA
GREYMARE
GORE
PALGRAVE
CEMENT MILLS
TERRICA
GOLDFIELDS
DALVEEN
PASSCHENDAELE



0 km 5

- MacIntyre Wind Farm
- Overhead Transmission Line
- Collin Offset Site
- Visual observation records
- Scat observation records
- Koala historical record
- High value remnant woodland
- Moderate value remnant woodland
- Low value remnant woodland
- Patchy, sparsely distributed or non-remnant woodland
- Shrubland with emergent koala food trees
- Balance area
- Watercourse

MACINTYRE WIND FARM
Existing Koala habitat mapped within the Offset site

Attexo

REVIEWED: JC **DRAWN:** TOD **SCALE (A3):** 1:125,000 **DATE:** 26/04/2024 **DWG No:** ACC-005_194[C]

FIGURE 3.5

151°34'
151°36'
151°38'
151°40'
151°42'
-28°20'
-28°22'
-28°24'
Hunters Hill Road
Carbean Road
Forestry Ro
Millmerran
Clifton
Allora
Warwick
Stanthorpe
0
km
5

Offset Site

Habitat Quality
- High (remanant)
- Moderate (regrowth)
- Low (predominantly cleared)

Watercourse
Roads

MACINTYRE WIND FARM
Existing Grey-headed Flying-fox habitat mapped within the Offset Site

Attexo

REVIEWED: DM | **DRAWN:** DC | **SCALE (A3):** 1:50,000 | **DATE:** 29/04/2024 | **DWG No:** ACC-005_195[D]

FIGURE 3.6

151°32'
151°34'
151°36'
151°38'
151°40'
-28°20'
-28°22'
-28°24'
Hunters Hill Road
Carbean Road
Rabbit Fence Road
Snake Ridge Road
Millmerran
Clifton
Allora
Warwick
Stanthorpe
0
km
5

Offset Site
Denning Habitat
Foraging Habitat
Dispersal Corridor

Hollows
High (abundant hollows)
Moderate (some hollows)
Low (predominantly cleared no hollows)

Watercourse
Roads

MACINTYRE WIND FARM
Greater Glider habitat mapped within the Offset Site

Attexo

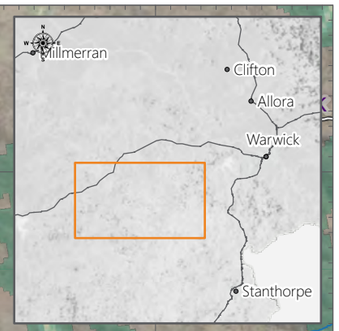
REVIEWED: DM | **DRAWN:** DC | **SCALE (A3):** 1:50,000 | **DATE:** 30/04/2024 | **DWG No:** ACC-005_196[E]

FIGURE 3.7

151°26' 151°28' 151°30' 151°32' 151°34' 151°36' 151°38' 151°40' 151°42' 151°44' 151°46' 151°48'

-28°16' -28°18' -28°20' -28°22' -28°24' -28°26' -28°28'

Columba Road
Cleary Lane
KARARA
Rockdale Road
Burrabaranga Road
Rabbit Fence Road
GREYMARE
Dinky Street
GORE
Road
Dungorm Road
Cunningham Highway
Mountain Maid Road
Forestry Road
Clare Hills Road
Hunters Hill Road
PALGRAVE
Carbean Road
CEMENT MILLS
Welsh Road
Valhalla Road
Snake Ridge Road
Pikedale Road
Luna Road
TERRICA
Spring Creek Road
Cement Mills Road
Bonfields Road
Goldfields Road
Goldfields Link Road
GOLDFIELDS
Mount Janet Road
Palgrave Road
Inverary Road
Loloma Road
DALVEEN
PASSCHENDAELE



0 km 5

Offset Site
Field record
Historical record
Denning Habitat
Foraging Habitat
Watercourse
Roads
Greater glider home range 3ha
Greater glider home range 19ha
Dispersal Corridor

MACINTYRE WIND FARM

Greater Glider State mapped habitat and dispersal corridors

Attexo

REVIEWED: JC **DRAWN:** TOD **SCALE (A3):** 1:125,000 **DATE:** 30/04/2024 **DWG No:** ACC-005_196[D]

FIGURE 3.7a

151°26' 151°28' 151°30' 151°32' 151°34' 151°36' 151°38' 151°40' 151°42' 151°44' 151°46' 151°48'

-28°16' -28°18' -28°20' -28°22' -28°24' -28°26' -28°28'

Columba Road
Rockdale Road
Cleary Lane
Dinky Street
Burrabaranga Road
Rabbit Fence Road
Dungorm Road
Road
Cunningham Highway
Mountain Maid Road
Forestry Road
Clare Hills Road
Hunters Hill Road
Carbean Road
Welsh Road
Valhalla Road
Snake Ridge Road
Pikedale Road
Luna Road
Spring Creek Road
Cement Mills Road
Inverary Road
Goldfields Link Road
Goldfields Road
Mount Janet Road
Bonfields Road
Palgrave Road
Loloma Road

Millmerran
Clifton
Allora
Warwick
Stanthorpe

0 km 5

Collin Offset Site
Roads
Watercourse

Historical Regent Honeyeater Records

Habitat Type
High Quality
Potential

Regent Honeyeater (Foraging habitat)
High
Moderate
Low

Regent Honey Eater Offset areas

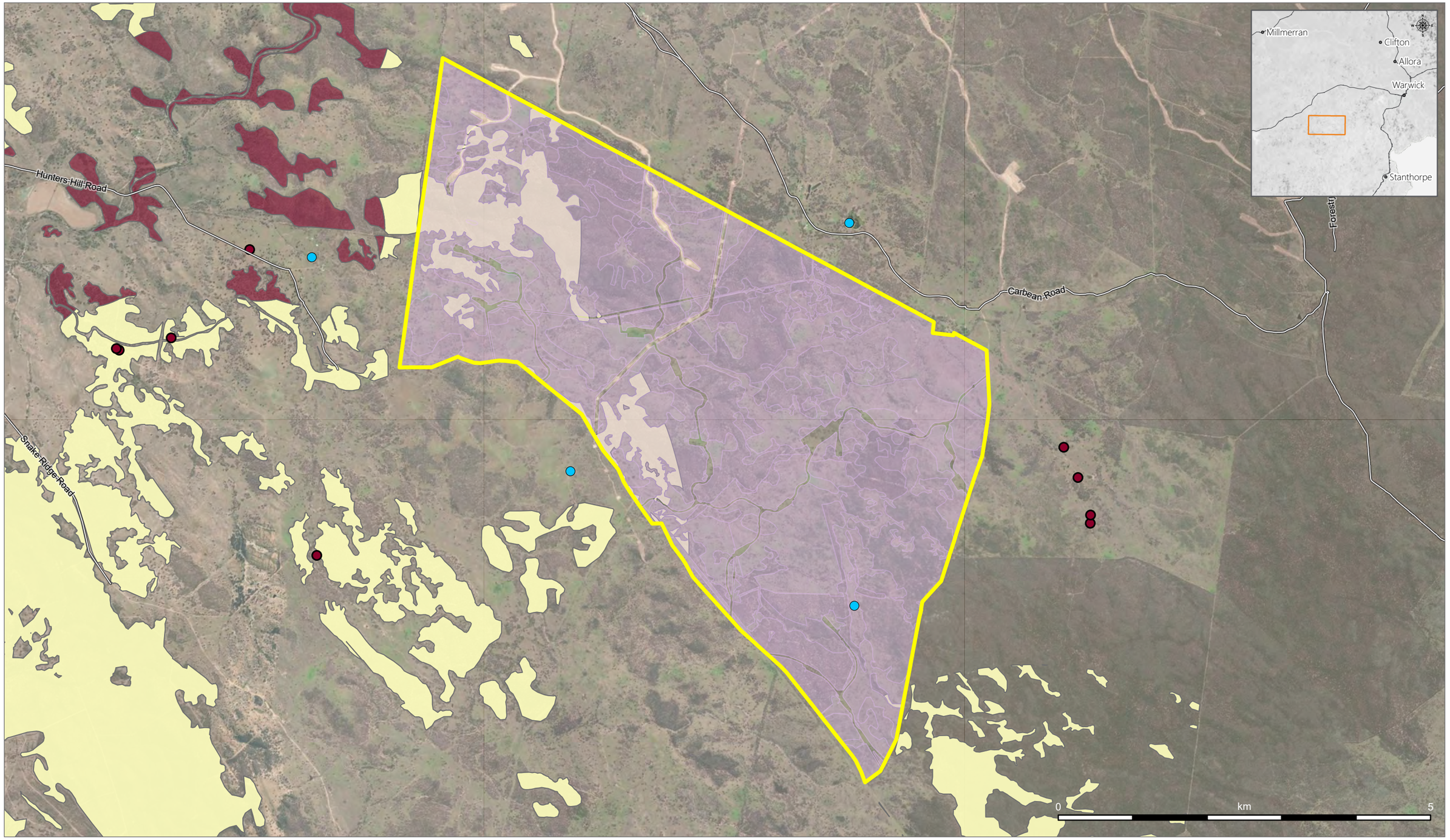
MACINTYRE WIND FARM

Regent honey-eater habitat mapped within the Offset site (GHD, 2021a)

Attexo

REVIEWED: DM **DRAWN:** DC **SCALE (A3):** 1:125,000 **DATE:** 30/04/2024 **DWG No:** ACC-005_197[D]

FIGURE 3.8



Collin Offset Site

Permanent Water Source (Dam)

Field records

Historical Records

Foraging and breeding habitat

Foraging habitat

Future Habitat

Roads

MACINTYRE WIND FARM

Squatter pigeon habitat mapped within the Offset Site

Attexo

REVIEWED: JC **DRAWN:** TOD **SCALE (A3):** 1:50,000 **DATE:** 30/04/2024 **DWG No:** ACC-005_198[B]

FIGURE 3.9

4.0 BioCondition survey data (Condition 6d-ii, 6e)

4.1 Survey Methodology

Habitat quality assessments have been undertaken within the offset site using the same approach to habitat quality scoring undertaken in impact areas (construction footprint) for each Project. Habitat quality data was collected, using the methodology set out in the Queensland *BioCondition Assessment Manual Version 2.2* (the BioCondition Manual) (Eyre *et al* 2015) and the *Guide to Determining Terrestrial Habitat Quality Version 1.2* (the Guide) (DEHP, 2017). The survey approach also incorporated guidance provided by DCCEEW (previously the Department of Agriculture, Water and the Environment) on using a Modified Habitat Quality Assessment (MHQA) to better reflect the requirements of the EPBC Act Environmental Offsets Policy.

The MHQA method was presented and approved in the Offset Strategies published with Preliminary Documentation submitted for each Project during the impact assessment phase of the Project under the EBPC Act (Attexo 2021a; Attexo 2021b). The MHQA defines field data that will be collected during field habitat assessments to allow comparative analysis between sites and subsequently support area calculations for the purposes of acquitting offset requirements for relevant MNES species (**Section 1.2**). For a comprehensive summary of MHQA methodology, see Section 4.2 of the Offset Strategies prepared for the Project (Attexo 2021a and Attexo 2021b).

The MHQA requires a condition benchmark for each regional ecosystem (RE) represented to allow scoring of the assessment. Although the Government has only published BioCondition benchmarks for a subset of REs affected by these projects, the Queensland Herbarium has provided the ACCIONA with benchmark information for all affected REs. To achieve this, the Queensland Herbarium utilised data provided by the project from nine local reference sites established by the project within the adjoining Durikai State Forest. These reference sites were established as per the *Method for the Establishment and Survey of Reference Sites for BioCondition, Queensland Herbarium Version 3* (Eyre *et al* 2017).

The MHQA also incorporates habitat-specific Site Condition and Site Context attributes to allow for a more comprehensive and robust analysis of habitat scores. A summary of how these additional attributes were assessed and scored for each MNES value has been presented in **Appendix A**.

The following sections provide a summary of the average Site Condition, Site Context and Species Stocking Rates for each MNES.

4.2 Summary of Site Condition scores for each MNES

A summary of the Site Condition attribute scoring data for each AU has been provided in **Table** 4-1. A description of the methodologies used to assess and score these attributes has been provided in Section 4.2 of Attexo 2021a or Attexo 2021b. As discussed in the MHQA methodology, two species habitat attributes have been included in the analysis of the Site Condition for these MNES values, including:

- Quality and availability of food and foraging habitat; and
- Quality and availability of shelter.

A breakdown of the specific habitat features used to assess these species habitat attributes for each MNES has been provided in **Table** 4-2. The maximum potential specific habitat feature score varies for each MNES value. Further information detailing how these habitat features were assessed and scored has been provided in **Appendix A**. A summary of all the combined Site Condition scores (average across all BioCondition sites) for each MNES value has been provided in **Table** 4-3.

A summary scoring table for each MNES value have been provided in **Appendix B**.

Table 4-1 Site Condition attribute scores for each MNES value

Site Condition Attributes	Maximum potential score	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8
Large trees	**15**	3.33	2.50	0.00	2.50	2.50	1.67	1.67	3.75
Tree canopy height	**5**	4.00	4.50	5.00	5.00	5.00	3.67	3.00	4.50
Recruitment of woody perennial species	**5**	5.00	3.75	5.00	5.00	5.00	2.00	5.00	4.50
Tree canopy coverage	**5**	4.00	3.50	5.00	5.00	5.00	0.67	3.00	1.00
Shrub canopy cover	**5**	3.17	4.00	3.00	3.00	3.00	2.67	2.00	0.75
Coarse woody debris	**5**	3.50	1.75	5.00	3.50	2.00	1.33	3.33	4.25
Native plant species richness - trees	**5**	4.58	3.75	2.50	5.00	2.50	2.50	3.33	1.88
Native plant species richness - shrubs	**5**	4.17	4.38	5.00	5.00	2.50	3.33	4.17	3.13
Native plant species richness - grasses	**5**	5.00	5.00	5.00	3.75	2.50	4.17	5.00	5.00
Native plant species richness - forbes	**5**	5.00	5.00	5.00	2.50	3.75	3.33	4.17	5.00
Non-native plant cover	**10**	9.17	8.75	10.00	10.00	10.00	8.33	6.00	5.75
Native grass cover	**5**	5.00	5.00	5.00	5.00	2.50	5.00	5.00	5.00
Organic litter	**5**	2.83	3.00	5.00	3.00	4.00	0.00	3.67	0.75
Total	**80**	**58.75**	**54.88**	**60.50**	**58.25**	**50.25**	**38.67**	**49.33**	**45.25**

Table 4-2 Site Condition species habitat attributes for each MNES (Condition 6e)

Habitat feature	Specific habitat feature	Average Habitat Quality Scoring*
Koala		
Quality and availability of food and foraging habitat	• Number of non-juvenile Koala habitat trees per ha • Richness of non-juvenile Koala habitat trees • Moisture and nutrient content of leaves • Number of juvenile koala habitat trees per ha	3.44
Quality and availability of shelter habitat	• Non-juvenile Koala habitat tree benchmark • Non-juvenile tree species with dense foliage per ha	2.16
Grey-headed Flying-fox		
Quality and availability of food and foraging habitat	• Presence of food species within the site, (Eby and Law 2008) • Availability of High Yield of Food Trees based on a measure of productivity and reliability (Eby & Law 2008). • Richness of feed Species	2.68
Quality and availability of shelter habitat	• Not required for the Grey-headed Flying-fox	n/a

Habitat feature	Specific habitat feature	Average Habitat Quality Scoring*
Greater Glider		
Quality and availability of food and foraging habitat	• Availability of Food Trees Presence of food species within the site • Richness of greater glider habitat trees • Richness of greater glider habitat trees • Site Fertility/ Productivity	1.96
Quality and availability of shelter habitat	• Number of large eucalypts • Availability of food trees • Number of artificial nest boxes	2.00
Regent Honeyeater		
Quality and availability of food and foraging habitat	• Availability of food trees • Availability of food mistletoe	2.09
Quality and availability of shelter habitat	• Availability of nesting trees	1.35
Squatter Pigeon		
Quality and availability of food and foraging habitat	• Density of preferred habitat eucalypt woodland trees • Projected ground-level cover • Non-native plant cover	1.68
Quality and availability of shelter habitat	• Tree canopy height for nocturnal roosting • Projected ground-level cover	3.84

** Average calculated across all BioCondition sites and AUs*

Table 4-3 Combined Site Condition Scores for each MNES value (out of 3)

MNES Value	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8
Koala	1.94	1.86	2.12	1.93	1.82	1.22	1.62	1.45
Grey-headed Flying-fox	2.06	1.86	2.35	2.04	1.86	1.32	1.77	1.54
Greater Glider	1.89	1.74	2.12	1.93	1.69	1.22	1.62	1.42
Regent Honeyeater	1.84	1.71	n/a	n/a	1.76	1.22	1.58	1.45
Squatter Pigeon	1.90	1.77	2.15	1.99	1.76	1.26	1.67	1.51

4.3 Summary of Site Context scores for each MNES

A summary of the Site Context attribute scoring data for each MNES value identified in the MIWF and OHTL Project areas has been provided in in **Table** 4-4. A description of the methodologies used to assess and score these attributes has been provided in Section 4.2 of Attexo 2021a or Attexo 2021b. As discussed in the MHQA methodology, three species habitat attributes have been included in the analysis of the Site Context for these MNES values, including:

- Role of the site location to species overall population in the state;
- Threats to the species; and
- Species mobility capacity.

A breakdown of the specific habitat features used to assess these species habitat attributes for each MNES has been provided in **Table** 4-5. Information detailing how these habitat features were assessed and scored has been provided in **Appendix A**. A summary of all the average Site Condition scores for each MNES value has been provided in **Table** 4-6.

Detailed BioCondition spreadsheets for each MNES value have been provided in **Appendix B**.

Table 4-4 Site Context attribute scores for each MNES value

Site Context Attributes	Maximum potential score	AU1	AU2	AU3	AQU4	AU5	AU6	AU7	AU8
Size of patch	**10**	9.50	7.50	10.00	5.00	7.50	0.00	3.33	0.00
Connectedness	**5**	1.83	3.00	2.00	2.00	4.50	0.67	0.00	1.00
Context	**5**	3.67	3.00	4.00	2.00	4.00	1.33	2.67	3.00
Ecological corridors	**6**	0.67	1.00	0.00	0.00	2.00	2.00	0.00	1.00
Total	**26**	**15.67**	**14.50**	**16.00**	**9.00**	**18.00**	**4.00**	**6.00**	**5.00**

Table 4-5 Summary of Site Context species habitat attributes for each MNES (Condition 6e)

Habitat Feature	Specific Habitat Feature	Average Habitat Quality Scoring
Koala		
Role of the site location to species overall population in the state		4.20
Threats to the species		7.00
Species mobility capacity	• Coarse woody debris • Number of refuge trees • Non-native plant cover	7.72
Grey-headed Flying-fox		
Role of the site location to species overall population in the state		1.00
Threats to the species		7.00
Species mobility capacity	• Proximity to nationally important camps • Presence of large-scale objects preventing dispersal	7.00
Greater Glider		
Role of the site location to species overall population in the state		1.00
Threats to the species		7.00
Species mobility capacity	• Number of mature trees	1.38

Habitat Feature	Specific Habitat Feature	Average Habitat Quality Scoring
Regent Honeyeater		
Role of the site location to species overall population in the state		3.91
Threats to the species		2.64
Species mobility capacity	• The percentage of canopy cover and a lower density of shrubs over 2 m	8.05
Squatter Pigeon		
Role of the site location to species overall population in the state		2.83
Threats to the species		2.50
Species mobility capacity	• Ease of movement for foraging and nesting	7.75

Table 4-6 Summary of Site Context Scores for each MNES value (out of 3)

MNES Value	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8
Koala	1.94	1.83	1.88	1.58	1.90	1.29	1.20	1.17
Grey-headed Flying-fox	1.64	1.58	1.66	1.47	1.77	1.02	1.13	1.07
Greater Glider	1.38	1.18	1.34	0.96	1.45	0.70	0.80	0.75
Regent Honeyeater	1.62	1.50	n/a	n/a	1.39	1.07	0.98	1.07
Squatter Pigeon	1.51	1.33	1.55	1.42	1.47	0.93	1.02	1.21

4.4 Summary of Species Stocking Rate Scores for each MNES value

In addition to the site condition and site context values assessed at each BioCondition site, the species habitat index or Species Stocking Rate (SSR) for each MNES value was also assessed to quantify the capacity of the site to support a population of the fauna species in question. In accordance with the MHQA methodology presented in the approved Offset Strategies (Attexo 2021a and Attexo 2021b), 4 SSR attributes were assessed and scored for each MNES except for *Approximate density* which was only used to assess the Koala. **Table** 4-7 provides a summary of the overall SSR scores for each MNES value.

A summary of scoring for each MNES value have been provided in **Appendix B**.

Table 4-7 Summary of Species Stocking Rate values for each MNES

Attribute	Maximum potential score	Koala	Grey-headed Flying Fox	Greater Glider	Regent Honeyeater	Squatter Pigeon
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	**10**	10	0	5	5	5
Species usage of the site (habitat type and evidence usage)	**15**	15	10	10	10	15
Approximate density	**30**	0	n/a	n/a	n/a	n/a
Role/importance of species population on site*	**15**	10	0	0	10	15
Total	**70 or 40**	**35**	**10**	**15**	**25**	**35**
Overall SSR Score (out of 4)	**4**	**2**	**1.00**	**1.50**	**2.50**	**3.50**

* Role/importance of species population on site was calculated by considering the following supplementary attributes: *Key source population for breeding*, *Key source population for dispersal*, *Necessary for maintaining genetic diversity* and *near the limit of the species range*.

4.5 Baseline offset site Habitat Quality Scoring

Using the scores for Site Condition, Site Context and SSR generated above, weighted habitat quality scoring was completed for each MNES value, taking into consideration the size of each AU. A summary of these weighted habitat quality scores can be found in **Table** 4-8, with a more detailed breakdown provided in **Appendix B**.

These scores represent the starting offset site habitat quality score used for each MNES value in the DCCEEW Offset Assessment Guide (v1.04) calculator (see **Section 5.0**).

Table 4-8 Baseline habitat quality scores for EPBC listed threatened species

MNES Value	Weighted habitat quality scores / value used in calculator
Koala	5.20 / 5
Grey-headed Flying-fox	4.09 / 4
Greater Glider	4.14 / 4
Regent Honeyeater	5.49 / 5
Squatter Pigeon	6.42 / 6

5.0 DCCEEW Offset Assessment Calculator inputs

To confirm that the proposed offset site has the potential to acquit the consolidated impacts of the MIWF & OHTL Projects DCCEEW Offset Assessment Guides (v1.04) were established for each MNES value discussed in the EPBC approvals for these Projects. Based upon advice and input from DCCEEW the following inputs were used to determine if the offset site was appropriate for these values.

- **Impact Area**: Values for each MNES value are presented in **Table** 1-3.
- **Impact Area Score**: Impact area scores for each MNES value are presented in **Table** 1-3.
- **Time over which loss is averted**: 20 years. It is acknowledged that this offset site will need to be managed for the duration of the respective EPBC approvals (EPBC 2020/8756 and 2020/8759) which are valid until at least 2067. Resultantly, the maximum allowable value has been used here.
- **Time until ecological benefit**: 20 years. It is anticipated that the ecological benefit outlined in this OAMP will be realised after 20 years, beyond which, ongoing management activities will ensure that this benefit is maintained and allowed to improve if practicable.
- **Start area (ha)**: The starting areas for each MNES value are presented in **Table** 3-4 as the "Future Habitat Area (Collin Offset Site)" column.
- **Starting quality**: The starting habitat quality scores for each MNES value are presented in **Table** 4-8.
- **Risk of loss (%) without offset**: In accordance with the Guidance for deriving 'Risk of Loss' estimates when evaluating biodiversity offset proposals under the EPBC Act (Maseyk, F.J.F *et al* 2017), this Offset site is located within the Goondiwindi Local Government Area which has this average annual background rate of loss (%), equating to 7% over 20 years;
- **Future quality without offset**: It is anticipated that the future quality score (without offset) would remain the same as the starting quality score presented above and in **Table** 4-8.
- **Risk of loss (%) with an offset**: No risk of loss with the offset is anticipated as the site will be legally secured to protect from development.
- **Future quality with offset**: The future habitat quality scores (or completion criteria) and interim milestones are presented in **Table** 6-1.
- **Confidence in result (%)**: The confidence in result values used in these assessment calculators was 65% for those MNES values where habitat requirements are complex and 70% for MNES values where habitat requirements are less complex. Confidence in overall result is based confidence in the specific restoration tasks required for specific restoration tasks.

Offset Assessment Guides for each MNES value have been attached in **Appendix C**, which demonstrate that a minimum of 100% of the impact will be offset for each of these values.

6.0 Offset site interim milestones and completion criteria (Condition 6j)

This section outlines the specific offset completion criteria that will be required for each MNES value to achieve the nominated future habitat quality scores for each MNES value. The interim milestones and final habitat quality scores presented in **Table** 6-1, illustrates the proposed progression of improvement in the quality of habitat for each MNES value over the initial duration of the Offset, and for the duration of the respective Project. The interim milestones have been established at 5-yearly intervals, as required by the approval (Condition 6k).

The Year 20 (minimum) scores represent the minimum scores needed to reach the future quality with offset score values used in the Assessment Calculators in **Section 5.0**. The Year 20 (predicted) scores represent the scores that ACCIONA believe could be achieved if the targeted site-specific attributes (**Section 6.1**) and targeted species-specific (**Section 6.2**) attributes are appropriately managed for the duration of the offset.

To ensure that these interim milestones are achieved, various ongoing management actions will be undertaken (see **Section 7.0**). To confirm that these management actions are proving the intended benefit to each MNES value, and to ensure that the quality of the offset site is tracking towards these interim milestones, regular monitoring reports will be prepared to quantify this progress (see **Section 8.0**).

Table 6-1 Interim milestones and completion criteria for habitat quality for each MNES (Condition 6h)

MNES Value	Year 0	Year 5	Year 10	Year 15	Year 20 (minimum)	Year 20 (predicted)
Koala	5.20	5.54	5.86	6.18	6.50	6.74 / 7
Grey-headed Flying-fox	4.09	4.44	4.80	5.15	5.50	5.49 / 6
Greater Glider	4.14	4.48	4.82	5.16	5.50	5.58 / 6
Regent Honeyeater	5.35	5.71	5.97	6.24	6.50	6.38 / 6
Squatter Pigeon	6.38	6.44	6.46	6.48	6.50	7.57 / 8

6.1 Targeted site-specific attributes for improvement (Condition 6h)

A detailed review of the BioCondition data collected across each AU identified several site-specific attributes that, with appropriate management, can be and will need to be improved to reach the proposed interim milestones and final completion criteria. These site-specific attributes represent those values currently scoring poorly within an individual AU or across the entire offset site. The ongoing improvements of these site condition attributes is also expected to cause a subsequent increase in the site context values as more vegetation reaches remnant status within the offset site.

A summary of the key site-specific attributes that have become the focus of management actions discussed in this OAMP (**Section 7.0**), have been presented in **Table** 6-2.

Table 6-2 Targeted site-specific attributes for improvement (Condition 6h)

Site-Specific Attribute	Targeted Value	Justification
No. Large Trees (Eucalypts & Non-Eucalypts)	≥50% - 100% of Benchmark	The average score for *Large Trees* across all BioCondition sites was 2.5/15 indicating that there is room for improvement over the first 20 years of offset management. Based upon the average *Recruitment* (4.33/5) and *Tree Species Richness* (3.54/5) values, it is considered likely that an overall improvement in the number of Large Trees is achievable within this timeframe. **Key Management Actions:** Implementation of a Bushfire Management Plan and the exclusion of livestock from the offset site.
% Tree Canopy Cover (average of emergent, canopy and sub-canopy)	≥50% and ≤200% of Benchmark	The average score for *Tree Canopy Cover* across all BioCondition sites was 3.04/5 indicating that there is room for improvement over the duration of the Offset. As discussed above, the *Recruitment* (4.33/5) and *Tree Species Richness* (3.54/5) average scores indicate that the number of *Large Trees* is likely to increase, bringing a subsequent increase to the overall *Tree Canopy Cover* within these AUs. AU6 had a very low value for *Tree Canopy Cover* compared with other AUs indicating that improvements here would be the most noticeable. **Key Management Actions:** Implementation of a Bushfire Management Plan and the exclusion of livestock from the offset site.
% Shrub Canopy Cover	≥50% and ≤200% of Benchmark	The average score for Shrub Canopy Cover across all BioCondition sites was 2.68/5 indicating that there is room for improvement over the first 20 years of offset management. Based upon the average *Shrub Species Richness* (3.98/5) and the general absence of any substantial *Non-Native Plant Cover* (8.55/10), it is considered likely that an overall improvement in Shrub Canopy Cover is achievable within this timeframe. **Key Management Actions:** Implementation of a Bushfire Management Plan, implementation of a Weed Management Plan and the exclusion of livestock from the offset site.
Coarse woody debris	≥50% and ≤200% of Benchmark	The average score for *Coarse Woody Debris* across all BioCondition sites was 2.73/5 indicating that there is room for improvement over the first 20 years of offset management. As discussed above, the *Recruitment* (4.27/5) and *Tree Species Richness* (3.75/5) average scores indicate that the number of *Large Trees* is likely to increase, providing more potential sources of *Coarse Woody Debris* across the offset site. **Key Management Actions:** Implementation of a Bushfire Management Plan and the exclusion of livestock from the offset site.
% Organic Litter	≥50% and ≤200% of Benchmark	The average score for *Organic Litter* across all BioCondition sites was 2.41/5 indicating there is room for improvement over the first 20 years of offset management. Based upon the *Recruitment* (4.27/5), *Tree Species Richness* (3.75/5) and *Shrub Species Richness* (3.98/5) it is considered likely that an increase in *Organic Litter* is achievable as these vegetation communities mature. The average Organic Litter score for AU6 was 0/5 indicating that improvements here will be needed to meet the nominated Interim milestones and final completion criteria. **Key Management Actions:** Implementation of a Bushfire Management Plan, implementation of a Weed Management Plan and the exclusion of livestock from the offset site.

The remaining site-specific attributes are also likely to increase with the implementation of the management actions discussed in **Table** 6-2 and those discussed further in **Section 7.0**.

6.2 Targeted species-specific attributes for improvement

The review of the BioCondition data identified several species-specific attributes that, with appropriate management, can be improved to reach the proposed interim milestones and final completion criteria nominated in this OAMP. Given that these species-specific attributes are scored differently for each MNES value a summary of these key attributes for each species has been presented in **Table** 6-3. Relevant management actions are discussed further in **Section 7.0**.

Table 6-3 Targeted species-specific attributes for improvement (Condition 6h)

Species-Specific Attribute	Targeted Value	Justification
Koala		
Site Condition: Quality and availability of food and foraging habitat	Overall Score of 10 (min 30/40 component score)	The average score for *Quality and availability of food and foraging habitat* across all BioCondition sites was 3.55/10 indicating there is room for improvement over the first 20 years off offset management. This attribute is split into four equal components including: *% of Non-Juvenile Koala Habitat Trees (NJKHTs)*, *Richness of NJKHTs*, *Moisture Content* and *Number of Juvenile Koala habitat Trees (JKHTs)*. These components have been outlined in greater detail in **Appendix A**. Based on the average *Tree Species Richness* (3.75/5) and the number of *NJKHTs* and *JKHTs* provided in the BioCondition assessments, it is considered likely that an increase in the *Quality and availability of food and foraging habitat* is achievable as these AUs mature and continue to self-propagate. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.
Site Condition: Quality and availability of shelter	Overall Score of 10 (min 14/20 component score)	The average score for *Quality and availability of shelter* across all BioCondition sites was 2.14/10 indicating that there is room for improvement over the first 20 years off offset management. This attribute is split into two equal components including: *% of NJKHTs* and *Non-juvenile tree species with dense foliage per ha*. These components have been outlined in greater detail in **Appendix A**. Based on the average *Tree Canopy* (3.14/5) and the number of *NJKHTs* provided in the BioCondition assessments, it is considered likely that an increase in the Quality and availability of shelter is achievable as these AUs mature and continue to self-propagate. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.
Site Context: Threats to species	Overall score of 15/15	Based upon the current condition of the offset site, it was determined that the *Threats to species* score for each BioCondition site was 7/15 (moderate). This score was reached by examining the known threats to this species and the likelihood of these threats occurring within the offset site. It is considered likely that at the conclusion of the Offset (Year 20) that these risks would be mitigated, and this score would increase to 15/15. **Key Management Actions:** Implementation of a Bushfire Management Plan, and Pest Management Plan.

Species-Specific Attribute	Targeted Value	Justification
Grey-headed Flying-fox		
Site Condition: Quality and availability of food and foraging habitat	Overall Score of 5/10 (7.5/30 component score)	The average score for *Quality and availability of food and foraging habitat* across all BioCondition sites was 2.73/10 indicating there is room for improvement over the first 20 years off offset management. This attribute is split into 3 equal components including: *Cover of blossom and fruit food trees*, *Cover of high yield food trees* and *Food tree richness*. These components have been outlined in greater detail in **Appendix A**. Based on the average *Tree Species Richness* (3.75/5) and the tree species listed in the BioCondition assessments, it is considered likely that an increase in the *Quality and availability of food and foraging habitat* is achievable as these AUs mature and increase in species richness. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.
Site Context: Threats to species	Overall score of 15/15	Based upon the current condition of the offset site, it was determined that the *Threats to species* score for each BioCondition site was 7/15 (moderate). This score was reached by examining the known threats to this species and the likelihood of these threats occurring within the offset site. It is considered likely that at the conclusion of the Offset (Year 20) that these risks would be mitigated, and this score would increase to 15/15. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.
Greater Glider		
Site Condition: Quality and availability of food and foraging habitat	Overall Score of 5/10 (max 21/30 component score)	The average score for *Quality and availability of food and foraging habitat* across all BioCondition sites was 1.91/10 indicating there is room for improvement over the duration of the Offset. This attribute is split into 3 equal components including: *Cover of food/habitat trees*, *Site fertility/productivity* and *Food/habitat tree richness*. These components have been outlined in greater detail in **Appendix A**. Based on the average *Tree Species Richness* (3.75/5) and the proposed increase to *Tree Canopy Cover* (see **Table** 6-2), it is considered likely that an increase in the *Quality and availability of shelter* is achievable as these AUs mature and continue to self-propagate. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.
Site Condition: Quality and availability of shelter	Overall Score of 10/10 (min 16/20 component score)	The average score for *Quality and availability of shelter* across all BioCondition sites was 1.91/10 indicating that there is room for improvement over the duration of the Offset. This attribute is split into two equal components including: *Number of large eucalypt trees* and *Availability of food trees*. These components have been outlined in greater detail in **Appendix A**. Based on the average *Tree Species Richness* (3.75/5) and the proposed increase to *Tree Canopy Cover* and *Large Trees* (see **Table** 6-2), it is considered likely that an increase in the *Quality and availability of shelter* is achievable as these AUs mature and continue to self-propagate. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.

Species-Specific Attribute	Targeted Value	Justification
Site Context: Threats to species	Overall score of 15/15	Based upon the current condition of the offset site, it was determined that the *Threats to species* score for each BioCondition site was 7/15 (moderate). This score was reached by examining the known threats to this species and the likelihood of these threats occurring within the offset site. It is considered likely that at the conclusion of the Offset (Year 20) that these risks would be mitigated, and this score would increase to 15/15. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.
Site Context: Species mobility capacity	Overall score of 10/10	Based upon the current condition of the offset site, it was determined that the average *Species mobility capacity* score was 1.55/10 indicating that there is room for improvement over the duration of the Offset. This attribute is scored using a single component, namely the *Number of large trees*. This component has been outlined in greater detail in **Appendix A**. Based on the average *Recruitment* (4.75/5) (see **Table** 6-2) and the number of NJKHTs present within these BioCondition sites, it is considered likely that an increase in the Species mobility capacity is achievable as these AUs mature and continue to self-propagate. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.
Regent Honeyeater		
Site Condition: Quality and availability of food and foraging habitat	Overall score of 5/10	The average score for *Quality and availability of food and foraging habitat* across all BioCondition sites was 1.8/10 indicating that there is room for improvement over the duration of the Offset. This attribute is calculated by assessing the combined *Tree Canopy Covers* for specific food trees at each site. A list of these tree species has been provided in **Appendix A**. Based on the *Tree Canopy Cover* (average of 2.95/5) and the *Tree Species Richness* (3.63/5), it is considered likely that an increase in the *Quality and availability of food and foraging habitat* is achievable as these AUs mature. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.
Site Condition: Quality and availability of shelter	Overall score of 5/10	The average score for *Quality and availability of shelter* across all BioCondition sites was 1.2/10 indicating that there is room for improvement over the duration of the Offset. This attribute is calculated by assessing the combined *Tree Canopy Covers* for specific nesting trees at each site. A list of these tree species has been provided in **Appendix A**. Based on the *Tree Canopy Cover* (average of 2.95/5) and the *Tree Species Richness* (3.63/5), it is considered likely that an increase in the *Quality and availability of shelter* is achievable as these AUs mature. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.

Species-Specific Attribute	Targeted Value	Justification
Site Context: Threats to species	Overall Score of 7/15	Based upon the current condition of the offset site, it was determined that the *Threats to species* score for each BioCondition site was 1/15 (high). This score was reached by examining the known threats to this species and the likelihood of these threats occurring within the offset site. It is considered likely that at the conclusion of the Offset (Year 20) that most these risks would be mitigated, and this score would increase to 7/15. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.
Squatter Pigeon		
Site Condition: Quality and availability of food and foraging habitat	Overall Score 5/10 (min 21/30 component score)	The average score for *Quality and availability of food and foraging habitat* across all BioCondition sites was 1.55/10 indicating that there is room for improvement over the first 20 years off offset management. This attribute is split into three equal components including: *Tree canopy cover*, *Ground cover* and *Non-native plant cover*. These components have been outlined in greater detail in **Appendix A**. Based on the average Tree canopy cover (see **Table** 6-2), the ground cover calculated for each BioCondition site, and the general absence of Non-native plant cover (average of 8.55/10), it is considered likely that an increase in the Quality and availability of food and foraging habitat is achievable as these AUs mature and continue to self-propagate. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.
Site Context: Threats to species	Overall score of 15/15	Based upon the current condition of the offset site, it was determined that the *Threats to species* score for each BioCondition site was 1/15 (high). This score was reached by examining the known threats to this species and the likelihood of those threats occurring within the offset site. It is considered likely that at the conclusion of the Offset (Year 20) that these risks would be mitigated, and this score would increase to 15/15. **Key Management Actions:** Implementation of a Bushfire Management Plan, Weed Management Plan, Pest Management Plan and the exclusion of livestock from the offset site.

7.0 Management actions (Condition 6i)

This section outlines the management actions that will be implemented to ensure that the interim milestones and final completion criteria are achieved. **Section 7.1** to **Section 0** discuss the key management actions and **Table** 6-2 and **Table** 6-3, and **Section 7.5** outline the additional management actions and restrictions that will also be implemented. These management actions have been developed from relevant guidelines, information contained within approved conservation advice documents for each MNES value and other publicly available management plans established in the region. Regular monitoring and reporting will be undertaken to document the effectiveness of these management actions (**Section 8.0**), and will help to determine if additional corrective actions will be required to ensure that interim milestones and completion criteria are achieved (**Section 9.0**).

7.1 Bushfire management

General bushfire management within the offset site will be used to reduce the sites overall fire hazard, manage existing fuel loads and in accordance with the weed management measures outlined in **Section 7.2**, potentially reduce the presence of invasive weeds whilst promoting native species richness. The following bushfire management measures will be implemented across the offset site:

- The condition of existing fire breaks and access tracks throughout the offset site is to be maintained for the duration of the action. Maintenance activities will be conducted annually at the beginning of the dry season (if weather permits), and will not reduce the total habitat areas for each MNES value;
- As stated in Condition 14 of EPBC approvals, the MNES Management Plan for these Projects must implement fire management measures to prevent high intensity and frequent fires from occurring within the impact areas. These measures include the supply of water carts/water tanks that will be located adjacent to construction work areas during the fire danger season as outlined in the Projects Bushfire Management Plan (BMP). Given that the offset site is located within the MIWF Project area, these resources will also be available for the offset area for the duration of operation.
- The operational Bushfire Management Plan for the MIWF Project will be reviewed and updated to be consistent with requirements set out in this OAMP.
- Reduce standing and accumulated fuel load through low-intensity controlled burns and grazing (when vegetation is of sufficient age to withstand grazing impacts). The need for these controlled burns will be determined by assessing the available fuel load and the RE in question. Fire management guidelines for each RE (DES, 2021) have been summarised in **Table** 7-1.
- Consideration will be given to ensure that controlled burns avoid impacts to specific habitat features for MNES values. This includes, but is not limited to, planning burns when native grasses are not seeding and ensuring hollow baring trees are not impacted (to protect food and nesting resources of Squatter Pigeon and Greater Glider respectively).
- Low-intensity controlled burns can also be used to effectively control weed infestations. These programs will ensure that a mosaic of grassy and shrubby understory species is maintained to promote regrowth of native species in these areas. Consideration will also be given to maintaining ground litter and fallen timber habitats by conducting these burns only when there is sufficient soil moisture. Burning will aim to produce fine scale mosaics of burnt and unburnt areas. Variability in season and fire intensity is important, as well as spot ignition in cooler or moister periods to encourage mosaics.

Table 7-1 Bushfire management guidelines for REs mapped within the offset site (DES, 2021)

Regional Ecosystem	Fire Management Guidelines
13.11.3 (AU 1, 2 and 6)	Season – Autumn/Winter (April to August) • Intensity – Low • Interval – 5-15 years • Strategy – Burn maximum of 20% of stands in any year, burning patches each year where practicable
13.11.5 (AU 3)	• Season – Autumn/Winter (April to August) • Intensity – Low • Interval – 5-15 years • Strategy – Burn maximum of 20% of stands in any year, burning patches each year where practicable. ***Note***: Need to actively manage. *Eucalyptus sideroxylon* (mugga) is hard to burn. May need late summer (March) burning.
13.11.6 (AU 4)	• Season – Autumn/Winter (April to August) • Intensity – Low • Interval – 5-15 years • Strategy – Burn maximum of 20% of stands in any year, burning patches each year where practicable.
13.11.8 (AU 5, 7 and 8)	• Season – Autumn/Winter (April to August) • Intensity – Low • Interval – 5-15 years • Strategy – Burn maximum of 20% of stands in any year, burning patches each year where practicable.

Any low-intensity controlled burns will be agreed to by ACCIONA and the landholder in advance and conducted by the landholder or by specialist controlled burn subcontractors as agreed by all parties. Mosaic burns that burn between 10 to 20 ha of a particular vegetation type in any one year will be implemented where practicable. If multiple burns are planned, contractors will provide a schedule to ACCIONA and these details will be included in the 5-yearly Monitoring Report (see **Section 8.0**). This will include the area of relevant RE, the total area to be burnt and an indication of how accurate these values ended up being.

7.1.1 Confidence

A high degree of confidence (80%) in the conservation outcome of the proposed is expected. The success of fire regimes is demonstrated through the positive results (reduced fire fuel, weed suppression, recruitment) of controlled burns outlined in the Queensland Herbarium Regional Ecosystems Descriptions Database guidelines. The tailored actions undertaken such as fire regimes specific to the management of the regional ecosystem are highly practical and can reduce fire-related threats to Koala, Grey-headed Flying-fox and Greater Glider within the offset site.

7.2 Weed management (Condition 6i-iv)

The weed management measures outlined in this section will be implemented across the offset site to help ensure that interim milestones and final completion criteria can be achieved. These measures have been aligned with those discussed in the MNES Management Plan, and those that will be incorporated into the MIWF & OHTL Weed Management Plan (WMP).

As discussed in **Section 3.4.1**, two weed species were identified as occurring within the offset site during the baseline BioCondition surveys, namely: Velvet Prickly Pear (*Opuntia tomentosa*) and Common Prickly Pear (*Opuntia stricta*). Both species are listed a restricted matters under the *Biosecurity Act 2014* and are recognised as WoNS.

Recognised and approved control strategies for these species have been detailed in the *Opuntioid* cacti Fact Sheet (DAF, 2022a). **Table** 7-2 outlines the currently approved herbicide control strategy for these species, which will be implemented across the offset site.

To ensure that additional weed infestations within the offset site are prevented wherever practicable, identified if already occurring and appropriately managed, a Weed Control Program (WCP) has been developed and has been outlined in **Table** 7-3. This control program aligns with the objectives and management actions outlined in the MNES Management Plan and the WMP for the MIWF and OHTL Projects.

Table 7-2 Herbicide control measures for Velvet Prickly Pear and Common Prickly Pear (DAF, 2022a)

Situation	Herbicide	Rate	Method
Agricultural non-crop areas, commercial and industrial areas, fence lines, forestry, pastures and rights-of-way	Triclopyr 240 g/L + Picloram 120 g/L (e.g. Access)	1 L/60 L diesel	Apply as an overall spray, wetting all areas of plant to ground level

Table 7-3 Offset Site Weed Control Program (WCP)

Control Action	Description	Timing
Comprehensive Weed Survey	To ensure that the full extent of current weeds within the offset site have been identified and to ensure that they can by appropriately managed, a comprehensive weed survey will be conducted across the entire offset site. This survey will be conducted by a suitably qualified bush regeneration contractor and/or suitably qualified ecologist and will follow the methodology outlined in the *Field Manual for Surveying and Mapping Nationally Significant Weeds* (McNaught *et al.* 2008). Whilst this survey will focus on the identification of declared (restricted or prohibited) weed species under the *Biosecurity Act 2014*, it will also be designed to identify any large patches of Buffel Grass (*Cenchrus ciliaris*) which is listed as a threat to the Squatter Pigeon.	Year 1
Establishment of a Weed Infestation Register	Following the completion of the comprehensive weed survey in Year 1, an active weed register will be developed to help focus and track the progress of weed management activities within the offset site. This weed register will be provided to any contractors brought into manage weeds across the offset site. This register will be updated every five years and incorporated into 5-yearly Monitoring Reports (see **Section 8.0**).	Year 1
Preliminary Weed Management Activities	Guided by the weed register, active weed management activities will be undertaken across the offset site in accordance with state recognised fact sheets for respective declared species available from https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/biosecurity/plants/invasive. Specific control measures for Buffel Grass taken from the South Australian Fact Sheet (DPIR, 2021), will also be implemented across the offset site as required. The location and scale of identified infestations will be used to determine the most effective management strategies for these weeds, as multiple strategies may be required to manage these infestations. A summary of these implemented management strategies will be provided in 5-yearly Monitoring Reports (see **Section 8.0**). It is anticipated that by Year 5, preliminary weed management activities will have effectively managed any current weed infestations identified within the offset site.	Year 1 - 5
Weed Monitoring	Weed monitoring surveys will be conducted every five years across the offset site, focusing of areas previously identified in the weed register. New investigations will be documented and included in the weed register to help coordinate future management actions.	Year 5, 10, 15, 20
Completion Weed Management Activities	Following the completion of the preliminary weed management activities (Years 1 – 5), it is anticipated that ongoing weed management activities will only be required sporadically as new weed infestations are identified. Using the fact sheets discussed above, ongoing weed management activities will be implemented across the offset site as required, and all efforts will be documented in 5-yearly Monitoring Reports.	Year 6 - 20

Control Action	Description	Timing
Post-completion Weed monitoring	Following the completion criteria for the offset site being met in Year 20, post-completion weed monitoring activities will continue for the duration of the action. New infestations will be documented and included in the weed register to help coordinate future management actions.	Every 5 years (or more frequently as required)
Post-completion Weed Management Activities	It is anticipated that ongoing post-completion weed management activities will only be required sporadically as new weed infestations are identified. Using the fact sheets discussed above, ongoing weed management activities will be implemented across the offset site as required, and all efforts will be documented in 5-yearly Monitoring Reports.	

In addition to the implementation of the WCP (**Table** 7-3), general weed hygiene protocols will be adopted across the offset site in alignment with those already required as part of the MNES Management Plan and those that will be incorporated into WMP for the MIWF and OHTL Projects. These hygiene protocols have been developed to reduce the likelihood that new declared, WoNS of known weed species are not introduced into the offset site. These weed hygiene protocols will be implemented for plant and equipment brought to the offset site, except where they have come from the operational wind farm areas or from the Collin property, and include:

- Washdown all light vehicles prior to entry of the offset site. Vehicles must retain a valid weed hygiene certificate whilst on site. Vehicle washdown procedures have been outlined in **Table** 7-4.
- Washdown all heavy vehicles/machinery prior to entry of the offset site. Machinery must retain valid weed hygiene certificate whilst on site. Machinery washdown procedures have been outlined in **Table** 7-4.
- The movement of vegetation and soil within the offset site will be prohibited except during the construction phase of the MIWF.
- These weed hygiene protocols will be reviewed in accordance with this OAMP (see **Section 14.0**), and in coordination with the WMP that will be developed for the MIWF.

Table 7-4 Light vehicle and machinery washdown procedure

Procedure	Description
Pre-washdown	1. Position vehicle/equipment safely and ensure stability (i.e. brakes applied); 2. Remove excessive debris (i.e. mud, branches) for appropriate disposal using a dry cleaning method before wet where practicable (e.g. scrape off mud before pressure hose applied); and 3. Detach removable items or parts and decontaminate individually (if practicable).
Decontamination of external surfaces	1. Start top-down of vehicle or equipment; 2. Wet decontamination procedure: apply disinfectant/detergent and leave for appropriate contact time (usually 10 minutes) then rinse with clean water; and 3. If other techniques e.g. heat, fumigation for tools, equipment and other things are required, ensure exposure requirements are met as required by disease/pest guidelines.
Decontamination of internal surfaces	1. Only necessary if internal surfaces are exposed to potential contamination; 2. Protective covers (i.e. seat covers, dash covers) will be removed and cleaned or appropriately disposed of; 3. Remove solid materials with a vacuum, cloth or brush; 4. Air filters will be removed, replaced and cleaned (technician may be required); and 5. Surfaces can be wiped or sprayed with 70% alcohol or another appropriate disinfectant.

7.2.1 Confidence

A high degree of confidence (80%) in the conservation outcome of the proposed. The tailored actions undertaken such as repeated herbicide application and spot treatment to achieve low weed cover are highly practical and can control weeds within, if not sooner than the set timeframe.

7.3 Pest management (Condition 6i-v, 6i-iv)

The pest management measures outlined in this Section will be implemented across the offset site to help ensure that interim milestones and final completion criteria can be achieved. These measures will help to reduce risk of predation and competition for resources for each MNES value. These measured have been aligned with those discussed in the MNES Management Plan, and those that will be incorporated into the Collin's Offset Site Pest Management Plan (PMP).

As discussed in **Section 3.4.1**, five fauna pests were identified as likely to occur and/or occurring within or in the vicinity of the offset site, including: wild dog (*Canis lupis familiaris*), feral cat (*Felis catus*), foxes (*Vulpes vulpes*), feral pigs (*Sus scrofa*) and rabbits (*Oryctolagus cuniculus*). Opportunistic pest animal observations will be recorded throughout the offset site during all management activities and scheduled monitoring events. Where pest animals are recorded, suitable control measures will be undertaken by a suitability qualified person in accordance with the *Biosecurity Act 2014* and relevant Threat Abatement Plans (TAPs) (see **Section 11.0**).

Separately, approval conditions for the MIWF and OTHL Projects require the implementation of a pest management program. Integration of pest management activities for the offset site are most likely to achieve the best ecological outcomes by integrating the two pest management programs. A tailored approach to pest management has been developed as part of this OAMP which has considered how these pest species threaten each of the MNES values, and how best to manage these threats. **Table** 7-5 outlines the recommended pest management strategies for each of these MNES values, should they be required.

Table 7-5 Pest animal management actions for each MNES value

MNES Value	Recommended Management Action	Reference
Koala	• Manage wild dog populations within the vicinity of the offset site to reduce the risk of Koala mortality by implementing a trapping, baiting and/or shooting program in accordance with DAF Guidelines (2020b)	• South-East Queensland Koala Conservation Strategy 2020-2025 (DES 2020). • Wild dog fact sheet (DAF, 2022b).
Grey-headed Flying-fox	• Manage feral pig and European rabbit populations within the vicinity of the offset site to reduce impacts upon future habitat for this species by: - Implementation of a trapping, baiting and/or shooting program in accordance with DAF Guidelines (2020c) for feral pigs and the DSEWPC Guidelines for feral European rabbits. **Note**: Feral pests are not listed as a direct threatening process for this MNES.	• National Recovery Plan for the Grey-headed Flying-fox (DAWE, 2021). • Feral pig: DAF, 2022c and DoEE, 2017. • Feral European rabbit: DSEWPC, 2011 and DoEE, 2016.
Greater Glider	• Manage feral cat populations within the vicinity of the offset site to reduce the risk of Greater Glider mortality by: - Implementation of a trapping, baiting and/or shooting program in accordance with DAF Guidelines (2020d)	• Approved Conservation Advice for the Greater Glider (southern and central) (DCCEEW, 2022). • Feral cat: DAF 2020d, DoE, 2015b.
Regent Honeyeater	• Manage feral pig and European rabbit populations within the vicinity of the offset site to reduce impacts upon future habitat for this species by:	• National Recovery Plan for Regent Honeyeater (DoE, 2016). • Feral pig: DAF, 2022c and DoEE, 2017.

MNES Value	Recommended Management Action	Reference
	- Implementation of a trapping, baiting and/or shooting program in accordance with DAF Guidelines (2020c) for feral pigs and the DSEWPC Guidelines for feral European rabbits. **Note**: Feral pests are not listed as a direct threatening process for this MNES, but their potential impact, on riparian areas in particular, may impact key foraging habitat for this species.	• Feral European rabbit: DSEWPC, 2011 and DoEE, 2016.

MNES Value	Recommended Management Action	Reference
Squatter Pigeon	• Manage wild dog, European fox, and feral cat populations within the vicinity of the offset site to reduce the risk of Squatter Pigeon mortality by: - Implementation of a trapping, baiting and/or shooting program in accordance with DAF Guidelines (2020b, 2020d and 2020e). • Manage feral pig and European rabbit populations within the vicinity of the offset site to reduce impacts upon future habitat for this species by: - Implementation of a trapping, baiting and/or shooting program in accordance with DAF Guidelines (2020c) for feral pigs and the DSEWPC Guidelines for feral European rabbits.	• SPRAT Profile for the Squatter Pigeon (DoE, 2022). • European fox: DAF 2020e and DEWHA, 2008. • Feral pig: DAF, 2022c and DoEE, 2017. • Feral cat: DAF 2020d, DoE, 2015b. • Feral European rabbit: DSEWPC, 2011 and DoEE, 2016.

7.3.1 Confidence

A high degree of confidence (80%) in the conservation outcome of the proposed feral animal management is expected. The methods proposed are practical and widely used. Nearby landholders have been successful in complete eradication of predatory pest fauna species (exclusionary fencing) and the gains predicted are modest. Following the outlined methods it is expected that reductions to wildlife related injuries will be achievable within, if not sooner than the set timeframe.

7.4 Stock exclusion (Condition 6i-I, 6i-ii and 6i-iv)

All stock will be excluded from the offset site for the duration of the MIWF and OHTL Project approvals except where required for management of fuel loads. Existing stock fencing will be maintained to ensure this exclusion is maintained. Excluding stock from the offset site will help reduce the risks of erosion, weed infestations and ongoing impacts to plant species richness (especially for grasses and forbs).

Where practicable, barbed wire fencing will be replaced with plan wire fencing (especially the top wire) to reduce the possibility that Greater Glider and Grey-headed Flying-foxes could become entangled.

7.4.1 Confidence

A high degree of confidence (90%) in the conservation outcome of proposed stock exclusion is expected. The offset area encompasses the *Macrozamia conferta* translocation site, which has been observed (through installation of remove cameras) to be stock free since the commencement of the action. Similar success rates for stock exclusion are expected for the remainder of the offset area.

7.5 Additional management actions and restrictions

In addition to the key management actions outlined above, further management actions and restrictions described in **Table** 7-6 will also be enforced across the offset site for the duration of the respective Project approvals. The additional actions discussed in this section align with several actions also discussed in the MNES Management Plan developed for the MIWF and OHTL Projects.

Table 7-6 Additional management actions and offset site restrictions

Restriction	Description
Staff awareness/training	All ACCIONA staff, external contractors and landholders will be made aware of this OAMP and its management actions as they pertain to operational activities.
Unauthorised access	Access to the offset site should be minimised wherever practicable and should be limited to authorised personnel only. Only the landholder and authorised ACCIONA personal/contractors should be granted access to the offset site. ACCIONA will advise the landholder (with one weeks' notice) of upcoming management or monitoring works being conducted within the offset site. Gates to the offset site will be locked, with the keys managed by the landholder and ACCIONA. Existing fencing and locks will be maintained, and new fencing and locks established where required for access restriction. Signage will be established at all access points of the offset site that states the area is protected for conservation purposes and is restricted to authorised personnel only. The offset site will be demarcated on all site plans.
Access tracks	Vehicle movement will be restricted to designated access tracks, existing firebreaks and fence lines which will be maintained for the duration of the action. Tracks will be maintained no wider that 5 m and vegetation disturbance is to be minimised. Usage of access tracks during poor weather should be restricted wherever practicable. Gully crossings will be repaired following rainfall events as required to maintain access.
Speed restrictions	All vehicles will be restricted to speeds of 60 km/h throughout he offset site to reduce the potential of fauna strikes (especially Koalas and Squatter Pigeons). Driving should be avoided at night wherever practicable.
Vegetation clearing	Vegetation clearing within the offset site must not reduce the total area of future MNES habitat and is only permitted under the following circumstances: • Ongoing maintenance of all pre-existing access tracks, firebreaks and fence; • Weed management actions (see **Section 7.2**); and • Ensuring public safety or as directed by emergency management response personnel in the event of uncontrolled fire or another emergency procedure.
Timber harvesting and firewood collection	No timber harvesting and/or firewood collection is permitted within the offset site.
Fodder harvesting	No harvesting of vegetation for fodder is permitted within the offset site.
Erosion Monitoring and Maintenance	Erosion monitoring will be conducted across the Offset site on an annual basis in conjunction with the firebreak, access track and fence line monitoring requirements. Areas identified as being impacted by erosion will be appropriately managed by ACCIONA.

8.0 Monitoring program (Condition 6k, 6l)

This section outlines the monitoring program that will be implemented to evaluate the overall success of the management actions described in this OAMP and track the progress of the offset site towards the interim milestones and completion criteria for each MNES. Monitoring reports will be prepared every 5 years from the approval of this OAMP and for the duration of the MIWF and OHTL EPBC approvals. The ongoing completion of these Monitoring reports even after the completion criteria have been met in Year 20, will ensure that these criteria are maintained for the duration of the action. They will be used to document the progress of the offset site and determine whether corrective actions (see **Section 9.0**) are required to meet and maintain these completion criteria.

8.1 Monitoring Report methodologies

To track the progress of the offset site towards the interim milestones and completion criteria, these monitoring plans will follow the same methodology that was used to collect the baseline information in 2022. As discussed in **Section 4.1**, the methodologies used to collect this baseline data were described in the Environmental Offset Strategies developed for the MIWF and OHTL Projects (Attexo 2021a; Attexo 2021b). A consolidated summary of the MHQA data inputs required to score each of the MNES values has been provided in **Table** 8-1. Further information surrounding specific habitat scoring indicators for each MNES has also been provided in **Appendix A**.

Table 8-1 Monitoring program MHQA methodologies

Attribute	Methodology
Site Condition	
Site-based attributes: • Recruitment of woody perennial species in the ecologically dominant layer (EDL) • Native plant species richness – trees, shrubs, grasses and forbs • Tree canopy height • Tree canopy cover • Shrub canopy cover • Native grass cover • Organic litter • Large native trees • Coarse woody debris • Non-native plant cover	Attributes are assessed in accordance with the BioCondition Assessment Manual (Eyre *et al*, 2015): • *Chapter 3: The assessment unit and site selection* • *Chapter 5: Assessment of site-based attributes* Attributes scored out of a maximum of **80 points**. Benchmarks for each Regional Ecosystem have been developed from reference sites and based upon guidance provided by the Queensland Herbarium (DES, 2019). In addition to collecting these site-based attributes, directional photographs were also be taken at each BioCondition site to keep a visual record of the offset site. Photos were be taken from 1.5 m above the ground, in a landscape orientation for north, east, south and west directions.
Species habitat attributes: • Quality and availability of food and foraging habitat • Quality and availability of shelter	These attributes are scored by incorporating several species-specific indicators and developing a rating scale for each indicator. Attributes are assessed in accordance with the Guide (DEHP, 2017): • *Chapter 7.2 Undertaking species habitat index assessment (Table 4)* Attributes scored out of a maximum of **20 points** (only **10 points** for the Greater Glider as quality and availability of shelter is not used). Additional species-specific information required to score these species-specific indicators: • Number of Koala Habitat Trees and NJKHTs within each stratum (E, T1, T2, T3, NJKHTs and Juvenile trees). Attribute to be counted within the entire 100 x 50 m survey plot.

Attribute	Methodology
Site Context	
Landscape-scale attributes • Large native trees • Coarse woody debris • Non-native plant cover • Ecological Corridors	These attributes are assessed in accordance with *Chapter 6.2: Undertaking a site context assessment* from the Guide (DEHP, 2017) and *Chapter 6.1 Fragmentated landscapes* from the BioCondition Assessment Manual (Eyre, *et al,* 2015). Attributes scored out of a maximum of **26 points**. Assessment Units within the offset site have been identified as occurring within a fragmented landscape. The Guide (DEHP, 2017) includes only remnant or regrowth vegetation in the measurement of habitat. To score this for the MHQA, measurements must include all habitat for the MNES value. For example, koala habitat includes any forest of woodland containing species that are known koala food trees, or shrubland with emergent food trees as defined in the EPBC Act Referral Guidelines for the Vulnerable koala (DoE, 2014a). To assess AU scale, the Guide (DEHP, 2017) states that measurements should be conducted at the overall site level. To score this for the MHQA measurements should be conducted at the AU level. To assess connectivity and the absence of barriers to movement, the Guide (DEHP, 2017) measures connectivity based on adjacency to vegetation. This score this for the MHQA, connectivity includes any boundaries where the MNES value can move into adjacent habitat. For example, a boundary adjacent to a narrow strip of cleared land/track which koalas would use to move into adjacent habitat would be 'connected' to adjacent habitat. To assess context buffers, the BioCondition Assessment Manual (Eyre *et al,* 2015) measures context using a 1 km buffer. To score this for the MHQA, a buffer of 20 km should be used for the Koala, Greater Glider and Squatter Pigeon. To assess connectivity for this MHQA, 'sharing a common boundary with' an ecological corridor includes any boundaries where the MNES value can move into adjacent corridors. For example, if a boundary adjacent to a narrow strip of cleared land/track which koalas would use to move into adjacent corridors would be considered to be a shared common boundary.
Species habitat attributes: • Role of site location to overall population • Threats to species • Species mobility capacity	These attributes are assessed in accordance with the Guide (DEHP, 2017): • *Chapter 2.6: Undertaking a site context assessment; and* • *Chapter 7.2: Undertaking a species habitat index assessment* Attributes scored out of a maximum of **30 points**. The role of the site location to overall population and threats to species' attributes are determined by reviewing available peer reviewed literature, published recovery plans and expert opinions to provide references in support of the nominated score. Species mobility capacity is calculated for each MNES value incorporating specific species-specific attributes which are supported by referenced peer reviewed literature.
Species Stocking Rate	
Species presence and usage attributes: • Presence detected on or adjacent to site (neighbouring property with connecting habitat) • Species usage of the site (habitat type & evidence usage) • Approximate density (per ha)	These attributes have been derived from DCCEEW's MHQA. Attributes scored out of a maximum of **55 points** for the Koala and **25 points** for the remaining MNES values (approximate density per/ha is only used for the Koala and represents a maximum score of **30 points**). Presence detected on or adjacent to site will be determined based upon sighting data and indirect evidence (i.e. scats and scratches) observed within the offset site. Species usage of the site is derived from available peer reviewed literature and expert advice surrounding the habitat types present within the offset site (i.e. foraging, dispersal, breeding). The approximate density (per ha) is only used for the Koala, and is assessed by reviewing the results of a Spot Assessment Technique (SAT) survey to be conducted within the vicinity of each BioCondition site.
Role/importance of species population on site	Score derived from SSR Supplementary table (see below). Attributes scored out of a maximum of **15 points**.

Attribute	Methodology
SSR Supplementary Table	
Sub-attributes: • Key source population for breeding • Key source population for dispersal • Necessary for maintaining genetic diversity • Near the limit of the species range	These attributes which are internally scored out of **30 points** are used to calculate the score for the Role/importance of species population on site for each MNES value. These sub-attributes scores are determined from available peer reviewed literature, expert advice, recovery plans and other related EPBC policy documents that have been developed for each MNES value. Scores for these sub-attributes must be supported by scientific evidence, surveys or studies and species distribution mapping.

8.2 Monitoring Report structure

Each 5-yearly monitoring reports will include the following information:

- A summary of the climatic conditions across the offset site during the preceding 5-year period and how this could have affected the resultant habitat quality scores;
- A summary of the most recent MHQA ecology data collected from each BioCondition assessment site (with associated spreadsheets attached and directional photographs);
- A comparison of the current assessment data to the previous monitoring repots data and an analysis of how these attributes are tracking against the interim milestones and completion criteria for the offset site (the first 5-yearly monitoring report completed in Year 5 will compare its results back to the data presented in this OAMP);
- A summary of all management measures implemented across the offset site in the past 5 years including:
  - Bushfire management actions (including any controlled burns or unplanned bushfires);
  - Weed management actions (including an updated weed register);
  - Pest management actions (including the outcomes of any trapping, baiting or shooting programs); and
  - Any other management actions.
- A list of recommended corrective actions required to keep the offset site on track to meet future interim milestones and completion criteria; and
- Proposed amendments to the current OAMP, including recommendations and any changes to management and monitoring methods.

If the completion criteria have not been achieved after 20 years, ACCIONA will follow the requirements set out in Condition 9 of the EPBC approval for the MIWF and OHTL Projects (see **Section 9.0**).

9.0 Corrective actions (Condition 6i-iii and 6m)

Guided by the results of the monitoring reports (see **Section 8.0**), corrective actions described in this section may need to be implemented to ensure that interim milestones and final completion criteria can be met. In general, these corrective actions are additional and/or more intensive management measures than those currently proposed across the offset site (see **Section 7.0**), and if required, will be implemented in parallel with these existing management measures to ensure that completion criteria can be achieved.

If a monitoring report identifies that an interim milestone has not been achieved, then the following steps will be followed to identify which corrective actions should be undertaken:

1. Within one month of detecting the failure to meet an interim milestone, ACCIONA will arrange for and complete an investigation into the reasons why the milestone or completion criteria were not achieved. This investigation will include a comparison of the improvements/deteriorations in raw data related to the specific milestone in question.

2. Within six months of detecting the failure to meet an interim milestone, ACCIONA will select, approve and implement appropriate corrective action(s) as discussed in **Table** 9-1. If another corrective action, not currently specified in **Table** 9-1 is identified as the best viable solution, ACCIONA will first seek approval from the department before implementation.

3. Within six months after detecting the failure to meet an interim milestone, a review of all current management actions and corrective actions will be undertaken to ensure that they are fit for purpose, and capable of correcting the identified noncompliance. This process will be incorporated into the 5-yearly review of the OAMP discussed further in **Section 14.0**.

4. If improved or additional management measures and/or offset site(s) are proposed that are substantially different from those specified in this OAMP, a revised OAMP will be submitted to the Minister for approval.

Corrective action set out in **Table** 9-1, have been developed to ensure that the potential attribute improvements (discussed in **Section 6.1** and **Section 6.2**), can be achieved if the currently prescribed management measures (discussed in **Section 7.0**) are ineffective, or not providing the desired benefit. This table also includes a description of the conditions that will trigger the need for this corrective action to be implemented, the timeframe in which these actions must be implemented and any additional data that needs to be captured to monitor the effectiveness of these corrective actions.

If the nominated completion criteria (see **Table** 6-1) are not achieved across the offset site by Year 20, additional corrective measures discussed in **Section 9.1** will be triggered.

Table 9-1 Proposed corrective actions developed to address site-specific and species-specific attributes identified for improvement

Management Objective	Performance Criteria	Monitoring Methodology, Frequency, Responsible Party and Reporting Requirements	Trigger for corrective action	Corrective Action(s)	Completion Criteria
Bushfire Management Corrective Actions					
The overall fire hazard and available fuel loads present within the offset site is reduced and/or maintained for the duration of the action. Discussed in **Section 7.1**	No uncontrolled bushfires have occurred within the offset site.	Uncontrolled bushfire monitoring will be conducted opportunistically through the offset site for the duration of the action. All site personnel will be required to monitor for uncontrolled bushfires. Any uncontrolled bushfires will be reported to ACCIONA as soon as practicable, and a summary will be provided in the 5-yearly monitoring reports.	Uncontrolled bushfire is detected within the offset site.	• Within 1 month of the uncontrolled bushfire being identified, conduct an assessment to determine the extent of the damage • Review current bushfire management measures to identify areas for improvement • Develop a Bushfire Recovery Program (BRP) to ensure that affected areas can recover.	Appropriate fire regime and bushfire management actions are implemented for the duration of the action.
	Fuel loads present within the offset site have been effectively managed and remain low.	Visual inspections of available fuel loads will be conducted alongside BioCondition assessments throughout the offset site every 5 years. These assessments will be undertaken by a suitability qualified environmental consultancy. The available fuel loads present will be reported in each of the 5-yearly monitoring reports, in addition to all relevant management activities undertaken.	Fuel loads are recorded during BioCondition surveys to assess requirements for management.	• Review current bushfire management measures and consider utilising controlled low-intensity burns or grazing more frequently to help manage fuel loads.	Appropriate fire regime and bushfire management actions are implemented for the duration of the action.
	Existing firebreaks and access tracks throughout the offset site have been maintained.	Visual inspections of all firebreaks, access tracks and fence lines within the offset site will be conducted at least once per year (ideally at the beginning of the dry season where practicable). Inspections will be undertaken either by ACCIONA personnel or other suitability qualified individuals. The condition of these firebreaks, access tracks and fence lines will be reported in each of the 5-yearly monitoring reports, in addition to all relevant management activities undertaken.	Firebreaks, access tracks and fence lines have become ineffective, degraded or untraversable.	• Engage contractor to repair/maintain firebreaks, access tracks and fence lines within 1 month of trigger being observed. • Review current monitoring and reporting frequencies to ensure they are adequate.	Appropriate fire regime and bushfire management actions are implemented for the duration of the action.
Weed Management Corrective Actions					
The overall abundance of declared weeds within the offset site is managed and reduced for the duration of the action. Discussed in **Section 7.2**	No new declared weed infestations have become established within the offset site.	Weed hygiene protocols will be adhered to across the offset site for the duration of the action. All site personnel will be required to comply with these principals. New declared weed infestations will be reported to ACCIONA immediately and will also be recorded in the active weed register that will be maintained for the offset site.	New declared weed infestations (following the Year 1 comprehensive survey) are identified within offset site.	• A review of the offset site's weed hygiene protocols will be undertaken to identified areas for improvement. • Within 1 month of this observation, additional and/or more intensive weed management measures will be implemented to control these additional areas.	Declared weed infestations are appropriately managed across the offset site for the duration of the action.
	Existing declared weed infestations are managed and reduced.	A comprehensive weed survey will be conducted across the offset site in Year 1, which will be used to establish an active weed register that will be maintained for the duration of the action. ACCIONA will engage a suitability qualified environmental consultancy to conduct this survey and manage identified weed infestations. A summary of this weed register will be included in the 5-yearly monitoring report, in addition to all relevant weed management activities undertaken.	Existing declared weed infestations increase in extent.	• A review of species-specific recommended management strategies will be undertaken to ensure that those listed in this OAMP are current. • Additional and/or more intensive weed management actions will be implemented (i.e. more intense herbicides or low-intensity controlled burns of affected areas).	Declared weed infestations are appropriately managed across the offset site for the duration of the action.

Management Objective	Performance Criteria	Monitoring Methodology, Frequency, Responsible Party and Reporting Requirements	Trigger for corrective action	Corrective Action(s)	Completion Criteria
Pest Management Corrective Actions					
The overall abundance of pest species within the offset site is managed and reduced for the duration of the action. Discussed in **Section 0**.	The occurrence of fauna pest species within the offset site is reduced.	Pest management actions for each MNES value will be adhered undertaken across the offset site for the duration of the action. All site personnel will be required to notify ACCIONA if a pest animal is observed. A summary of all recorded information will be included in the 5-yearly monitoring report, in addition to all relevant management actions implemented across the offset site.	Occurrence of fauna pests within the offset site increase or complaints received.	• A review of the PMP will be undertaken to determine its effectiveness. • A review of pest species-specific management actions will be undertaken to ensure that currently proposed measures are effective. • Additional and/or more intensive management actions will be implemented (i.e. more intense trapping trapping/baiting and shooting programs).	Occurrence of fauna pests are maintained or reduced from baseline (Year 1) for the duration of the action.
Stock Exclusion Corrective Actions					
All stock will be excluded from the Offset for the duration of the action. Discussed in **Section 0**.	Any currently present stock are removed from the offset site at commencement of the OAMP and all stock are excluded from the offset site for the duration of the action unless required for management of fuel load.	Monitoring for evidence of stock presence will be undertaken by the Landholder and all site personnel opportunistically and in conjunction with all other activities across the offset site for the duration of approval. Any evidence of recent stock presence will be reported to ACCIONA immediately. A summary of any stock sightings and corresponding management actions will be included in the 5-yearly monitoring report.	Evidence of stock presence within the offset site is identified.	• Within 1 week, all stock will be removed from the offset site. • Within 1 month, an investigation will be conducted to determine how the stock were introduced into the offset site. • Appropriate management actions will be taken to ensure this does not happen again.	Stock are excluded from the offset site for the duration of approval.
Site-specific Attribute Corrective Actions					
The number of *Large Trees* (Eucalypts & Non-eucalypts) will improve over the duration of the Offset (20 years). These attributes will then be maintained or exceeded for the duration of the action. Discussed in **Table 6-2**.	The number of *Large Trees* improves to ≥50% - 100% of each RE Benchmark.	MHQAs undertaken as part of every 5-yearly monitoring report will track the number of Large Trees present within the Offset area at each permanent monitoring location. These assessments will be undertaken by a suitability qualified environmental consultancy. Assessment results, anecdotal reports and opportunistic observations will be presented in this 5-yearly monitoring report, along with further recommendations of how the quality of the offset site could be improved.	Nominated interim milestones scores have not been achieved by Year 5, Year 10, or Year 15.	• A review of current management strategies will be undertaken to identify whether they can be improved upon. • The use fertilisers will be considered to help promote plant growth and canopy cover. An initial trial program will be established to determine the effectiveness of this approach within each AU before this is implemented on a broader scale.	The number of *Large Trees* within the offset site improves to ≥50% to 100% of each RE Benchmark.
The percentage (%) *Tree Canopy Cover* (average of emergent, canopy and sub-canopy) will improve over the duration of the Offset (20 years). These attributes will then be maintained or exceeded for the duration of the action. Discussed in **Table 6-2**.	The percentage (%) *Tree Canopy Cover* improves to ≥50% and ≤200% of each RE Benchmark.	MHQAs undertaken as part of every 5-yearly monitoring report will track the % *Tree Canopy Cover* present within the Offset area at each permanent monitoring location. These assessments will be undertaken by a suitability qualified environmental consultancy. Assessment results, anecdotal reports and opportunistic observations will be presented in this 5-yearly monitoring report, along with further recommendations of how the quality of the offset site could be improved.	Nominated interim milestones scores have not been achieved by Year 5, Year 10, or Year 15.	• A review of current management strategies will be undertaken to identify if they can be improved upon. • The use fertilisers will be considered to help promote plant growth and canopy cover. An initial trial program will be established to determine the effectiveness of this approach within each AU before this is implemented on a broader scale. • If *Tree canopy Cover* ends up exceeding 200% of the RE Benchmark, a targeted thinning and/or pruning program will be established.	The percentage (%) *Tree Canopy Cover* within the offset site improves to ≥50% and ≤200% of each RE Benchmark.
The percentage (%) Shrub Canopy Cover will improve over the duration of the Offset (20 years). These attributes will then be maintained or exceeded for the duration of the action. Discussed in **Table 6-2**.	The percentage (%) Shrub Canopy Cover improves to ≥50% and ≤200% of each RE Benchmark.	MHQAs undertaken as part of every 5-yearly monitoring report will track the *% Shrub Canopy Cover* present within the Offset area at each permanent monitoring location. These assessments will be undertaken by a suitability qualified environmental consultancy. Assessment results, anecdotal reports and opportunistic observations will be presented in this 5-yearly monitoring report, along with further recommendations of how the quality of the offset site could be improved.	Nominated interim milestones scores have not been achieved by Year 5, Year 10, or Year 15.	• A review of current management strategies will be undertaken to identify whether they can be improved upon. • The use fertilisers will be considered to help promote plant growth and canopy cover. An initial trial program will be established to determine the effectiveness of this approach within each AU before this is implemented on a broader scale. • If *Shrub canopy Cover* ends up exceeding 200% of the RE Benchmark, a targeted thinning and/or pruning program will be established. • The applicability of low-intensity controlled burns will also be considered to manage the excess shrub cover.	The percentage (%) *Shrub Canopy Cover* within the offset site improves to ≥50% and ≤200% of each RE Benchmark.

Management Objective	Performance Criteria	Monitoring Methodology, Frequency, Responsible Party and Reporting Requirements	Trigger for corrective action	Corrective Action(s)	Completion Criteria
The quantity of Coarse Woody Debris will improve over the duration of the Offset (20 years). These attributes will then be maintained or exceeded for the duration of the action. Discussed in **Table 6-2**.	The percentage (%) Shrub Canopy Cover improves to ≥50% and ≤200% of each RE Benchmark.	MHQAs undertaken as part of every 5-yearly monitoring report will track the *quantity of Coarse Woody Debris* present within the Offset area at each permanent monitoring location. These assessments will be undertaken by a suitability qualified environmental consultancy. Assessment results, anecdotal reports and opportunistic observations will be presented in this 5-yearly monitoring report, along with further recommendations of how the quality of the offset site could be improved.	Nominated interim milestones scores have not been achieved by Year 5, Year 10, or Year 15.	• A review of current management strategies will be undertaken to identify whether they can be improved upon. • The viability of collecting and dispersing suitable Coarse Woody Debris from nearby clearing activities will be considered. Any dispersal of woody debris throughout the offset site would need to have limited ground disturbance impacts. • Additional sources of Coarse Woody Debris will be reviewed and considered.	The percentage quantity of *Coarse Woody Debris* within the offset site improves to ≥50% and ≤200% of each RE Benchmark.
The percentage (%) Organic Litter will improve over the duration of the Offset (20 years). These attributes will then be maintained or exceeded for the duration of the action. Discussed in **Table 6-2**.	The percentage (%) Shrub Canopy Cover improves to ≥50% and ≤200% of each RE Benchmark.	MHQAs undertaken as part of every 5-yearly monitoring report will track the *% Organic Litter* present within the Offset area at each permanent monitoring location. These assessments will be undertaken by a suitability qualified environmental consultancy. Assessment results, anecdotal reports and opportunistic observations will be presented in this 5-yearly monitoring report, along with further recommendations of how the quality of the offset site could be improved.	Nominated interim milestones scores have not been achieved by Year 5, Year 10, or Year 15.	• A review of current management strategies will be undertaken to identify whether they can be improved upon. • The use fertilisers will be considered to help promote plant growth and the generation of subsequent organic litter. An initial trial program will be established to determine the effectiveness of this approach within each AU before this is implemented on a broader scale. • Additional (external) sources of Organic Litter from nearby clearing activities will also be reviewed and considered.	The percentage (%) *Organic Litter* within the offset site improves to ≥50% and ≤200% of each RE Benchmark.
Species-specific Attribute Corrective Actions					
Increase the quantity and richness of available habitat over the duration of the Offset (20 years). These attributes will then be maintained or exceeded for the duration of the action. Discussed in **Table 6-3**. Relevant MNES Values: • Koala • Grey-headed Flying-fox • Greater Glider • Regent Honeyeater	The number of NJKHTs improves to ≥50% - 100% of each RE Benchmark. Relevant MNES: *Koala*.	MHQAs undertaken as part of every 5-yearly monitoring report will track the *number of NJKHTs* present within the Offset area at each permanent monitoring location. These assessments will be undertaken by a suitability qualified environmental consultancy. Assessment results, anecdotal reports and opportunistic observations will be presented in this 5-yearly monitoring report, along with further recommendations of how the quality of the offset site could be improved.	Nominated interim milestones scores have not been achieved by Year 5, Year 10, or Year 15.	• A review of current management strategies will be undertaken to identify whether they can be improved upon. • Juvenile tree guards will be considered to protect juvenile trees and ensure they reach NJKHT status (i.e. height > 4m or trunk circumference of 31.5 cm at a height of 1.3 m). • The use of fertilisers will be considered to help promote plant growth. An initial trial program will be established to determine the effectiveness of this approach within each AU before this is implemented on a broader scale. • The development of a targeted planting program will be considered to supplement the natural propagation of koala trees within the offset site. Any tree planning program would need to be initiated within the first 10 years of the Offset to receive the intended benefit in a timeframe that will contribute towards the completion criteria. Species selection will need to be representative of those associated with the RE in question. Suitable Koala habitat trees are listed in **Appendix A**.	The number of NJKHTs within the offset site improves to ≥50% - 100% of each RE Benchmark.
	The number of JKHTs improves to 100% of each RE Benchmark. Relevant MNES: *Koala*.	MHQAs undertaken as part of every 5-yearly monitoring report will track the *number of JKHTs* present within the Offset area at each permanent monitoring location. These assessments will be undertaken by a suitability qualified environmental consultancy. Assessment results, anecdotal reports and opportunistic observations will be presented in this 5-yearly monitoring report, along with further recommendations of how the quality of the offset site could be improved.	Nominated interim milestones scores have not been achieved by Year 5, Year 10, or Year 15.	• A review of current management strategies will be undertaken to identify whether they can be improved upon. • Juvenile tree guards will be considered to protect JKHTs (i.e. trees less than 4 m in height). • The use of fertilisers will be considered to help promote natural propagation. An initial trial program will be established to determine the effectiveness of this approach within each AU before this is implemented on a broader scale. • The development of a targeted planting program will be considered to supplement the natural propagation of koala trees within the offset site. Any tree planning program would need to be initiated within the first 10 years of the Offset to receive the intended benefit in a timeframe that will contribute towards the completion criteria. Species selection will need to be representative of those associated with the RE in question. Suitable Koala habitat trees are listed in **Appendix A**.	The number of NJKHTs within the offset site improves to ≥50% - 100% of each RE Benchmark.

Management Objective	Performance Criteria	Monitoring Methodology, Frequency, Responsible Party and Reporting Requirements	Trigger for corrective action	Corrective Action(s)	Completion Criteria
	The richness of MNES habitat trees improves to 100% of each RE Benchmark for each MNES value. Relevant MNES: *Koala, Grey-headed Flying*-fox, *Greater Glider* and *Regent Honeyeater*.	MHQAs undertaken as part of every 5-yearly monitoring report will track *MNES habitat tree species richness* within the Offset area at each permanent monitoring location. These assessments will be undertaken by a suitability qualified environmental consultancy. Assessment results, anecdotal reports and opportunistic observations will be presented in this 5-yearly monitoring report, along with further recommendations of how the quality of the offset site could be improved.	Nominated interim milestones scores have not been achieved by Year 5, Year 10, or Year 15.	• A review of current management strategies will be undertaken to identify whether they can be improved upon. • The development of a targeted planting program will be considered to introduce suitable habitat tree species that are currently absent various permanent monitoring locations. Any tree planning program would need to be initiated within the first 10 years of the Offset to receive the intended benefit in a timeframe that will contribute towards the completion criteria. Species selection will need to be representative of those associated with the RE in question. Relevant habitat trees for each MNES value are discussed in **Appendix A**.	The *richness of MNES habitat trees* within the offset site improves to 100% of each RE Benchmark for each MNES value.
	The % Canopy Cover of suitable food trees increases to ≥50% - 100% of each RE Benchmark. Relevant MNES: *Grey-headed Flying Fox, Greater Glider* and *Regent Honeyeater*.	MHQAs undertaken as part of every 5-yearly monitoring report will track the *% Canopy Cover of suitable food trees* within the Offset area at each permanent monitoring location. These assessments will be undertaken by a suitability qualified environmental consultancy. Assessment results, anecdotal reports and opportunistic observations will be presented in this 5-yearly monitoring report, along with further recommendations of how the quality of the offset site could be improved.	Nominated interim milestones scores have not been achieved by Year 5, Year 10, or Year 15.	• A review of current management strategies will be undertaken to identify whether they can be improved upon. • Juvenile tree guards will be considered to protect JKHTs (i.e. trees less than 4 m in height). • The use fertilisers will be considered to help promote plant growth and canopy cover. An initial trial program will be established to determine the effectiveness of this approach within each AU before this is implemented on a broader scale. • The development of a targeted planting program will be considered to supplement the natural propagation of food trees within the offset site. Any tree planning program would need to be initiated within the first 10 years of the Offset to receive the intended benefit in a timeframe that will contribute towards the completion criteria. Species selection will need to be representative of those associated with the RE in question. Relevant habitat trees for each MNES value are discussed in **Appendix A**.	The *% Canopy Cover of suitable food trees* within the offset site improves to ≥50% - 100% of each RE Benchmark.
Additional Corrective actions and Restrictions					
Maintain site staff awareness and access restrictions for the duration of the action general restrictions	All site staff are to be trained and made aware of the offset site for the duration of the action.	All site staff should complete an induction to familiarise themselves with the offset site, ongoing management activities and their obligations whilst on site.	Any significant updates to the offset site, active management actions or monitoring activities.	• An updated site induction should be prepared. • Once the MIWF and OHTL Projects have been constructed and commissioned, a review of the training/inductions required to work on the offset site should be undertaken to ensure they are current.	Relevant inductions and training will be available to all site staff working within the offset site for the duration of the action.
	Current unauthorised access restrictions are to be maintained and updated for the duration of the action.	Access restrictions pertaining to the offset site should be maintained for the duration of the action. Any changes to access restrictions will be communicated by ACCIONA to all relevant site staff and contractors.	Any significant updates to access requirements or restrictions.	• An updated site access plan should be developed. Relevant gates, locks and signage will be installed to manage these updates. • Once the MIWF and OHTL Projects have been constructed and commissioned, a review of the access restrictions will be undertaken to ensure they are relevant for the offset site.	Relevant access restrictions for the offset site will be maintained for the duration of the action.

9.1 Additional corrective actions (Condition 9a and 9b)

In accordance with Condition 9 and Condition 10 of the MIWF and OHTL EPBC approvals, if the completion criteria nominated in this OAMP (see **Table** 6-1) are not achieved across the offset site within 20 years of the commencement of the action, ACCIONA will, within 10 business days of this 20th anniversary:

- Notify the department which offset completion criteria have not been met, by how much, and the likely cause(s) of the completion criteria not being met; and
- Submit to the department within 4 months of the 20th anniversary, a Supplementary Offset Area Management Plan (SOAMP) for the approval of the minister.

If required, this SOAMP must include the following information:

- A description of the revised management/corrective measures proposed to compensate for this failure to meet the proposed completion criteria;
- In accordance with Condition 11, details of how additional offset site(s) will be secured within 12 months of the date of the SOAMP (this SOAMP must be attached to any relevant security mechanisms)

In accordance with Condition 12, once this SOAMP is approved by the Minister, ACCIONA will notify the department within 5 business days of the mechanism to secure each offset site having being executed.

10.0 Risk analysis (Condition 6n)

The following risk analysis was undertaken to identify the initial risks to the successful implementation of this OAMP and the achievement of the interim milestones and completion criteria within the required timeframes. These risks were assessed using the matrix provided in Attachment I of the MIWF and OHTL Project EPBC approvals, which was derived from the Environmental Management Plan Guidelines (DoE, 2014b). This analysis then incorporated the management measures and corrective actions discussed in this OAMP (see **Section 7.0** and **Section 9.0**) to calculate a residual risk rating after this OAMP has been implemented. The resultant residual risk ratings were all determined to be either low or medium indicating that the proposed management and corrective actions will successfully reduce the initial risk ratings.

Risk Analysis Matrix (developed using DoE 2014b)

RISK MATRIX	
Likelihood (L): A qualitative measure of likelihood how likely is it that this event/circumstances will occur both before and after management activities are implemented	
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances
Consequence (C): Qualitative measure of what will be the consequence/result if the issue does occur	
Minor	Minor incident of environmental damage that can be reversed (*e.g. short-term delays to achieving strategy objectives, implementing low-cost, well-characterised corrective actions*)
Moderate	Isolated but substantial instances of environmental damage that could be reversed with intensive efforts (*e.g. short-term delays to achieving strategy objectives, implementing well-characterised, high cost/effort corrective actions*)
High	Substantial instances of environmental damage that could be reversed with intensive efforts (*e.g. medium-long term delays to achieving objectives, implementing uncertain, high-cost/effort corrective actions*)
Major	Major loss of environmental amenity and real danger of continuing (*e.g. strategy objectives are unlikely to be achieved, with significant legislative, technical, ecological and/or administrative barriers to attainment that have no evidenced mitigation strategies*)
Critical	Severe widespread loss of environmental amenity and irrecoverable environmental damage (*e.g. strategy objectives are unable to be achieved, with no evidenced mitigation strategies*)

Risk Rating (R): A function of multiplying Likelihood (L) and Consequence (C)

		Consequence				
		Minor	**Moderate**	**High**	**Major**	**Critical**
Likelihood	**Highly Likely**	Medium	High	High	Severe	Severe
	Likely	Low	Medium	High	High	Severe
	Possible	Low	Medium	Medium	High	Severe
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

Table 10-1 Risk Analysis Table

Risk Event	Initial Risk Rating			Relevant Management Actions	Relevant Corrective Actions	Residual Risk Rating		
	L	C	R			L	C	R
Force Majeure Events								
Drought (Extreme and/or prolonged weather event)	Likely	Moderate	Medium	Relevant management actions have been discussed in **Section 7.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Likely	Moderate	Medium
Cyclones / Severe tropical lows / flooding	Likely	Minor	Low	Relevant management actions have been discussed in **Section 7.0**. ACCIONA site staff will conduct visual inspection of offset site following event, when conditions permit, to identify any additional management actions required.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Likely	Minor	Low
Catastrophic (uncontrolled) Bushfire	Possible	Critical	Severe	Relevant management actions have been discussed in **Section 7.0**. ACCIONA site staff will conduct visual inspection of offset site following event, when conditions permit, to identify any additional management actions required.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Unlikely	High	Medium
Standard Risks to the OAMP								
The Offset fails to meet the nominated final completion criteria	Possible	Major	High	Relevant management actions have been discussed in **Section 7.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Unlikely	High	Medium
Erosion	Possible	Minor	Low	Relevant management actions have been discussed in **Section 7.5**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Possible	Minor	Low
Timber harvesting/collection	Unlikely	Moderate	Low	Relevant management actions have been discussed in **Section 7.5**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Rare	Moderate	Low
Unauthorised clearing	Unlikely	Major	High	Relevant management actions have been discussed in **Section 7.5**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Rare	Major	Medium
New infestations of invasive weeds in the offset site	Possible	High	Medium	Relevant management actions have been discussed in **Section 7.2**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Unlikely	Low	Low
Expansion of existing weed infestations in the offset site	Possible	High	Medium	Relevant management actions have been discussed in **Section 7.2**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Unlikely	Moderate	Low
Increased population of pest animals in the offset area.	Possible	Moderate	Medium	Relevant management actions have been discussed in **Section 0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Unlikely	Moderate	Low
Unauthorised or inappropriate grazing in offset area	Possible	High	Medium	Relevant management actions have been discussed in **Section 0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Relevant corrective actions have been discussed in **Section 9.0**. Any additional management recommendations made in the 5-yearly monitoring reports will also be implemented.	Unlikely	Minor	Low

11.0 Conservation advice and other relevant documents (Condition 6o)

The following section provides a summary of the relevant Conservation Advice, Recovery Plans and Threat Abatement Plans used to develop the specific management and corrective actions set out in this OAMP. The key documents used to develop these management and corrective actions have been provided outlined in **Table** 11-1.

Table 11-1 Reference documentation for each MNES value used in this OAMP

Document Name	How management actions take conservation advice into account
Koala	
Approved Conservation Advice: Koala (*Phascolarctos cinereus*) (combined populations of Queensland, New South Wales and the Australian Capital Territory) (Koala Northern Design Table Unit) (DAWE, 2022a) National Recovery plan for the Koala: *Phascolarc cinereus* (combined populations of Queensland, New South Wales and the Australian Capital Territory) (DAWE, 2022b) EPBC Act referral guidelines for the vulnerable koala (combined populations of Queensland, New South Wales and the Australian Capital Territory). (DoE, 2014a).	These documents were used quantify existing and future suitable habitat for the Koala within the offset site and to identify known threats to this species. This information was also summarised in the approved Offset Strategies developed for the MIWF and OHTL Projects (Attexo, 2021a; Attexo 2021b). Management and corrective actions discussed in this OAMP were developed to address key threats and priority recovery objectives identified for this species including: • The prevention of further important habitat loss and ongoing disturbance through the restriction of clearing activities within the offset site (**Section 7.5**); • The protection of regional connectivity through the establishment of this offset site which will link two important state-wide biodiversity corridors together (**Section 3.2**); • The threat of predation by dogs through effective pest management (**Section 0**); and • The threat of vehicle strike by the implementation of speed restrictions across the offset site (**Section 7.5**).
Grey-headed flying fox	
National Recovery Plan for the Grey-headed Flying-fox (*Pteropus poliocephalus*) (DAWE, 2021)	This document was used to quantify the existing and future suitable habitat for the Grey-headed Flying-fox and to identify known threats to this species. This information was also summarised in the approved Offset Strategies developed for the MIWF and OHTL Projects (Attexo, 2021a; Attexo 2021b). Management and corrective actions discussed in this OAMP were developed to address key threats and priority recovery objectives identified for this species including: • The prevention of further habitat loss through the restriction of clearing activities (**Section 7.5**); and • The availability and connectivity of suitable foraging habitat through the establishment of this offset site which will link two important state-wide biodiversity corridors together (**Section 3.2**).
Greater Glider	
Approved Conservation Advice for *Petauroides Volans* (greater glider (southern and central)). (DCCEEW, 2022) Guide to greater glider habitat in Queensland, report prepared for the Department of Agriculture, Water and the Environment, Canberra. (Eyre, *et al.* 2022)	These documents were used to identify key habitat and foraging species for the Greater Glider as well as known threats for this species. This information was also summarised in the approved Offset Strategies developed for the MIWF and OHTL Projects (Attexo, 2021a; Attexo 2021b). Management and corrective actions discussed in this OAMP were developed to address key threats and priority recovery objectives identified for this species including: • A reduction in the frequency and intensity of prescribed burns through effective bushfire management (**Section 7.1**); • The protection of suitable habitat for this species through the establishment of this offset site which will link two important state-wide biodiversity corridors together (**Section 3.2**); and

Document Name	How management actions take conservation advice into account
	• The protection of large hollow-bearing trees through the restriction of clearing activities within the offset site (**Section 7.5**);
Regent Honeyeater	
Approved Conservation advice for the Regent Honeyeater (*Anthochaera Phrygia*) (DoE, 2015a). National Recovery Plan for the Regent Honeyeater (*Anthochaera Phrygia*). (DoE, 2016)	These documents were used to identify key habitat features for the Regent Honeyeater within the offset site as well as known threats for this species. This information was also summarised in the approved Offset Strategies developed for the MIWF and OHTL Projects (Attexo, 2021a; Attexo 2021b). Management and corrective actions discussed in this OAMP were developed to address key threats and priority recovery objectives identified for this species including: • The prevention of further important habitat loss and ongoing disturbance through the restriction of clearing activities within the offset site (**Section 7.5**); • The protection of regional connectivity through the establishment of this offset site which will link two important state-wide biodiversity corridors together (**Section 3.2**);
Squatter Pigeon	
Geophaps scripta scripta in Species Profile and Threats Database (DoE, 2022) Conservation Advice for the Squatter Pigeon (*Geophaps scripta scripta*) (TSSC, 2015).	These documents were used to identify and describe key habitat features for the Squatter Pigeon as well as known threats for this species. This information was also summarised in the approved Offset Strategies developed for the MIWF and OHTL Projects (Attexo, 2021a; Attexo 2021b). Management and corrective actions discussed in this OAMP were developed to address key threats and priority recovery objectives identified for this species including: • The retention and promotion of high value habitat such as grassy woodland within 1-3 km of permanent water bodies through the restriction of clearing activities within the offset site (**Section 7.5**); • The protection of regional connectivity through the establishment of this offset site which will link two important state-wide biodiversity corridors together (**Section 3.2**); • The exclusion of livestock within the offset site (**Section 0**); and • A reduction in the frequency and intensity of prescribed burns through effective bushfire management (**Section 7.1**);
Additional Threat Abatement Plans	
Threat abatement plan for competition and land degradation by rabbits (DoEE, 2016) Threat abatement plan for predation by feral cats (DoE, 2015b). Threat abatement plan for predation by the European red fox (DEWHA, 2008). Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs (Sus scrofa) (DoEE, 2017).	These abatement plans were used to identify appropriate management and control strategies that would be affective against fauna pest species identified as threatening process for each MNES value. Recommended management actions included: • The identification of and qualification of threatening process caused by these fauna pests (**Section 0**); • Conduct a monitoring program to determine the presence of these fauna pests (**Section 8.0**); • Coordinate with landowners to develop an appropriate pest management program (**Section 0**); and • Continue to review this pest management program to ensure appropriate population suppression techniques are being utilised (**Section 9.0**).

12.0 Offset site legal security mechanism (Condition 3, 6p and 7)

Following approval of the OAMP, the offset site will be legally secured through a Voluntary Declaration (VDec) in accordance with requirements set out under the Queensland *Vegetation Management Act 1999* (VM Act), section 19F. The VDec will be used to legally secure the offset site to satisfy Principle 2 of the *EPBC Environmental Offsets Policy* and meet offset area requirements under the Queensland *Environmental Offset Act 2014*.

The VDec process requires a management plan (this OAMP) to be assessed by the Department of Resources and accepted by all parties (including the landholder). The management plan must contain sufficient elements to ensure that the offset site is managed to achieve outcomes set out in the management plan. The management plan and VDec are noted on the land title once approved by the Department of Resources.

In Accordance with Condition 7 of the MIWF and OHTL EPBC approvals, this will occur within 12 months of this OAMP being approved by the Minister. A copy of this OAMP will be attached to the underlying approval.

ACCIONA will maintain responsibility for funding and the completion of all management actions outlined in the management plan.

13.0 Compliance with the offsets policy principles

The *EPBC Environmental Offsets Policy* provides eight overarching principles that are applied in determining the suitability of an offsets. A description of how these principals have been met by this OAMP has been provided in **Table** 13-1.

Table 13-1 Environmental Offsets Policy Principles

Principles of the Offsets Policy	DAWE OAMP template states offsets and offset proposal must:	How the principle is addressed by the offset:
1. Suitable offset must deliver an overall conservation outcome that improves or maintains the viability of the protected matter	• Improve or maintain the viability of the protected matter compared to what it would have been under the status quo (i.e. no action and no offset), resulting in No Net Loss or a Net Gain for the protected matter (refer to Section 3.1) • Be like-for like; achieve a positive conservation outcome for the same protected matter as being impacted, and the same attribute (e.g. habitat type) or one of better conservation value. If this is not able to be achieved, then the proposed impact may be deemed unacceptable. • Evidence that the protected matter is either on the offset site, or adjacent to (with connecting habitat/vegetation) and likely to inhabit the offset site once management makes it suitable for the matter • Be implemented for the duration of the impact (not just the action itself) • Not support or recreate non-endemic vegetation or ecosystems • Commit to a future quality that is equal to, or greater than, the quality of the impact site to be attained by the nominated time until ecological benefit and then maintained at for the duration of the impact (direct offsets only)	• By achieving the completion criteria outlined in **Section 6.0**, the quality of available habitat within the offset site will improve over the duration of the action. The implementation of management measures (**Section 7.0**) and protection of the offset area (**Section 12.0**) will ensure that the future quality is at least equal to that at the impact site. • The offset site contains suitable habitat for each MNES value as discussed in **Section 3.4**. Management measures (**Section 7.0**) implemented across the Offset site will ensure that that these areas achieve a positive conservation outcome. • An assessment of available suitable habitat within the Offset area was conducted in the development of this OAMP (**Section 3.4**). In this assessment it was determined that each MNES value was either recorded within the Offset area or in the surrounding area that makes up the MIWF and OHTL Projects. • The management (**Section 7.0**), monitoring (**Section 8.0**) and corrective actions (**Section 9.0**) discussed in this OAMP will be undertaken for the duration of the action, not just until the completion criteria are achieved. • Specific weed management measures (**see Section 7.2**) will manage existing invasive populations and ensure that no additional non-endemic vegetation will become established within the Offset area. • As outlined in **Section 5.0** and shown on the Offset Assessment Calculators for each MNES value (**Appendix C**), the future habitat quality scores are all greater than the initial habitat quality scores.
2. Suitable offsets must be built around direct offsets but can include other compensatory measures	• Be at least 90% direct offset • Direct offsets provide a measurable conservation gain for the impacted protected matter • Other compensatory measures must lead to benefits for the same aspect of the impacted protected matter • Address key threats and priority actions in relevant Recovery Plans, Threat Abatement Plans, Conservation/Listing Advice • Be legally secured for conservation purposes (i.e. protection mechanism that changes land tenure) for at least the	• As discussed in **Section 5.0** and shown in **Appendix C**, Offset Assessment Calculators for each MNES value result in a percentage direct offset value greater than 100%. • The completion criteria outlined in **Section 6.0**, represent the measurable conservation gain proposed in this OAMP. • Management measures (**Section 7.0**) and corrective actions (**Section 9.0**) will provide beneficiary measures to all environmental values across the Offset site.

Principles of the Offsets Policy	DAWE OAMP template states offsets and offset proposal must:	How the principle is addressed by the offset:
	duration of the impact if there is a risk of loss or degradation of the site without offset • The most secure and permanent protection mechanisms available should be used, and they should restrict activities not conducive to conservation of the protected matte	• The management measures (**Section 7.0**) discussed in this OAMP were developed to address key threating process for the respective MNES values (see **Section 11.0**). • The offset site will be legally secured using a VDec under the *Vegetation Management Act 1999* which is detailed in **Section 12.0**.
3. Suitable offsets must be in proportion to the level of statutory protection that applies to the protected matter	• Consider the accurate level of statutory protection (vulnerable, endangered or critically endangered) for the listed threatened species or ecological community • This is achieved by selecting the correct category in the 'EPBC Act status' box of the Offsets Assessment Guide (Offsets Calculator). Note where a matter has been up-listed in the time since approval, the up-listed status is generally required to be used	• The proposed offset site is a minimum of 4.5 times the area of impact of potential habitat for relevant MNES • Management of the offset site will be undertaken to implement relevant measures set out in national recovery plans, approved conservation advice and species profiles and threats (SPRAT)
4. Suitable offsets must be of a size and scale proportionate to the residual impacts on the protected matter	• Detail the attributes of the protected matter being impacted, the quality and importance of those attributes, the nature of the impact (e.g. permanent or temporary), the level of threat applicable to the offset site, the time it will take to achieve a conservation gain for the protected matter, and risk of the conservation gain not being realised. • Ensure that offsets calculations for threatened species and ecological communities are as accurate as possible and implement the Precautionary Principle where there is scientific uncertainty	• MNES and habitat likely to be impacted by the Project will be offset by securing the offset site and improving the quality of the preferred habitat for each species. In addition, habitat secured has been assessed and strategically selected within the landscape-scale so that there is a net increase in connectivity for each MNES species. The net increase in habitat protection and connectivity, and therefore net gain, will be achieved within 20 years of commencement of the Plan.
5. Suitable offsets must effectively account for and manage the risks of the offset not succeeding	• Consider the reduced risk of using direct offsets compared to other compensatory measures • Advanced offsets reduce this risk further • Include a risk analysis of factors that could affect the success of the offset (i.e. attain the completion criteria by the nominated time until ecological benefit and maintain this for the duration of the impact), with input from multiple environmental specialists • Assess the potential effectiveness of each management and corrective action (including for stochastic events), financial	• As detailed **in Section 10.0**, a risk assessment of the offset not succeeding has been undertaken. • In addition to key threats that directly impact each MNES survival, appropriate management measures, monitoring and corrective actions are planned to help ensure that the offset provides a net benefit. Relevant national recovery plans, approved conservation advice, approved methodology for monitoring and controlling relevant threats have been reviewed and incorporated into the management actions, monitoring and corrective actions proposed in this OAMP (see **Section 2.0**). These will prevent and reduce the likelihood of

Principles of the Offsets Policy	DAWE OAMP template states offsets and offset proposal must:	How the principle is addressed by the offset:
	and business limitations, possible perverse outcomes from the offset, and any other potential limiting factors • Propose compensatory measures for if the offset fails, such as additional offsets to compensate for both the impact and failed offset • Details of how and when the Precautionary Principle has been applied	detrimental outcomes and this OAMP identifies appropriate actions to implement should trigger criteria be exceeded.
6. Suitable offsets must be additional to what is already required, determined by law of planning regulations, or agreed to under other schemes or programs	• Detail the duty of care requirements applicable to the offset site, such as the landowner's responsibility to control certain weeds and feral animals • Specify environmental planning laws that apply to the offset site (e.g. statutory protection of riparian areas) • Conservation gains paid for, or achieved, while participating in other schemes (e.g. carbon offset scheme) • Provide conservation gains that are in addition to duty of care, environmental planning laws or other schemes	• Prior to the offset, the landowner has no statutory obligations under Queensland legislation to manage weeds or pests, other than restriction of sale or transport of restricted matters as set out in the *Biosecurity Act 2014*. • Prior to the offset, the landowner has restricted vegetation clearing rights within areas mapped as remnant vegetation and high value regrowth under the *Queensland Vegetation Management Act* 1999. • The offset site is not currently subject to any environmental schemes or agreements (such as a previous offset agreement) and the land use restrictions imposed within the offset site will be additional to what is already required.

Principles of the Offsets Policy	DAWE OAMP template states offsets and offset proposal must:	How the principle is addressed by the offset:
7. Suitable offsets must be efficient, effective, timely, transparent, scientifically robust and reasonable	• Maintain or improve the viability of the protected matter through sound allocation of resources, including for any required management and monitoring of the offset • Be implemented before, or at the same time as, the impact occurring • Be based on scientifically robust and verifiable information, including best-practice surveys undertaken by suitably qualified experts • All supporting evidence must be provided to the DAWE, and any assumptions or limitations must be specified • The Precautionary Principle must be implemented if there is not scientific certainty • Use scientifically robust and peer-reviewed methods for collecting and analysing environmental data • Have realistic offset commitments and completion criteria that are likely to be achieved despite any potential threats or risks	• Maintenance and monitoring requirements are explicitly outlined in this OAMP to achieve a net benefit for each MNES species so that self-sustaining populations are supported and will persist post the implementation of this OAMP. • The offset site will be established with key risks for all MNES species controlled (including domestic livestock and pest animal exclusion fencing) prior to implementing other management and monitoring activities. • Management actions will commence at the offset site prior to construction. • The results of monitoring programs assessing the success of this OAMP against key completion criteria will be provided to the DCCEEW as outlined in this OAMP. • Proposed methodologies and schedule for management actions and monitoring activities outlined in this OAMP have been peer-reviewed by a suitably qualified restoration ecologist. • This Plan incorporates feedback from peer-review and includes realistic and achievable completion criteria and timeframes.
8. Have transparent governance arrangements including being able to be readily measured, monitored, audited, and enforced	• Detail governance of the offset site, including ensuring that offset actions are fully funded for the required timeframe • Commitments to measure and monitor the performance of the offset, and report on this annually to the DAWE • As appropriate, be delivered through contractual arrangements with a third party • Ensure that offset commitments are measurable and specific so that they can be audited and enforced	• Implementation of the OAMP will be overseen by ACCIONA during the construction and operation of the Project. Funding of the offset, including management and monitoring, will occur as part of delivery of the Project. • Auditable performance and completion criteria are stated in this OAMP to assess overall offset success, monitoring and site maintenance actions and further actions are provided where trigger values are exceeded. • Corrective actions (activated by trigger criteria exceedances) are explicitly stated to address any inadequate outcomes.

14.0 Review and update of this OAMP

This OAMP follows an adaptive management approach and will be reviewed every five years following the preparation of the 5-yearly monitoring report and updated as required (see **Section 8.0**). The review will incorporate recommendations and changes identified through management actions and monitoring activities. In addition to this regular review process, the OAMP will also require a review under the following circumstances:

- When there is a substantial modification to the management, monitoring or corrective actions;
- When corrective triggers are exceeded from site inspections or corroborated anecdotal reports; or
- When/if there is a modification of best practice methods that could benefit the offset site.

When this document is updated, DCCEEW will be notified and the OAMP will be provided to the Minister for approval, as set out by Condition 8.

15.0 Suitably qualified ecologist (Condition 5)

As outlined in Condition 5, this OAMP was prepared by a suitably qualified ecologist in accordance with the following definition set out in the approval:

> *Suitably qualified ecologist means a person who has relevant professional qualifications and at least three (3) years of work experience writing and implementing management plans for improving the quality and condition of the habitat of EPBC Act listed threatened species and EPBC Act listed migratory bird or bat species and can give an authoritative assessment and advice on offset management to improve the quality and condition of the habitat of EPBC Act listed threatened species and EPBC Act listed migratory bird or bat species using relevant protocols, standards, methods and/or literature.*

This OAMP has been prepared by Jeromy Claridge. **Table** 15-1 sets out information on Jeromy's experience that demonstrates that his experience meets the requirements set out in this definition of suitably qualified ecologist.

Table 15-1 Suitably qualified ecologist experience

Requirement	Evidence
Relevant qualifications	Bachelor of Science (Honours Botany), University of Queensland 1996 Master of Environmental Management, University of Queensland 2007
At least 3 years of work experience	Worked as an environmental scientist since 1995 Certified Environmental Practitioner (CEnvP) #155 since 2006
Can give an authoritative assessment and advice on offset management to improve the quality and condition of the habitat of EPBC Act listed threatened species and EPBC Act listed migratory bird or bat species using relevant protocols, standards, methods and/or literature	Numerous offset strategies and management plans prepared and approved including: • West Mount Cotton Quarry Expansion EPBC Offset Management Plan 2021 • Australia Pacific LNG EPBC Offset Plan 2010 • Surat Basin Rail EIS Offset Strategy 2009

16.0 OAMP commitments to achieve ecological benefits (Condition 6b and 6i-vi)

This OAMP sets out several commitments that collectively contribute to achieving ecological benefits through the management of the offset site. **Table** 16-1 presents a summary of commitments presented in this OAMP.

Table 16-1 Summary of commitments presented in this OAMP

Environmental outcome	Commitment	Where the OAMP addresses this
Improve habitat quality scores for MNES	Achieve habitat quality scores within 20 years, with progress towards goals assessed every five years	Interim milestones set out in **Section 6.0**, with monitoring and reporting outlined in **Sections 8.0** and **Section 9.0**
Reduce risks of uncontrolled bushfire on habitat values for MNES	Monitor and control fuel loads, along with maintenance of fire breaks	Bushfire management commitments outlined in **Section 7.1**
Reduce potential impact of weeds on MNES habitat values	Undertake weed monitoring and management activities, along with weed hygiene practices	Weed management commitments outlined in **Section 7.2**
Reduce potential impact of pest fauna on MNES	Undertake pest management program for targeted pest species	Pest management commitments outlined in **Section 0**
Facilitate regeneration of vegetation communities through stock exclusion and management	Maintain fencing and exclude stock from sensitive areas, with grazing used selectively for management of fuel load	Stock exclusion commitments outlined in **Section 0**
Legally secure the offset site	Protect environmental values for the duration of the approval by registering a VDec within 12 months of approval of the OAMP.	Commitment to legally secure the offset site set out in **Section 12.0**

17.0 References

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Appendix A

MNES Species-specific Habitat Quality Scoring Methodologies

Koala scoring

The Koala is endemic to Australia. The species' range extends from north-eastern Queensland to the south-east corner of South Australia. The distribution of the koala and its habitat are influenced by altitude (generally limited to <800 m above sea level), temperature and, at the western and northern ends of the range, leaf moisture (Munks *et al.* 1996). In the semi-arid regions in the western and northern parts of the species' range, koala distribution and abundance are strongly influenced by the availability of water in soils from which food trees draw water. Given that average annual rainfall is considerably higher towards the coast, the density of the koala population is generally greater there than inland.

Koalas naturally inhabit a range of temperate, sub-tropical and tropical forest, woodland and semi-arid communities dominated by eucalyptus species (Martin & Handasyde 1999). Along the Great Dividing Range and the coastal belt throughout the species' range, koalas inhabit moist forests and woodlands mostly dominated by eucalyptus species. Koalas are habitat specialists and feed almost exclusively on eucalypt leaves which have low nutritional value and are high in indigestible or toxic materials. Therefore, they are selective about which tree species and leaves they consume. In general, soils with higher fertility and moisture holding capacity produce better quality, more palatable browse, which support koalas (Rhodes *et al.* 2015). The following list of known Koala Food Trees were used during the assessment and subsequent scoring for this species (derived from RE benchmarks provided by DCCEEW):

- *Angophora leiocarpa*
- *Angophora woodsiana*
- *Corymbia citriodora*
- *Corymbia clarksoniana*
- *Corymbia tessellaris*
- *Corymbia trachyphloia*
- *Eucalyptus albens*
- *Eucalyptus baileyana*
- *Eucalyptus blakelyi*
- *Eucalyptus caleyi*
- *Eucalyptus camaldulensis*
- *Eucalyptus chloroclada*
- *Eucalyptus crebra*
- *Eucalyptus dealbata*
- *Eucalyptus exserta*
- *Eucalyptus fibrosa*
- *Eucalyptus floribunda*
- *Eucalyptus intermedia*
- *Eucalyptus macrocarpa*
- *Eucalyptus melanophloia*
- *Eucalyptus melliodora*
- *Eucalyptus microcarpa*
- *Eucalyptus microcorys*
- *Eucalyptus moluccana*
- *Eucalyptus populnea*
- *Eucalyptus siderophloia*
- *Eucalyptus sideroxylon*
- *Eucalyptus tenuipes*
- *Eucalyptus tereticornis*
- *Eucalyptus terrica*
- *Lophostemon confertus*
- *Melaleuca bracteatacaylei*

A description of the species-specific habitat indicators for koala are presented below.

Koala Habitat Scoring Indicators

Habitat Indicator		Scoring
Quality and availability of food and foraging habitat		
Number of non-juvenile Koala habitat trees per ha	% of non-juvenile Koala habitat trees based on BioCondition benchmarks for the relevant RE into 3 classes.	1: < 25% of benchmark 5: 25-75% of benchmark 10: > 75% of benchmark
Richness of non-juvenile Koala habitat trees	The richness of non-juvenile Koala habitat tree species that can occur within a particular regional ecosystem as a % of those found in regional ecosystem technical descriptions.	1: < 25% of benchmark 5: 25-75% of benchmark 10: > 75% of benchmark
Moisture and nutrient content of leaves	Riparian areas, areas with alluvial or colluvial soils, or areas on lower slopes with moisture expression	1: Low 5: Medium 10: High
Number of juvenile koala habitat trees per ha	% of juvenile koala habitat trees based on the BioCondition benchmarks for the relevant REs (S1 & S2 layers) into 3 classes.	1: < 25% of benchmark 5: 25-75% of benchmark 10: > 75% of benchmark
Quality and availability of shelter		
Non-juvenile Koala habitat tree benchmark	% of non-juvenile Koala habitat trees based on BioCondition benchmarks for the relevant RE into 3 classes.	1: < 25% of benchmark 5: 25-75% of benchmark 10: > 75% of benchmark
Non-juvenile tree species with dense foliage per ha	Tree species with closed or dense canopies may provide shelter during extremes of weather (heat, heavy rain periods) based on BioCondition benchmarks for the relevant RE into 3 classes.	1: < 25% of benchmark 5: 25-75% of benchmark 10: > 75% of benchmark
Species mobility capacity		
Coarse woody debris	High abundance of coarse woody debris limiting site scale species mobility based on BioCondition benchmarks for the relevant RE into 4 classes.	1: >200% of benchmark 4: 150-200% of benchmark 7: 100-150% of benchmark 10: 100% of benchmark
Number of refuge trees	Presence / abundance of trees to provide refuge from predators (dogs) within the site based on BioCondition benchmarks for the relevant RE into 4 classes.	1: no large trees present 4: 1-25% of benchmark large trees 7: 25-50% of benchmark large trees 10: 51-100% of benchmark large trees
Non-native plant cover	Presence of high threat weeds that have potential to affect species mobility at the site scale include dense swards of large exotic pasture grasses, thicket forming woody weeds or presence of dominant weedy vines.	1: >50% cover of high threat exotic species 4: 25-50% cover of high threat exotic species 7: 5-25% cover of high threat exotic species 10: < 5% cover high threat exotic species

Habitat Indicator		Scoring
Role of site location to species overall population in the State		
		1: not or unlikely to be critical to species' survival 4: likely to be critical to species' survival 5: critical to species' survival
Threats to species		
		1: high threat level (i.e. likely to result in death, irreversible damage) 7: moderate threat level 15: low threat level (i.e. likely to survive)

Grey-headed Flying-fox scoring

The grey-headed flying-fox is Australia's only endemic flying-fox and occurs in the coastal belt from Rockhampton in central Queensland to Melbourne in Victoria (Tidemann 1998). However, only a small proportion of this range is used at any one time, as the species selectively forages where food is available. As a result, patterns of occurrence and relative abundance within its distribution vary widely between seasons and between years (DoEE 2019).

Grey-headed Flying-fox form two different roosting camps, summer camps and winter camps (Nelson 1965). Summer camps are used from September to April or June. In these camps, they establish territories, mate and reproduce (Nelson 1965). Winter camps are used from April to September. The sexes are separated in winter camps and most behaviour is characterised by mutual grooming (Nelson 1965). Summer camps are considered "main camps", while winter camps are referred to as "transit camps".

The grey-headed flying-fox requires foraging resources and roosting sites. It is a canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands. The primary food source is blossom from eucalyptus and related genera but in some areas, it also utilises a wide range of rainforest fruits (Eby 1998). None of the vegetation communities used by the grey-headed flying-fox produce continuous foraging resources throughout the year. As a result, the species has adopted complex migration traits in response to ephemeral and patchy food resources (Duncan *et al.* 1999; Eby 1996; Eby 1998; Nelson 1965; Parry-Jones & Augee 1992; Spencer *et al.* 1991 as referenced in DoEE 2019).

The Grey-headed Flying-fox roosts in aggregations of various sizes on exposed branches. Roost sites are typically located near water, such as lakes, rivers or the coast (van der Ree *et al.* 2005). Roost vegetation includes rainforest patches, stands of melaleuca, mangroves and riparian vegetation (Nelson 1965; Ratcliffe 1931), but colonies also use highly modified vegetation in urban and suburban areas (Birt *et al.* 1998; Tidemann & Vardon 1997; van der Ree *et al.* 2005). The species can maintain fidelity to roost sites for extended periods (Lunney & Moon 1997), although new sites have been colonised (DoEE 2019). Based on the National Flying-fox Monitoring Program (NFMP) the total population of grey-headed flying-fox was estimated to be 700,000 in 2018.

The following list of known Grey-headed Flying-fox habitat trees were used during the assessment and subsequent scoring for this species (derived from RE benchmarks provided by DCCEEW):

- *Acmena hemilampra*
- *Acmena ingens*
- *Acmena smithii*
- *Angophora floribunda*
- *Angophora leiocarpa*
- *Archontophoenix cunninghamiana*
- *Banksia integrifolia*
- *Banksia serrata*
- *Corymbia clarksoniana*
- *Corymbia citriodora*
- *Corymbia gummifera*
- *Corymbia intermedia*
- *Corymbia terminalis*
- *Corymbia tessellaris*
- *Corymbia trachyphloia*
- *Ehretia acuminata*
- *Elaeocarpus obovatus*
- *Eucalyptus acmenoides*
- *Eucalyptus albens*
- *Eucalyptus amplifolia*
- *Eucalyptus andrewsii*
- *Eucalyptus bancroftii*
- *Eucalyptus camaldulensis*
- *Eucalyptus campanulata*
- *Eucalyptus crebra*
- *Eucalyptus deanei*
- *Eucalyptus fibrosa*
- *Eucalyptus longirostrata*
- *Eucalyptus major*
- *Eucalyptus mckieana*
- *Eucalyptus melanophloia*
- *Eucalyptus melliodora*
- *Eucalyptus moluccana*

- *Eucalyptus pilularis*
- *Eucalyptus propinqua*
- *Eucalyptus resinifera*
- *Eucalyptus saligna*
- *Eucalyptus siderophloia*
- *Eucalyptus sideroxylon*
- *Eucalyptus tereticornis*
- *Ficus coronata*
- *Grevillia robusta*
- *Livistona australis*
- *Lophostemon confertus*
- *Maclura cochinchinensis*
- *Mallotus discolor*
- *Melia azedarach*
- *Melodinus australis*
- *Pennantia cumminghamii*
- *Polyosma cunninghamii*
- *Rhodamnia argentea*
- *Sambucus australasica*
- *Schizomeria ovata*
- *Syncarpia glomulifera*
- *Syzygium austral*
- *Syzygium corynanthum*
- *Syzygium crebrinerve*

A description of the species-specific habitat indicators for Grey-headed Flying-fox are presented below.

Grey-headed Flying-fox Habitat Quality Attributes Scoring

Habitat Indicator		Scoring
Quality and availability of food and foraging habitat		
Availability of Food Trees Presence of food species within the site, as defined in Eby and Law (2008) Benchmarked against the technical description for the relevant RE (species and cover %).	Density per hectare Blossom diet species: forage species from *Eucalyptus*, *Corymbia* or *Angophora* genus. Fruit diet species.	1: < 25% of potential density 5: 25-75% of potential density 10: > 75% of potential density
Availability of High Yield of Food Trees Habitat weighted productivity x reliability score (Wt P*r score) indicates the yield of food tree species based on a measure of productivity and reliability (Eby & Law 2008). Benchmarked against the technical description for the relevant RE (species and cover %).	Density per hectare Density of species with a high (>0.65) Wt p*r score	1: < 25% of potential density 5: 25-75% of potential density 10: > 75% of potential density
Richness of Feed Species Blossom or fruit diet tree species reflecting potential richness for the relevant RE based on the technical description for that RE.	Blossom diet species: forage species from *Eucalyptus*, *Corymbia* or *Angophora* genus. Fruit diet species.	1: < 25% of potential density 5: 25-75% of potential density 10: > 75% of potential density

Habitat Indicator		Scoring
Quality and availability of shelter		
NA	Not scored	This attribute was not scored because there are no known camps within the project area (the nearest recorded camp is approximately 35km to the northeast) and because the capacity of a site to provide resources during important breeding and food shortage periods is dealt with by meeting richness benchmarks outlined above in quality and availability of food and habitat required for foraging.
Species mobility capacity		
Proximity to nationally important camps Reducing the distance the species has to travel to forage	Distance in km Distance from nationally important flying-fox camps to mid-point of assessment unit.	1: > 50km 4: 30-50km 7: 20-30km 10: < 20km
Presence of large-scale objects preventing dispersal Physical structures that prevent dispersal or access to the assessment unit or site	Presence or absence of structures Scored on the basis of presence or absence of structures that prevent access	1: structures present 10: structures not present
Role of site location to species overall population in the State		
		1: not or unlikely to be critical to species' survival 4: likely to be critical to species' survival 5: critical to species' survival
Threats to species		
		1: high threat level (i.e. likely to result in death, irreversible damage) 7: moderate threat level 15: low threat level (i.e. likely to survive)

Regent Honeyeater Scoring

The regent honeyeater is listed as Critically Endangered under the *Environment Protection and Biodiversity Conservation Act 1999* and the *Nature Conservation Act 1992*, having undergone more than 80% population decline within three generations (Garnett *et al.* 2011).

The regent honeyeater is identified by its black head, neck and upper breast, with its yellow back and lower breast scaled black, and underparts grading into a white rump. The wings have conspicuous yellow patches, and a black tail, edged yellow. The male of the species has yellowish warty bare skin around the eye and the female is generally smaller, with a bare yellowish patch under the eye and less black on the throat (Pizzey 1981; Menkhorst 1993).

The regent honeyeater is endemic to south-eastern Australia. It has a patchy distribution which extends from 100 km north of Brisbane, through NSW and the ACT, to central Victoria. Records are widely distributed across its range, but it is only found regularly at a few localities in NSW and Victoria where most recent sightings are now recorded (Menkhorst *et al.* 2017).

The species is considered partially migratory or dispersive post the breeding season with evidence of movement into southern Queensland and northern NSW in early autumn (Franklin *et al.* 1989). It is thought these birds are moving out of cooler climates in search of nectar supplies (Franklin *et al.* 1989, Pizzey & Knight 2012).

Regent Honeyeater populations have undergone significant declines in recent decades with a decline of 80% over a period of approximately 24 years prior to 2011. As of 2011, the entire population of mature individuals was estimated to be a maximum of 400 birds. Subsequent surveys suggest the species population is continuing to decline (Garnett *et al.* 2011). The decline of the regent honeyeater population appears to be primarily due to habitat loss, fragmentation and general degradation (Garnett *et al.* 2011). The species relies on several different foraging resources and is particularly susceptible to the removal of large mature trees which offer reliable sources of nectar required for successful reproduction (Franklin *et al.* 1989; Oliver 2000).

Regent Honeyeaters occur mainly in dry box-ironbark eucalypt woodland and sclerophyll forest, but also inhabit riparian vegetation and lowland coastal forest areas (DoE 2016) inland of the Great Dividing Range, particularly favouring those on the wettest, most fertile soils, such as along creek flats and broad river valleys. Other forest types regularly utilised by regent honeyeaters include wet lowland coastal forest dominated by swamp mahogany (*Eucalyptus robusta*), spotted gum-ironbark associations and riverine woodlands (Menkhorst 1997; Geering & French 1998; Oliver *et al.*, 1998; Oliver *et al.*, 1999). Habitat adjacent to box-ironbark woodland (Geering & French 1989; Oliver *et al.* 1998; Oliver *et al.*, 1999) and within 150m of a water source are also preferred (Crates 2019). Remnant stands of timber, roadside reserves, travelling stock routes and street trees also provide important habitat at certain times (Franklin *et al.* 1987; Franklin *et al.* 1989; Ley & Williams 1992; Webster & Menkhorst 1992; Oliver 1998).

The regent honeyeater requires high volumes of nectar, particularly during the breeding season. It is primarily nectivorous but will feed on other resources such as fruit, lerps (psyllids) and arthropods (Franklin & Robinson 1989). Notably important tree species across its geographical range consists of *Eucalyptus sideroxylon*, *E. melliodora*, *E. albens*, and *E. robusta*, with a lesser reliance on *E. eugenioides* and *E. fibrosa*. The species is also known to exploit the fruit and nectar from multiple species of mistletoe – particularly those within the genus of *Amyema*, and search stands of *Allocasuarina* for arthropods (Franklin & Robinson 1989).

Studies undertaken across 92 sites found the percentage of canopy cover, the density of mistletoe, the density of riparian tree species and a lower density of shrubs over 2m were also positively correlated with the presence of regent honeyeater (Oliver *et al.* 1999).

The regent honeyeater is a generalist forager, although it feeds mainly on the nectar from a relatively small number of eucalypts, preferably taller and larger diameter trees as these typically produce more nectar (Franklin & Robinson 1989; Webster & Menkhorst 1992; Menkhorst *et al.* 1999; Oliver 2000). Key eucalypt species include mugga ironbark, yellow box, white box and swamp mahogany. Other tree species may be regionally important.

Key tree and mistletoe species associations for the regent honeyeater include:

- *Eucalyptus sideroxylon*
- *Eucalyptus blakelyi*
- *Eucalyptus fibrosa*
- *Amyema cambagei*
- *Amyema pendula*
- *Eucalyptus eugenioides*
- *Eucalyptus microcarpa*
- *Eucalyptus leucoxylon*
- *Casuarina cunninghamiana*
- *Amyema miquelii*
- *Eucalyptus melliodora*
- *Eucalyptus albens*
- *Corymbia citriodora*
- *Amyema miquelii*
- *Dendrophthoe vitellina*

When nectar is scarce, lerp and honeydew can comprise a large proportion of the diet. Insects make up about 15% of the total diet and are important components of the diet of nestlings (Geering & French 1998). Particularly when breeding, this includes gum exudate from stems of Eucalyptus and Banksia species, bees, ants and spiders, insects including Hemiptera, Psyllidae, Coleoptera, Carabidae, Scarabaeidae, Elateridae, Bostrychidae, Coccinellidae Chrysomelidae, Apionidae, Diptera, Lepidoptera, Hymenoptera, Tenthredinidae, Chalcid idae, Formicidae, Arachnida and Araneae (Barker & Vestjens 1984; BirdLife International 2018).

In Queensland, the regent honeyeater has been primarily recorded from the south-east corner, south of a line between Chinchilla and the Sunshine Coast. There are records from several State Forests, including breeding activity in suitable habitat, particularly in the Warwick-Stanthorpe districts (Hines 2008).

The species breeds between July and January in box-ironbark and other temperate woodlands and riparian gallery forest dominated by river sheoak. Regent Honeyeaters usually nest in horizontal branches or forks in tall (>8m) mature eucalypts and sheoaks but also nest in mistletoe haustoria. Within its current distribution there are four known key breeding areas where the species is regularly recorded. These are the Bundarra-Barraba, Capertee Valley and Hunter Valley districts in New South Wales, and the Chiltern area in north-east Victoria. Breeding has also been regularly recorded in the Cement Mills-Durikai area west of Warwick, Queensland and in the Australian Capital Territory (DoE 2016).

Breeding territories contain a nest-tree and surrounding feeding areas can extend 5-40m or more from the nest-tree (Higgins *et al.* 2001). Nests are usually established in the canopy of mature trees with rough bark including ironbark, sheoaks (*Casuarina*) and rough-barked apple (*Angophora*). Nests can be up to 700m from a resource tree (Geering & French 1998) and distances between nests can range from 40-110m depending on location and habitat (Higgins *et al.* 2001). Nests position in upright forks between 4-25m above ground at extremity of branches (Oliver *et al.* 1998).

The major cause for the decline in the regent honeyeater population has been the clearing and fragmentation of woodland and forest containing the bird's preferred eucalypt species. Whilst clearing directly reduces the amount of available habitat, it can also make remaining remnants unsuitable as they become too small, isolated, or degraded and increase competition with large, aggressive nectivorous species including noisy miners *Manorina melanocephala*, noisy friarbird *Philemon corniculatus,* and red wattlebird *Anthochaera carunculata*. Nest predation by multiple arboreal marsupial and bird species is a significant threat to the species' ability to recruit (DoE 2016). The primary threats to the regent honeyeater are highly interactive and relate to the species' small population size, habitat loss and fragmentation, competition, and degradation of remnant habitat.

The species habitat assessment indicators (see table below) for the regent honeyeater have been determined through the use of information contained within the Species National Recovery Plan (DoE 2016) and scientific investigations into the species habitat and behaviours (as referenced throughout).

Regent Honeyeater Habitat Quality Attributes Scoring

Habitat Indicator		Scoring
Quality and availability of food and foraging habitat		
Availability of Food Trees	% Canopy Cover High Quality Habitat for the Regent Honeyeater consists of old growth >50-70% vegetation (Nature Advisory, 2020) that has been identified as habitat for this species. This old growth vegetation, in addition to the mistletoe that can be found within it, provide food resources for the Regent Honeyeater. The emergent, T1 and T2 canopies of the following key food species will be used to calculate this attribute: • Mugga (or red) ironbark (*E. sideroxylon).* • Thin-leaved stringybark (*E. eugenioides*). • Yellow box (*E. melliodora*). • Blakely's red gum *E. blakelyi.* • Grey box (*E. microcarpa*). • Narrowleaf ironbark (*E. crebra*). • Broad-leaved ironbark (*E. fibrosa*). • White box (*E. albens*). • Yellow gum (*E. leucoxylon*). • Swamp mahogany (*E. robusta*). • Spotted gum (*Corymbia maculata*); and • River sheoak (*Casuarina cunninghamiana*).	1: < 10% old growth 5: 10-50% old growth 10: > 50% old growth
Quality and availability of shelter		
Availability of nesting trees	% Canopy Cover Regent Honeyeater nests are established in the canopy of mature rough-barked trees and in smaller trees with dense crown covers. A list of suitable nesting trees was generated from the list of available habitat trees discussed above, with a preference for rough bark and dense canopy covers, which includes: • Ironbark (Eucalyptus sideroxylon); • Broad-leaved ironbark (E. fibrosa) ; • Swamp mahogany (E. robusta) ; • River sheoak (*Casuarina cunninghamiana*); and • Rough-barked apple (Angophora).	1: 0 mature rough-barked trees 5: 10-50 mature rough-barked trees 10: > 50 mature rough-barked trees
Species mobility capacity		
The availability of linear habitat patches	Oliver and Lollback (2010) found higher presence of Regent Honeyeater habitat closer to the edge of linear high-quality, well-connected remnants, with a low proportion of woodland habitat within a 1-2 km radius. The ratio used to score this attribute follows that of McGarigal (2017) landscape metric 'Shape Index' whereby linearity of the patch is quantified by perimeter-area ratios compared to a standardised shape to account for size dependency: $Shape\ Index = p\sqrt{a_2}$ When Shape Index = 1, patch is circular and increasing values represent increasing linearity	1: Shape Index of 1 - 0.66 5: Shape Index of 0.66 – 0.33 10: Shape Index of 0.33 - 0 Oliver and Lollback (2010)

Habitat Indicator		Scoring
Role of site location to species overall population in the State		
		1: not or unlikely to be critical to species' survival 4: likely to be critical to species' survival 5: critical to species' survival
Threats to species		
		1: high threat level (i.e. likely to result in death, irreversible damage) 7: moderate threat level 15: low threat level (i.e. likely to survive)

Central Greater Glider Scoring

The greater glider is listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* and the *Nature Conservation Act 1992*.

The greater glider is an arboreal nocturnal marsupial, largely restricted to old-growth, contiguous open eucalypt forests and woodlands along the Great Dividing Range with patchy distribution from north-eastern Queensland to south-eastern and central Victoria, across an elevational range from sea level to 1200m above sea level (Kavanagh 2000; Smith & Smith 2018). The species is primarily folivorous, with a diet mostly comprising eucalypt leaves, and occasionally flowers (van der Ree *et al.* 2004). It is typically found in highest abundance in taller, mature, moist eucalypt forests and woodlands with relatively large trees, excluding non-remnant (regrowth) and rainforest habitats (Kavanagh 2000; Eyre *et al.* 2018; van der Ree *et al.* 2004; Vanderduys *et al.* 2012; Van Dyck & Strahan 2008).

The greater glider favours forests with a diversity of eucalypt species, due to seasonal variation in its preferred tree species, and large hollow-bearing trees are a key habitat feature required within its home range of 1-4 ha to maintain high density populations (Kavanagh 1984, 2000; Eyre 2006; Lindenmayer *et al.* 2004; McLean *et al.* 2015). In Queensland, greater gliders preference of habitat is dry, mixed eucalypt forest and woodlands dominated by a variety of hollow-bearing ironbark and smooth bark tree species (Cohen 2019). They feed on the young leaves of eucalypts, and shelter in large hollow branches (TSSC 2016).

Notwithstanding relatively small home ranges, but in part because of low dispersal ability, greater gilders may be sensitive to fragmentation (Eyre 2006; Lindenmayer & McCarthy 2006; Lindenmayer *et al.* 2000; Taylor & Goldingay 2009), have relatively low persistence in small forest fragments, and disperse poorly across vegetation that is not native forest. Modelling suggests that they require native forest patches of at least 160 km^2 to maintain viable greater glider populations (Eyre 2002). Kavanagh and Webb (1998) found no significant movement of greater gliders into unlogged reserves from surrounding logged areas.

The following list of known Greater Glider habitat trees were used during the assessment and subsequent scoring for this species (derived from RE benchmarks provided by DCCEEW):

- *Acacia floribunda*
- *Acacia leiocarpa*
- *Corymbia citriodora*
- *Corymbia clarksoniana*
- *Corymbia intermedia*
- *Corymbia tessellaris*
- *Eucalyptus albens*
- *Eucalyptus andrewsii*
- *Eucalyptus camaldulensis*
- *Eucalyptus crebra*
- *Eucalyptus fibrosa*
- *Eucalyptus melanophloia*
- *Eucalyptus melliodora*
- *Eucalyptus moluccana*
- *Eucalyptus punctata*
- *Eucalyptus sideroxylon*
- *Eucalyptus tereticornis*

The species habitat assessment indicators (see table below) for the greater glider have been determined using information contained within the Approved Conservation Advice for Greater Glider (*Petauroides volans*) via The Action Plan for Australian Mammals 2012 (TSSC 2016; Woinarski *et al.* 2014), and scientific investigations into the species habitat and behaviours (as referenced throughout).

Central Greater Glider Habitat Quality Attributes Scoring

Habitat Indicator		Scoring
Quality and availability of food and foraging habitat		
Availability of Food Trees Presence of food species within the site, as defined by Eyre (2002), benchmarked against the description for the relevant RE (species and cover %).	% Canopy Cover Species has a specified folivorous diet and prefers foraging from larger *Myrtaceous* tree species. The combined % canopy cover of the known habitat trees discussed above was calculated to assess this attribute.	1: <10% of potential tree canopy cover 5: 10-50% of potential tree canopy cover 10: >50% of potential tree canopy cover
Richness of greater glider habitat trees	The richness of greater glider habitat tree species that can occur within a particular regional ecosystem as a % of those found in regional ecosystem technical descriptions. The richness was calculated against the list of known habitat trees for this species above.	1: < 25% of benchmark 5: 25-75% of benchmark 10: >75% of benchmark
Site Fertility/ Productivity Increased site productivity leads to an increase in resource availability and vigour of eucalypts, providing greater and extended foraging opportunities for the species (Eyre 2006).	Vegetation community indicative of high site fertility / moisture	1: Low 5: Medium 10: High
Quality and availability of shelter		
Number of large eucalypt trees Include reference to describe frequency of hollows in mature trees**	Number of mature trees within suitable regional ecosystems (i.e., RE 13.11.6, 13.11.5, 13.11.8) as a % of benchmark	1: <25% of benchmark large trees 5: 25-75% of benchmark large trees 10: >75% of benchmark large trees
Availability of food trees Greater Gliders shelter within close proximity to preferred food trees	% Canopy Cover Species has a specified folivorous diet and prefers foraging from larger *Myrtaceous* tree species. The combined % canopy cover of the known habitat trees discussed above was calculated to assess this attribute.	1: <10% of potential tree canopy cover 5: 10-50% of potential tree canopy cover 10: >50% of potential tree canopy cover
Species mobility capacity		
Number of mature trees	Large mature trees (30-70cm DBH) are preferred and required for arboreal species for mobility, movement, and gliding (Smith *et al.* 2007)	1: <25% of benchmark large trees 4: 25-50% of benchmark large trees 7: 51-75% of benchmark large trees 10: >75% of benchmark large trees
Role of site location to species overall population in the State		
		1: Not or unlikely to be critical to species' survival 4: Likely to be critical to species' survival 5: Critical to species' survival

Habitat Indicator		Scoring
Threats to species		
		1: High threat level (results in loss of large hollow-bearing trees, irreversible damage) 7: Moderate threat level (Evidence of infrequent, low intensity fire) 15: Low threat level (No evidence of fire)

Squatter Pigeon (southern)

The squatter pigeon (southern) (*Geophaps scripta scripta*) is listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and *Nature Conservation Act 1992* (NC Act). The subspecies occurs throughout remnant and regrowth open-forest to sparse open-woodlands and scrub dominated by *Eucalyptus*, *Corymbia*, *Acacia* or *Callitris* species with patchy, tussock-grassy understorey (Higgins & Davies 1996; TSSC 2015). Its current distribution extends from central Queensland, west to Longreach and Charleville, east to the coast between Port Curtis and Proserpine, and south to New South Wales north of 29° S (Cooper *et al.* 2014). The squatter pigeon (southern) was once common and widespread nationally, however, at present is pervasive in the north-east and north of the QLD state border with rare occurrences in NSW (Higgins & Davies 1996). Populations known to occur in the Warwick-Inglewood-Texas region (including the local population) are important populations for the species under the EPBC Act, given they occur near the southern extent of the species range in an area within which the species has experienced substantial declines (Squatter Pigeon Workshop 2011).

Squatter Pigeons are not dependent on remnant vegetation communities and often favour thinned habitats where grazing cattle create favourable open patches of ground for foraging, and some introduced pastures (*Urochloa mosambicensis* and *Stylosanthes spp.*) also provide a valuable food source for the species (Crome 1976). Although less common where Buffel Grass (*Cenchrus ciliaris*) dominates the grass cover (Reis 2012). Disturbed areas where the sub-species has been recorded foraging include cattle yards, road and railway easements, and sown pastures with scattered trees (Squatter Pigeon Workshop 2011). Soil type is often a useful indication of their foraging and breeding habitat of which is generally restricted to well-draining, gravelly, sandy, or loamy soils (land zones 5 and 7, and Land Zone 3 when imbedded in Land Zone 5 and/or 7) (Squatter Pigeon Workshop 2011). These typically support a patchy ground layer composed of native perennial tussock grasses or a mix of native perennial tussock grasses and low shrubs or forbs (DoEE 2019b; Squatter Pigeon Workshop 2011). The ground-dwelling subspecies forages on a wide range of seeds from grasses, legumes, herbs, and shrubs, as well as insects with diet varying seasonally depending on food availability (Higgins & Davies 1996). Breeding habitats are typically on stony rises within 1 km of a suitable, permanent waterbody (dams and/or standing water), and nests are usually shallow depressions in the ground, sometimes among, or sheltered by vegetation, including short, dry grass, grass tussocks or bushes (Frith 1982; Squatter Pigeon Workshop 2011).

The subspecies is unlikely to move far from woodland trees which provide protection from predatory birds (Squatter Pigeon Workshop 2011). Where scattered trees still occur, and the distance of cleared land between remnant trees or patches of habitat does not exceed 100 m, individuals may be found foraging in, or moving across modified or degraded environments (Squatter Pigeon Workshop 2011).

The habitat assessment indicators (see table below) for the squatter pigeon (southern) have been determined through the use of information contained within the Conservation Advice (TSSC 2015) and scientific literature of the species behavioural ecology (as referenced throughout).

Squatter Pigeon (southern) Habitat Quality Attributes Scoring

Habitat Indicator		Scoring
Quality and availability of food and foraging habitat		
Availability of suitable habitat	% Canopy Cover Preferred habitat: regrowth and remnant dry open forests, woodlands and scrub dominated by *Eucalyptus*, *Corymbia*, *Acacia* or *Callitris* species. Calculated by combining the canopy covers of the E, T1, T2 and T3 canopy layers.	1: <10% or >75% tree canopy cover 5: 10-30% or >50-75% tree canopy cover 10: 30-50% tree canopy cover
Availability of suitable foraging habitat	Projected ground-level cover A patchy, ground-level vegetation cover including native tussock grasses not exceeding 33% total ground area is important for suitable foraging habitat (Squatter Pigeon Workshop 2011)	1: >50% ground cover 5: 33-50% ground cover 10: No more than 33% ground cover
Non-native plant cover	Non-native plant cover Invasive plant species outcompete the species' preferred native food plants (TSSC 2015)	1: >5% non-native plant cover 5: 1-5% non-native plant cover 10: <1% non-native plant cover
Quality and availability of shelter		
Tree canopy height	Nocturnal roost tree height Squatter Pigeon roost overnight in low trees (TSSC 2015).	1: Ecologically Dominant Layer (EDL) < 50% of benchmark 5: EDL 50-80% of benchmark 10: EDL > 80% of benchmark
Availability of suitable foraging habitat	Projected ground-level cover A patchy, ground-level vegetation cover including native tussock grasses not exceeding 33% total ground area is important for suitable breeding habitat (Squatter Pigeon Workshop 2011)	1: >50% ground cover 5: 33-50% ground cover 10: No more than 33% ground cover
Species mobility capacity		
Ease of movement for foraging and nesting	Extent of understorey vegetation thickening Thick and high density of understorey and ground-level vegetation cover represents unpreferred habitat	1: Severely restricted (>75% shrub, T2, T3 and low T1 cover) 4: Highly restricted (>50-75% shrub, T2, T3 and low T1 cover) 7: Moderately restricted (25-50% shrub, T2, T3 and low T1 cover) 10: Minor restriction (<25% shrub, T2, T3 and low T1 cover)
Role of site location to species overall population in the State		
		1: Not or unlikely to be critical to species' survival 4: Likely to be critical to species' survival 5: Critical to species' survival

Habitat Indicator		Scoring
Threats to species		
		1: High threat level (results in loss of large hollow-bearing trees, irreversible damage) 7: Moderate threat level (Evidence of infrequent, low intensity fire) 15: Low threat level (No evidence of fire)

Appendix B

Baseline MNES Scoring Spreadsheets

IMPACT - Greater Glider

156.65

Assessment Unit - Regional Ecosystem	AU1_MIWF_13.11.3_Remnant									AU2_MIWF_13.11.5_Remnant									AU3_MIWF_13.11.6_Remnant								
Site Reference	Benchmark	BC58_MIWF			BC82A_MIWF			Average Score	Maximum Score	Benchmark	BC37_MIWF			BC36_MIWF			Average Score	Maximum Score	Benchma	BC81_MIWF			BC82_MIWF			B
Site Condition	13.11.3	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score			13.11.5	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score			13.11.6	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data
Large trees (euc plus non-euc)	20	6	30	5	2	10	5	5	15	51	52	102	15	9	18	5	10	15	43	11	26	5	10	23	5	12
Tree canopy height (average of emergent, canopy, sub-canopy)	11	12	107	5	12	111	5	5	5	16	16	97	5	14	88	5	5	5	15	20	134	5	14	90	5	14
Recruitment of woody perennial species in EDL	100	100	100	5	100	100	5	5	5	100	100	100	5	100	100	5	5	5	100	100	100	5	100	100	5	100
Tree canopy cover (average of emergent, canopy, sub-canopy)	31.5	28	89	5	29	93	5	5	5	27	21	77	5	31	114	5	5	5	33.5	44	133	5	37	110	5	51
Shrub canopy cover	23	1	3	0	14	59	5	2.5	5	18	3	19	3	3	16	3	3	5	9	0	0	0	0	0	0	3
Coarse woody debris	1024	205	20	2	330	32	2	2	5	947	1835	194	5	2210	233	2	3.5	5	1292	201	16	2	630	49	2	1210
Native plant species richness - trees	4	5	125	5	4	100	5	5	5	5	5	100	5	7	140	5	5	5	3	6	200	5	3	100	5	6
Native plant species richness - shrubs	8	8	100	5	9	113	5	5	5	8	5	63	2.5	4	50	2.5	2.5	5	7	7	100	5	2	29	2.5	10
Native plant species richness - grasses	6	10	167	5	8	133	5	5	5	7	3	43	2.5	5	71	2.5	2.5	5	7	15	214	5	4	57	2.5	5
Native plant species richness - forbes	11	16	145	5	9	82	2.5	3.75	5	11	9	82	2.5	9	82	2.5	2.5	5	20	24	120	5	3	15	0	7
Non-native plant cover	0	0.0001	100	10	0.001	100	10	10	10	0	0.001	100	10	0.0001	100	10	10	10	0	0	100	10	0.001	100	10	0.001
Native grass cover	11	17	155	5	16	149	5	5	5	7	7	97	5	3	46	1	3	5	2	6	280	5	0	20	1	1
Organic litter	55	58	105	5	62	113	5	5	5	64	66	103	5	78	122	5	5	5	89	84	94	5	94	105	5	90
Quality and availability of food and foraging habitat				10			5	7.5	10				10			10	10	10				5			5	
Quality and availability of shelter habitat				10			5	7.5	10				10			5	7.5	10				10			5	
MAX Site Condition Score									*100*									*100*								
Score for sampling site				82.0			74.5						90.5			68.5						77.0			58.0	
Score for assessment unit								*78.3*									*79.5*									
Score for the site																										
(converted to) **Site Condition Score - out of 3**								**2.35**									**2.39**									
Site Context																										
Size of patch	**10**			10			10	10	10	**10**			10			10	10	10	**10**			10			10	
Connectedness	**5**			4			5	4.5	5	**5**			4			5	4.5	5	**5**			5			5	
Context	**5**			4			5	4.5	5	**5**			4			5	4.5	5	**5**			5			5	
Ecological Corridors	**6**			4			6	5	6	**6**			4			6	5	6	**6**			6			6	
Role of site location to species overall population in the state	**5**			5			5	5	5	**5**			5			5	5	5	**5**			5			5	
Threats to the species	**15**			7			7	7	15	**15**			7			7	7	15	**15**			7			7	
Species mobility capacity	**10**			d			1	1	10	**10**			10			1	5.5	10	**10**			4			1	
MAX Site Context Score									*56*									*56*								
Score for sampling site				34.0			39.0						44.0			39.0						42.0			39.0	
Score for assessment unit								*37.0*									*41.5*									
Score for the site																										
(converted to) **Site Context Score - out of 3**								**1.98**									**2.22**									

Species Stocking Rate (SSR)	Scoring Table AU1					Score assigned
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	Score	0	5	10		10
		No	Yes - adjacent	Yes - on-site		
Species usage of the site (habitat type & evidenced usage)	Score	0	5	10	15	10
		Not habitat	Dispersal	Foraging	Breeding	
Approximate density (per ha)	Score	0	10	20	30	n/a
		0%				
Role/importance of species population on site*	Score	0	5	10	15	10
	(*Total*	0	5 - 15	20 - 35	40 - 45	
					Total SRR score - out of 40	30
					(converted to) **Total SRR score - out of 4**	3.00

	Scoring Table AU2					Score assigned
10	Score	0	5	10		10
		No	Yes - adjacent	Yes - on-site		
	Score	0	5	10	15	10
		Not habitat	Dispersal	Foraging	Breeding	
	Score	0	10	20	30	n/a
		0%				
	Score	0	5	10	15	10
	(*Total*	0	5 - 15	20 - 35	40 - 45	
					Total SRR score - out of 70	30
					(converted to) **Total SRR score - out of 4**	3.00

	Scoring Table AU3					Score assigned
	Score	0	5	10		10
		No	Yes - adjacent	Yes - on-site		
	Score	0	5	10	15	10
		Not habitat	Dispersal	Foraging	Breeding	
	Score	0	10	20	30	n/a
		0%				
	Score	0	5	10	15	10
	(*Total*	0	5 - 15	20 - 35	40 - 45	
					Total SRR score - out of 70	30
					(converted to) **Total SRR score - out of 4**	3.00

	Score	0		
		No		
	Score	0		
		Not habitat		
	Score	0		
		0%		
	Score	0		
	(*Total*	0		

***SSR Supplementary Table**	Scoring table			Score assigned
*Key source population for breeding	Score	0	10	10
		No	Yes/ Possibly	
*Key source population for dispersal	Score	0	5	10
		No	Yes/ Possibly	
*Necessary for maintaining genetic diversity	Score	0	15	n/a
		No	Yes/ Possibly	
*Near the limit of the species range	Score	0	15	0
		No	Yes	
	Total for SSR Supplementary Table			**20**

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	10
	No	Yes/ Possibly	
Score	0	15	n/a
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
Total for SSR Supplementary Table			**20**

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	10
	No	Yes/ Possibly	
Score	0	15	n/a
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
Total for SSR Supplementary Table			**20**

Scoring ta			
Score	0		
	No		
Score	0		
	No		
Score	0		
	No		
Score	0		
	No		
otal for SSR Supplem			

Final habitat quality score (weighted)	**AU1**	**AU2**	**AU3**	**AU4**	**Average/Final**
Site Condition score (out of 3)	2.35	2.39	2.15	2.36	
Site Context Score (out of 3)	1.98	2.22	2.17	2.04	
Species Stocking Rate Score (out of 4)	3.00	3.00	3.00	3.00	
Habitat Quality score - out of 10	**7.33**	**7.61**	**7.32**	**7.39**	**7.41**
Assessment Unit Area	64.85	13	66.15	12.65	
Total Impact Area (ha) for MNES	156.65	156.65	156.65	156.65	
Size weighting	0.41	0.08	0.42	0.08	
Weighted Habitat Quality	**3.03**	**0.63**	**3.09**	**0.60**	**7.35**

							AU4_MIWF_13.11.8_Remnant						Total
C82B_MIWF		BC227_MIWF			Average	Maximum	Benchm	BC60_MIWF			Average	Maximum	Averag
% Benchmar	Score	Raw Data	% Benchmar	Score	Score	Score	13.11.8	Raw Data	% Benchma	Score	Score	Score	e Score
28	5	7	16	5	5	15	34	16	47	5	5	15	6.25
90	5	11	73	5	5	5	12.5	15	120	5	5	5	5.00
100	5	100	100	5	5	5	100	100	100	5	5	5	5.00
153	5	40	119	5	5	5	29.5	36	123	5	5	5	5.00
30	3	6	66	5	2	5	22	2	11	3	3	5	2.63
94	5	1340	104	5	3.5	5	568	75	13	2	2	5	2.75
200	5	4	133	5	5	5	5	7	140	5	5	5	5.00
143	5	11	157	5	4.375	5	6	4	67	2.5	2.5	5	3.59
71	2.5	3	43	2.5	3.125	5	6	11	183	5	5	5	3.91
35	2.5	8	40	2.5	2.5	5	12	13	108	5	5	5	3.44
100	10	0.0001	100	10	10	10	0	0.01	100	10	10	10	10.00
70	3	0	20	1	2.5	5	21	10	49	1	1	5	2.88
101	5	96	107	5	5	5	60	65	109	5	5	5	5.00
	10			5	6.25	10				10	10	10	8.44
	10			5	7.5	10				10	10	10	8.13
						100						*100*	
	81.0			71.0						78.5			
					71.8						*78.5*		
													9.6
					2.15						**2.36**		**3.2**
	10			10	10	10	**10**			10	10	10	10.00
	5			5	5	5	**5**			4	4	5	4.50
	5			5	5	5	**5**			4	4	5	4.50
	6			6	6	6	**6**			4	4	6	5.00
	5			5	5	5	**5**			5	5	5	5.00
	7			7	7	15	**15**			7	7	15	7.00
	4			1	2.5	10	**10**			4	4	10	3.25
						56						*56*	
	42.0			39.0						38.0			
					40.5						*38.0*		
													4.9
					2.17						**2.04**		

Scoring Table AU4				Score assigned
5		10		10
Yes - adjacent		Yes - on-site		
5	10	15		10
Dispersal	Foragin g	Breeding		
10	20	30		n/a
5	10		15	10
5 - 15	20 - 35		40 - 45	
Total SRR score - out of 70				30
(converted to) **Total SRR score - out of 4**				3.00

ble	Score assigne d
10	
Yes/ Possibly	10
5	
Yes/ Possibly	10
15	
Yes/ Possibly	n/a
15	
Yes	0
entary Table	**20**

IMPACT - Grey-headed Flying-fox
498.11

Assessment Unit - Regional Ecosystem	AU1_MIWF_13.11.3_Remnant																	
Site Reference	Benchmark	BC82A_MIWF			BC86_MIWF			BC83_MIWF			BC91_MIWF			BC93_MIWF			Average Score	Maximum Score
Site Condition	**13.11.3**	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data	% Benchm	Score		
Large trees (euc plus non-euc)	20	2	10	5	4	20	5	1	5	5	0	0	0	18	90	10	5	15
Tree canopy height (average of emergent, canopy, sub-cano	11	12	111	5	11	99	5	8	73	5	9	84	5	11	101	5	5	5
Recruitment of woody perennial species in EDL	100	100	100	5	100	100	5	66	66	3	67	67	3	100	100	5	4.6	5
Tree canopy cover (average of emergent, canopy, sub-canop	31.5	29	93	5	20	62	5	34	108	5	28	88	5	26	82	5	4.6	5
Shrub canopy cover	23	14	59	5	1	5	0	0	0	0	5	21	3	20	85	5	3.6	5
Coarse woody debris	1024	330	32	2	297	29	2	199	19	2	297	29	2	86	8	0	1.2	5
Native plant species richness - trees	4	4	100	5	3	75	2.5	6	150	5	6	150	5	5	125	5	3.9	5
Native plant species richness - shrubs	8	9	113	5	4	50	2.5	4	50	2.5	8	100	5	6	75	2.5	4	5
Native plant species richness - grasses	6	8	133	5	9	150	5	17	283	5	16	267	5	9	150	5	4.5	5
Native plant species richness - forbes	11	9	82	2.5	21	191	5	26	236	5	38	345	5	14	127	5	4.5	5
Non-native plant cover	0	0.001	100	10	1	99	10	0.1	100	10	5	95	5	1	99	10	8	10
Native grass cover	11	16	149	5	31	285	5	31	282	5	25	224	5	43	393	5	6	5
Organic litter	55	62	113	5	36	66	5	25	45	3	35	63	5	29	53	5	5	5
Quality and availability of food and foraging habitat				5			1			1			1			5	3	10
Quality and availability of shelter habitat (N/A)																		
MAX Site Condition Score																		*90*
Score for sampling site				69.5			58.0			56.5			54.0			72.5		
Score for assessment unit																	*62.9*	
Score for the site																		
(converted to) **Site Condition Score - out of 3**																	**2.10**	
Site Context																		
Size of patch	**10**			10			10			10			10			10	10	10
Connectedness	**5**			5			5			5			5			5	6	5
Context	**5**			5			4			2			4			4	4.4	5
Ecological Corridors	**6**			6			4			4			4			4	4	6
Role of site location to species overall population in the state	**5**			5			5			5			5			5	4.8	5
Threats to the species	**15**			7			7			7			7			7	6.6	15
Species mobility capacity	**10**			7			7			7			7			7	7	10
MAX Site Context Score																		*56*
Score for sampling site				45.0			42.0			40.0			42.0			42.0		
Score for assessment unit																	*42.8*	
Score for the site																		
(converted to) **Site Context Score - out of 3**																	**2.29**	

Assessment Unit - Regional Ecosystem	AU2_MIWF_13.11.3_Regrowth																				
Site Reference	Benchma	BC01A_MIWF			BC77_MIWF			BC78_MIWF			BC88_MIWF			BC90_MIWF			BC92_MIWF			Average Score	Maximum Score
Site Condition	**13.11.3**	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchmar	Score	Raw Data	% Benchmar	Score	Raw Data	% Benchmar	Score	Raw Data	% Benchm	Score		
Large trees (euc plus non-euc)	20	5	25	5	17	85	10	5	25	5	0	0	0	0	0	0	25	125	15	5.833333	15
Tree canopy height (average of emergent, canopy, sub-cano	11	12	107	5	9	85	5	9	84	5	10	88	5	10	88	5	11	97	5	5	5
Recruitment of woody perennial species in EDL	100	100	100	5	100	100	5	100	100	5	100	100	5	100	100	5	100	100	5	5	5
Tree canopy cover (average of emergent, canopy, sub-canop	31.5	17	54	5	14	45	2	8	25	2	0	0	0	26	83	5	27	87	5	3.166667	5
Shrub canopy cover	23	6	26	3	0	0	0	2	7	0	0	0	0	1	5	0	5	22	3	1	5
Coarse woody debris	1024	120	12	2	131	13	2	317	31	2	430	42	2	176	17	2	528	52	5	2.5	5
Native plant species richness - trees	4	5	125	5	3	75	2.5	5	125	5	7	175	5	4	100	5	6	150	5	4.583333	5
Native plant species richness - shrubs	8	8	100	5	2	25	2.5	2	25	2.5	7	88	2.5	0	0	0	7	88	2.5	2.5	5
Native plant species richness - grasses	6	7	117	5	17	283	5	19	317	5	12	200	5	13	217	5	12	200	5	5	5
Native plant species richness - forbes	11	16	145	5	22	200	5	25	227	5	14	127	5	17	155	5	26	236	5	5	5
Non-native plant cover	0	0	100	10	3	97	10	2	98	10	1	0	0	0	100	10	1	99	10	8.333333	10
Native grass cover	11	31	278	5	32	295	5	21	187	5	18	167	5	28	255	5	30	273	5	5	5
Organic litter	55	28	51	5	23	43	3	18	32	3	35	64	5	31	56	5	17	30	3	4	5
Quality and availability of food and foraging habitat				5			1			5			1			5			1	3	10
Quality and availability of shelter habitat (N/A)																					
MAX Site Condition Score																					*90*
Score for sampling site				70.0			58.0			59.5			40.5			57.0			74.5		
Score for assessment unit																				*59.9*	
Score for the site																					
(converted to) **Site Condition Score - out of 3**																				**2.00**	
Site Context																					
Size of patch	**10**			10			10			10			5			10			10	9.166667	10
Connectedness	**5**			2			4			4			2			2			2	2.666667	5
Context	**5**			2			4			4			2			4			4	3.333333	5
Ecological Corridors	**6**			0			0			0			0			4			4	1.333333	6
Role of site location to species overall population in the state	**5**			5			5			5			5			5			5	5	5
Threats to the species	**15**			7			7			7			7			7			7	7	15
Species mobility capacity	**10**			7			7			7			7			7			7	7	10
MAX Site Context Score																					*56*
Score for sampling site				33.0			37.0			37.0			28.0			39.0			39.0		
Score for assessment unit																				*35.5*	
Score for the site																					
(converted to) **Site Context Score - out of 3**																				**1.90**	

Assessment Unit - Regional Ecosystem	AU3_MIWF_13.11.5_Remnant								
Site Reference	Benchm	BC01_MIWF			BC36_MIWF			Average Score	Maximum Score
Site Condition	**13.11.5**	Raw Data	% Benchma	Score	Raw Data	% Benchm	Score		
Large trees (euc plus non-euc)	51	13	25	5	9	18	5	5	15
Tree canopy height (average of emergent, canopy, sub-cano	16	12	72	5	14	88	5	5	5
Recruitment of woody perennial species in EDL	100	100	100	5	100	100	5	5	5
Tree canopy cover (average of emergent, canopy, sub-canop	27	20	75	5	31	114	5	5	5
Shrub canopy cover	18	7	38	3	3	16	3	3	5
Coarse woody debris	947	220	23	2	2210	233	2	2	5
Native plant species richness - trees	5	5	100	5	7	140	5	5	5
Native plant species richness - shrubs	8	7	88	2.5	4	50	2.5	2.5	5
Native plant species richness - grasses	7	6	86	2.5	5	71	2.5	2.5	5
Native plant species richness - forbes	11	10	91	5	9	82	2.5	3.75	5
Non-native plant cover	0	1	99	10	0.0001	100	10	10	10
Native grass cover	7	4	51	3	3	46	1	2	5
Organic litter	64	58	91	5	78	122	5	5	5
Quality and availability of food and foraging habitat				10			10	10	10
Quality and availability of shelter habitat (N/A)									
MAX Site Condition Score									*90*
Score for sampling site				68.0			63.5		
Score for assessment unit								*65.8*	
Score for the site									
(converted to) **Site Condition Score - out of 3**								**2.19**	
Site Context									
Size of patch	**10**			10			10	10	10
Connectedness	**5**			5			5	5	5
Context	**5**			2			5	3.5	5
Ecological Corridors	**6**			0			6	3	6
Role of site location to species overall population in the state	**5**			5			5	5	5
Threats to the species	**15**			7			7	7	15
Species mobility capacity	**10**			7			7	7	10
MAX Site Context Score									*56*
Score for sampling site				36.0			45.0		
Score for assessment unit								*40.5*	
Score for the site									
(converted to) **Site Context Score - out of 3**								**2.17**	

Assessment Unit - Regional Ecosystem	AU4_MIWF_13.11.6_Remnant					
Site Reference	Benchma	BC02A_MIWF			BC81_MIWF	
Site Condition	**13.11.6**	Raw Data	% Benchm	Score	Raw Data	% Benchmar
Large trees (euc plus non-euc)	43	7	16	5	11	26
Tree canopy height (average of emergent, canopy, sub-cano	15	19	124	5	20	134
Recruitment of woody perennial species in EDL	100	80	80	5	100	100
Tree canopy cover (average of emergent, canopy, sub-canop	33.5	35	104	5	44	133
Shrub canopy cover	9	0	0	0	0	0
Coarse woody debris	1292	760	59	5	201	16
Native plant species richness - trees	3	5	167	5	6	200
Native plant species richness - shrubs	7	6	86	2.5	7	100
Native plant species richness - grasses	7	5	71	2.5	15	214
Native plant species richness - forbes	20	13	65	2.5	24	120
Non-native plant cover	0	1	99	10	0	100
Native grass cover	2	15	750	5	6	280
Organic litter	89	63	71	5	84	94
Quality and availability of food and foraging habitat				10		
Quality and availability of shelter habitat (N/A)						
MAX Site Condition Score						
Score for sampling site				67.5		
Score for assessment unit						
Score for the site						
(converted to) **Site Condition Score - out of 3**						
Site Context						
Size of patch	**10**			10		
Connectedness	**5**			5		
Context	**5**			4		
Ecological Corridors	**6**			4		
Role of site location to species overall population in the state	**5**			5		
Threats to the species	**15**			7		
Species mobility capacity	**10**			7		
MAX Site Context Score						
Score for sampling site				42.0		
Score for assessment unit						
Score for the site						
(converted to) **Site Context Score - out of 3**						

Species Stocking Rate (SSR)	Scoring Table AU1					Score
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	Score	0	5		10	5
		No	Yes - adjacent		Yes - on-site	
Species usage of the site (habitat type & evidenced usage)	Score	0	5	10	n/a	10
		Not habitat	Dispersal	Foraging	Breeding	
Approximate density (per ha)	Score	0	10	20	30	n/a
		0%				
Role/importance of species population on site*	Score	0	5	10	15	0
	(Total	0	5 - 15	20 - 35	40 - 45	
	Total SRR score - out of 35					15
	(converted to) **Total SRR score - out of 4**					1.71

Scoring Table AU2					Score
Score	0	5		10	5
	No	Yes - adjacent		Yes - on-site	
Score	0	5	10	n/a	10
	Not habitat	Dispersal	Foraging	Breeding	
Score	0	10	20	30	n/a
	0%				
Score	0	5	10	15	0
(Total	0	5 - 15	20 - 35	40 - 45	
Total SRR score - out of 35					15
(converted to) **Total SRR score - out of 4**					1.71

Scoring Table AU3					Score
Score	0	5		10	5
	No	Yes - adjacent		Yes - on-site	
Score	0	5	10	n/a	10
	Not habitat	Dispersal	Foraging	Breeding	
Score	0	10	20	30	n/a
	0%				
Score	0	5	10	15	0
(Total	0	5 - 15	20 - 35	40 - 45	
Total SRR score - out of 35					15
(converted to) **Total SRR score - out of 4**					1.71

Scoring Table AU4					Score
Score	0	5		10	5
	No	Yes - adjacent		Yes - on-site	
Score	0	5	10	n/a	10
	Not habitat	Dispersal	Foraging	Breeding	
Score	0	10	20	30	n/a
	0%				
Score	0	5	10	15	0
(Total	0	5 - 15	20 - 35	40 - 45	
Total SRR score - out of 35					15
(converted to) **Total SRR score - out of 4**					1.71

Scoring Table AU5					Score
Score	0	5		10	5
	No	Yes - adjacent		Yes - on-site	
Score	0	5	10	n/a	10
	Not habitat	Dispersal	Foraging	Breeding	
Score	0	10	20	30	n/a
	0%				
Score	0	5	10	15	0
(Total from	0	5 - 15	20 - 35	40 - 45	
Total SRR score - out of 35					15
(converted to) **Total SRR score - out of 4**					1.71

Scoring Table AU6					Score
Score	0	5		10	5
	No	Yes - adjacent		Yes - on-site	
Score	0	5	10	n/a	10
	Not habitat	Dispersal	Foraging	Breeding	
Score	0	10	20	30	n/a
	0%				
Score	0	5	10	15	0
(Total	0	5 - 15	20 - 35	40 - 45	
Total SRR score - out of 35					15
(converted to) **Total SRR score - out of 4**					1.71

Scoring Table AU7				
Score	0	5		10
	No	Yes - adjacent		Yes - on-site
Score	0	5	10	n/a
	Not habitat	Dispersal	Foraging	Breeding
Score	0	10	20	30
	0%			
Score	0	5	10	15
(Total	0	5 - 15	20 - 35	40 - 45
Total SRR score - out of 35				
(converted to) **Total SRR score - out of 4**				

***SSR Supplementary Table**	Scoring table			Score assigned
*Key source population for breeding	Score	0	10	0
		No	Yes/ Possibly	
*Key source population for dispersal	Score	0	5	0
		No	Yes/ Possibly	
*Necessary for maintaining genetic diversity	Score	0	15	0
		No	Yes/ Possibly	
*Near the limit of the species range	Score	0	15	0
		No	Yes	
	Total for SSR Supplementary Table			**0**

Scoring table			Score assigned
Score	0	10	0
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
Total for SSR Supplementary Table			**0**

Scoring table			Score assigned
Score	0	10	0
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
otal for SSR Supplementary Table			**0**

Scoring table			Score assigned
Score	0	10	0
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
tal for SSR Supplementary Table			**0**

Scoring table			Score assigned
Score	0	10	0
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
Total for SSR Supplementary Table			**0**

Scoring table			Score assigned
Score	0	10	0
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
Total for SSR Supplementary Table			**0**

Scoring table			Score assigned
Score	0	10	0
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
tal for SSR Supplementary Table			**0**

Final habitat quality score (weighted)	**AU1**	**AU2**	**AU3**	**AU4**	**AU5**	**AU6**	**AU7**	**AU8**	**Average/Final**
Site Condition score (out of 3)	2.10	2.00	2.19	2.26	1.76	2.12	1.45	1.56	
Site Context Score (out of 3)	2.29	1.90	2.17	2.38	2.01	2.20	2.20	1.32	
Species Stocking Rate Score (out of 4)	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	
Habitat Quality score - out of 10	**6.10**	**5.61**	**6.08**	**6.36**	**5.49**	**6.03**	**5.36**	**4.60**	**5.70**
Assessment Unit Area	128.32	165.02	12.01	67.55	52.7	13.29	34.6	24.62	
Total Impact Area (ha) for MNES	498.11	498.11	498.11	498.11	498.11	498.11	498.11	498.11	
Size weighting	0.26	0.33	0.02	0.14	0.11	0.03	0.07	0.05	
Weighted Habitat Quality	**1.57**	**1.86**	**0.15**	**0.86**	**0.58**	**0.16**	**0.37**	**0.23**	**5.78**

	BC82_MIWF			BC82B_MIWF			BC227_MIWF			Average Score	Maximum Score
Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchmar	Score		
5	10	23	5	12	28	5	7	16	5	5	15
5	14	90	5	14	90	5	11	73	5	5	5
5	100	100	5	100	100	5	100	100	5	5	5
5	37	110	5	51	153	5	40	119	5	5	5
0	0	0	0	3	30	3	6	66	5	1.6	5
2	630	49	2	1210	94	5	1340	104	5	3.8	5
5	3	100	5	6	200	5	4	133	5	5	5
5	2	29	2.5	10	143	5	11	157	5	4	5
5	4	57	2.5	5	71	2.5	3	43	2.5	3	5
5	3	15	0	7	35	2.5	8	40	2.5	2.5	5
10	0.001	100	10	0.001	100	10	0.0001	100	10	10	10
5	0	20	1	1	70	3	0	20	1	3	5
5	94	105	5	90	101	5	96	107	5	5	5
10			10			10			10	10	10
											90
72.0			58.0			71.0			71.0		
										67.9	
										2.26	
10			10			10			10	10	10
5			5			5			5	5	5
5			5			5			5	4.8	5
6			6			6			6	5.6	6
5			5			5			5	5	5
7			7			7			7	7	15
7			7			7			7	7	10
											56
45.0			45.0			45.0			45.0		
										44.4	
										2.38	

AU5_MIWF_13.11.6_Regrowth														
Benchmarl	BC71_MIWF			BC74_MIWF			BC79_MIWF			BC80_MIWF			Average Score	Maximum Score
13.11.6	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score		
43	0	0	0	0	0	0	0	0	0	0	0	0	0	15
15	7	43	3	0	2	0	11	74	5	9	59	3	2.75	5
100	100	100	5	0	0	0	100	100	5	100	100	5	3.75	5
33.5	15	46	2	0	0	0	27	81	5	25	73	5	3	5
9	6	68	5	1	11	3	1	11	3	0	0	0	2.75	5
1292	495	38	2	530	41	2	671	52	5	720	56	5	3.5	5
3	6	200	5	1	33	2.5	3	100	5	5	167	5	4.375	5
7	4	57	2.5	7	100	5	4	57	2.5	3	43	2.5	3.125	5
7	4	57	2.5	10	143	5	16	229	5	16	229	5	4.375	5
20	6	30	2.5	10	50	2.5	20	100	5	25	125	5	3.75	5
0	0.001	100	10	0.001	100	10	2	98	10	1	99	10	10	10
2	28	1400	5	32	1600	5	15	750	5	9	430	5	5	5
89	38	43	3	22	24	3	43	48	3	63	71	5	3.5	5
			5			1			1			5	3	10
														90
			52.5			39.0			59.5			60.5		
													52.9	
													1.76	
10			10			10			10			0	7.5	10
5			2			2			2			2	2	5
5			4			4			2			2	3	5
6			6			6			6			6	6	6
5			5			5			5			5	5	5
15			7			7			7			7	7	15
10			7			7			7			7	7	10
														56
			41.0			41.0			39.0			29.0		
													37.5	
													2.01	

AU6_MIWF_13.11.8_Remnant					
Benchmarl	BC273_MIWF			Average Score	Maximum Score
13.11.8	Raw Data	% Benchm	Score		
34	9	26	5	5	15
12.5	11	86	5	5	5
100	100	100	5	5	5
29.5	44	149	5	5	5
22	2	10	3	3	5
568	1320	232	2	2	5
5	4	80	2.5	2.5	5
6	8	133	5	5	5
6	9	150	5	5	5
12	19	158	5	5	5
0	1	99	10	10	10
21	10	47	1	1	5
60	74	123	5	5	5
			5	5	10
					90
			63.5		
				63.5	
				2.12	
10			10	10	10
5			4	4	5
5			4	4	5
6			4	4	6
5			5	5	5
15			7	7	15
10			7	7	10
					56
			41.0		
				41.0	
				2.20	

AU7_MIWF_13.11.8_Regrowth									
Benchmarl	BC70_MIWF			BC72_MIWF			Average Score	Maximum Score
13.11.8	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score		
34	0	0	0	0	0	0	0	15
12.5	6	48	3	6	48	3	3	5
100	100	100	5	100	100	5	5	5
29.5	21	72	5	21	70	5	5	5
22	3	12	3	7	34	3	3	5
568	460	81	5	570	100	5	5	5
5	5	100	5	0	0	0	2.5	5
6	8	133	5	3	50	2.5	3.75	5
6	3	50	2.5	4	67	2.5	2.5	5
12	4	33	2.5	11	92	5	3.75	5
0	0.001	0	0	1	0	0	0	10
21	9	42	1	16	78	3	2	5
60	72	120	5	66	110	5	5	5
			5			1	3	10
								90
			47.0			40.0		
							43.5	
							1.45	
10			10			10	10	10
5			2			2	2	5
5			4			4	4	5
6			6			6	6	6
5			5			5	5	5
15			7			7	7	15
10			7			7	7	10
								56
			41.0			41.0		
							41.0	
							2.20	

AU8_MIWF_Predominantly cleared																		**Total**
Benchmarl	BC63_MIWF			BC76_MIWF			BC84_MIWF			BC87_MIWF			BC89_MIWF			Average Score	Maximum Score	**Average Score**
13.11.3	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score			
20	5	25	5	2	10	5	1	5	5	2	10	5	0	0	0	4	15	3.73
11	6	55	3	12	110	5	8	75	5	7	63	3	10	95	5	4.2	5	4.37
100	0	0	0	100	100	5	100	100	5	100	100	5	0	0	0	3	5	4.54
31.5	11	36	2	7	21	2	19	60	5	0	0	0	0	0	0	1.8	5	4.07
23	0	0	0	1	4	0	0	0	0	1	6	0	1	6	0	0	5	2.24
1024	510	50	2	304	30	2	203	20	2	98	10	0	660	64	5	2.2	5	2.78
4	2	50	2.5	0	0	0	4	100	5	3	75	2.5	0	0	0	2	5	3.73
8	2	25	2.5	3	38	2.5	3	38	2.5	7	88	2.5	4	50	2.5	2.5	5	3.42
6	10	167	5	18	300	5	4	67	2.5	10	167	5	16	267	5	4.5	5	3.92
11	10	91	5	24	218	5	24	218	5	9	82	2.5	23	209	5	4.5	5	4.09
0	0.001	100	10	15	85	5	4	96	10	0.5	100	10	3	97	10	9	10	8.17
11	17	155	5	55	498	5	13	120	5	61	551	5	39	355	5	5	5	3.63
55	38	70	5	1	1	0	1	3	0	6	10	3	2	4	0	1.6	5	4.26
			5			1			5			1			1	2.6	10	4.95
																	90	
			52.0			42.5			57.0			44.5			38.5			
																46.9		
																		7.2
																1.56		**2.4**
10			0			0			0			0			0	0	10	8.33
5			2			0			2			0			2	1.2	5	3.48
5			4			4			2			0			2	2.4	5	3.68
6			6			0			4			0			0	2	6	3.99
5			5			5			5			5			5	5	5	4.98
15			7			7			7			7			7	7	15	6.95
10			7			7			7			7			7	7	10	7.00
																	56	
			31.0			23.0			27.0			19.0			23.0			
																24.6		
																		4.8
																1.32		**1.6**

Score
5
10
n/a
0
15
1.71

	Scoring Table AU8				Score
Score	0	5		10	5
	No	Yes - adjacent		Yes - on-site	
Score	0	5	10	n/a	10
	Not habitat	Dispersal	Foraging	Breeding	
Score	0	10	20	30	n/a
	0%				
Score	0	5	10	15	0
(*Total*	0	5 - 15	20 - 35	40 - 45	
Total SRR score - out of 35					15
(converted to) **Total SRR score - out of 4**					1.71

Scoring table			Score assigned
Score	0	10	
	No	Yes/ Possibly	0
Score	0	5	
	No	Yes/ Possibly	0
Score	0	15	
	No	Yes/ Possibly	0
Score	0	15	
	No	Yes	0
otal for SSR Supplementary Table			**0**

IMPACT - Koala
498.11

Assessment Unit - Regional Ecosystem	AU1_MIWF_13.11.3_Remnant																	
Site Reference	**Benchmark**	BC82A_MIWF			BC86_MIWF			BC83_MIWF			BC91_MIWF			BC93_MIWF			Average Score	Maximum Score
Site Condition	**13.11.3**	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data	% Benchm	Score		
Large trees (euc plus non-euc)	20	2	10	5	4	20	5	1	5	5	0	0	0	18	90	10	5	15
Tree canopy height (average of emergent, canopy, sub-cano	11	12	111	5	11	99	5	8	73	5	9	84	5	11	101	5	5	5
Recruitment of woody perennial species in EDL	100	100	100	5	100	100	5	66	66	3	67	67	3	100	100	5	4.2	5
Tree canopy cover (average of emergent, canopy, sub-canop	31.5	29	93	5	20	62	5	34	108	5	28	88	5	26	82	5	5	5
Shrub canopy cover	23	14	59	5	1	5	0	0	0	0	5	21	3	20	85	5	2.6	5
Coarse woody debris	1024	330	32	2	297	29	2	199	19	2	297	29	2	86	8	0	1.6	5
Native plant species richness - trees	4	4	100	5	3	75	2.5	6	150	5	6	150	5	5	125	5	4.5	5
Native plant species richness - shrubs	8	9	113	5	4	50	2.5	4	50	2.5	8	100	5	6	75	2.5	3.5	5
Native plant species richness - grasses	6	8	133	5	9	150	5	17	283	5	16	267	5	9	150	5	5	5
Native plant species richness - forbes	11	9	82	2.5	21	191	5	26	236	5	38	345	5	14	127	5	4.5	5
Non-native plant cover	0	0.001	100	10	1	99	10	0.1	100	10	5	95	5	1	99	10	9	10
Native grass cover	11	16	149	5	31	285	5	31	282	5	25	224	5	43	393	5	5	5
Organic litter	55	62	113	5	36	66	5	25	45	3	35	63	5	29	53	5	4.6	5
Quality and availability of food and foraging habitat				5			5			5			5			1	4.2	10
Quality and availability of shelter habitat				1			1			10			5			5	4.4	10
MAX Site Condition Score																		*100*
Score for sampling site				70.5			63.0			70.5			63.0			73.5		
Score for assessment unit																	*68.1*	
Score for the site																		
(converted to) **Site Condition Score - out of 3**																	**2.04**	
Site Context																		
Size of patch	**10**			10			10			10			10			10	10	10
Connectedness	**5**			5			5			5			5			5	5	5
Context	**5**			5			4			2			4			4	3.8	5
Ecological Corridors	**6**			6			4			4			4			4	4.4	6
Role of site location to species overall population in the stat	**5**			5			5			5			5			5	5	5
Threats to the species	**15**			7			7			7			7			7	7	15
Species mobility capacity	**10**			10			10			10			10			10	10	10
MAX Site Context Score																		*56*
Score for sampling site				48.0			45.0			43.0			45.0			45.0		
Score for assessment unit																	*45.2*	
Score for the site																		
(converted to) **Site Context Score - out of 3**																	**2.42**	

Assessment Unit - Regional Ecosystem	AU2_MIWF_13.11.3_Regrowth																				
Site Reference	**Benchma**	BC01A_MIWF			BC77_MIWF			BC78_MIWF			BC88_MIWF			BC90_MIWF			BC92_MIWF			Average Score	Maximum Score
Site Condition	**13.11.3**	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchmar	Score	Raw Data	% Benchmar	Score	Raw Data	% Benchmar	Score	Raw Data	% Benchm	Score		
Large trees (euc plus non-euc)	20	5	25	5	17	85	10	5	25	5	0	0	0	0	0	0	25	125	15	5.833333	15
Tree canopy height (average of emergent, canopy, sub-cano	11	12	107	5	9	85	5	9	84	5	10	88	5	10	88	5	11	97	5	5	5
Recruitment of woody perennial species in EDL	100	100	100	5	100	100	5	100	100	5	100	100	5	100	100	5	100	100	5	5	5
Tree canopy cover (average of emergent, canopy, sub-canop	31.5	17	54	5	14	45	2	8	25	2	0	0	0	26	83	5	27	87	5	3.166667	5
Shrub canopy cover	23	6	26	3	0	0	0	2	7	0	0	0	0	1	5	0	5	22	3	1	5
Coarse woody debris	1024	120	12	2	131	13	2	317	31	2	430	42	2	176	17	2	528	52	5	2.5	5
Native plant species richness - trees	4	5	125	5	3	75	2.5	5	125	5	7	175	5	4	100	5	6	150	5	4.583333	5
Native plant species richness - shrubs	8	8	100	5	2	25	2.5	2	25	2.5	7	88	2.5	0	0	0	7	88	2.5	2.5	5
Native plant species richness - grasses	6	7	117	5	17	283	5	19	317	5	12	200	5	13	217	5	12	200	5	5	5
Native plant species richness - forbes	11	16	145	5	22	200	5	25	227	5	14	127	5	17	155	5	26	236	5	5	5
Non-native plant cover	0	0	100	10	3	97	10	2	98	10	1	0	0	0	100	10	1	99	10	8.333333	10
Native grass cover	11	31	278	5	32	295	5	21	187	5	18	167	5	28	255	5	30	273	5	5	5
Organic litter	55	28	51	5	23	43	3	18	32	3	35	64	5	31	56	5	17	30	3	4	5
Quality and availability of food and foraging habitat				5			5			5			5			5			1	4.333333	10
Quality and availability of shelter habitat				1			1			1			1			1			5	1.666667	10
MAX Site Condition Score																					*100*
Score for sampling site				71.0			63.0			60.5			45.5			58.0			79.5		
Score for assessment unit																				*62.9*	
Score for the site																					
(converted to) **Site Condition Score - out of 3**																				**1.89**	
Site Context																					
Size of patch	**10**			10			10			10			5			10			10	9.166667	10
Connectedness	**5**			2			4			4			2			2			2	2.666667	5
Context	**5**			2			4			4			2			4			4	3.333333	5
Ecological Corridors	**6**			0			0			0			0			4			4	1.333333	6
Role of site location to species overall population in the stat	**5**			5			5			5			5			5			5	5	5
Threats to the species	**15**			7			7			7			7			7			7	7	15
Species mobility capacity	**10**			10			10			10			10			10			10	10	10
MAX Site Context Score																					*56*
Score for sampling site				36.0			40.0			40.0			31.0			42.0			42.0		
Score for assessment unit																				*38.5*	
Score for the site																					
(converted to) **Site Context Score - out of 3**																				**2.06**	

Assessment Unit - Regional Ecosystem	AU3_MIWF_13.11.5_Remnant									AU4_MIWF_13.11.6_Remnant						
Site Reference	**Benchm**	BC01_MIWF			BC36_MIWF			Average Score	Maximum Score	**Benchma**	BC02A_MIWF			BC81_MIWF		
Site Condition	**13.11.5**	Raw Data	% Benchma	Score	Raw Data	% Benchm	Score			**13.11.6**	Raw Data	% Benchm	Score	Raw Data	% Benchmar	Score
Large trees (euc plus non-euc)	51	13	25	5	9	18	5	5	15	43	7	16	5	11	26	5
Tree canopy height (average of emergent, canopy, sub-cano	16	12	72	5	14	88	5	5	5	15	19	124	5	20	134	5
Recruitment of woody perennial species in EDL	100	100	100	5	100	100	5	5	5	100	80	80	5	100	100	5
Tree canopy cover (average of emergent, canopy, sub-canop	27	20	75	5	31	114	5	5	5	33.5	35	104	5	44	133	5
Shrub canopy cover	18	7	38	3	3	16	3	3	5	9	0	0	0	0	0	0
Coarse woody debris	947	220	23	2	2210	233	2	2	5	1292	760	59	5	201	16	2
Native plant species richness - trees	5	5	100	5	7	140	5	5	5	3	5	167	5	6	200	5
Native plant species richness - shrubs	8	7	88	2.5	4	50	2.5	2.5	5	7	6	86	2.5	7	100	5
Native plant species richness - grasses	7	6	86	2.5	5	71	2.5	2.5	5	7	5	71	2.5	15	214	5
Native plant species richness - forbes	11	10	91	5	9	82	2.5	3.75	5	20	13	65	2.5	24	120	5
Non-native plant cover	0	1	99	10	0.0001	100	10	10	10	0	1	99	10	0	100	10
Native grass cover	7	4	51	3	3	46	1	2	5	2	15	750	5	6	280	5
Organic litter	64	58	91	5	78	122	5	5	5	89	63	71	5	84	94	5
Quality and availability of food and foraging habitat				5			5	5	10				5			1
Quality and availability of shelter habitat				1			1	1	10				1			1
MAX Site Condition Score									*100*							
Score for sampling site				64.0			59.5						63.5			64.0
Score for assessment unit								*61.8*								
Score for the site																
(converted to) **Site Condition Score - out of 3**								**1.85**								
Site Context																
Size of patch	**10**			10			10	10	10	**10**			10			10
Connectedness	**5**			5			4	4.5	5	**5**			5			5
Context	**5**			2			4	3	5	**5**			4			5
Ecological Corridors	**6**			0			4	2	6	**6**			4			6
Role of site location to species overall population in the stat	**5**			5			5	5	5	**5**			5			5
Threats to the species	**15**			7			7	7	15	**15**			7			7
Species mobility capacity	**10**			10			10	10	10	**10**			10			10
MAX Site Context Score									*56*							
Score for sampling site				39.0			44.0						45.0			48.0
Score for assessment unit								*41.5*								
Score for the site																
(converted to) **Site Context Score - out of 3**								**2.22**								

Species Stocking Rate (SSR)	Scoring Table AU1					Score
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	Score	0	5		10	10
		No	Yes - adjacent		Yes - on-site	
Species usage of the site (habitat type & evidenced usage)	Score	0	5	10	15	5
		Not habitat	Dispersal	Foraging	Breeding	
Approximate density (per ha)	Score	0	10	20	30	10
		0%				
Role/importance of species population on site*	Score	0	5	10	15	5
	(Total	0	5 - 15	20 - 35	40 - 45	
	Total SRR score - out of 70					30
	(converted to) **Total SRR score - out of 4**					1.71

Scoring Table AU2						Score
Score	0	5		10		10
	No	Yes - adjacent		Yes - on-site		
Score	0	5	10	15		5
	Not habitat	Dispersal	Foraging	Breeding		
Score	0	10	20	30		10
	0%					
Score	0	5	10	15		5
(Total	0	5 - 15	20 - 35	40 - 45		
Total SRR score - out of 70						30
(converted to) **Total SRR score - out of 4**						1.71

Scoring Table AU3						Score
Score	0	5		10		10
	No	Yes - adjacent		Yes - on-site		
Score	0	5	10	15		15
	Not habitat	Dispersal	Foraging	Breeding		
Score	0	10	20	30		30
	0%					
Score	0	5	10	15		5
(Total	0	5 - 15	20 - 35	40 - 45		
Total SRR score - out of 70						60
(converted to) **Total SRR score - out of 4**						3.43

Scoring Table AU4						Score
Score	0	5		10		10
	No	Yes - adjacent		Yes - on-site		
Score	0	5	10	15		5
	Not habitat	Dispersal	Foraging	Breeding		
Score	0	10	20	30		10
	0%					
Score	0	5	10	15		5
(Total	0	5 - 15	20 - 35	40 - 45		
Total SRR score - out of 70						30
(converted to) **Total SRR score - out of 4**						1.71

Scoring Table AU5						Score
Score	0	5		10		10
	No	Yes - adjacent		Yes - on-site		
Score	0	5	10	15		5
	Not habitat	Dispersal	Foraging	Breeding		
Score	0	10	20	30		10
	0%					
Score	0	5	10	15		5
(Total from	0	5 - 15	20 - 35	40 - 45		
Total SRR score - out of 70						30
(converted to) **Total SRR score - out of 4**						1.71

Scoring Table AU6						Score
Score	0	5		10		10
	No	Yes - adjacent		Yes - on-site		
Score	0	5	10	15		5
	Not habitat	Dispersal	Foraging	Breeding		
Score	0	10	20	30		10
	0%					
Score	0	5	10	15		5
(Total	0	5 - 15	20 - 35	40 - 45		
Total SRR score - out of 70						30
(converted to) **Total SRR score - out of 4**						1.71

Scoring Table AU7						Score
Score	0	5		10		10
	No	Yes - adjacent		Yes - on-site		
Score	0	5	10	15		5
	Not habitat	Dispersal	Foraging	Breeding		
Score	0	10	20	30		10
	0%					
Score	0	5	10	15		5
(Total	0	5 - 15	20 - 35	40 - 45		
Total SRR score - out of 70						30
(converted to) **Total SRR score - out of 4**						1.71

***SSR Supplementary Table**	Scoring table			Score assigned
*Key source population for breeding	Score	0	10	10
		No	Yes/ Possibly	
*Key source population for dispersal	Score	0	5	0
		No	Yes/ Possibly	
*Necessary for maintaining genetic diversity	Score	0	15	0
		No	Yes/ Possibly	
*Near the limit of the species range	Score	0	15	0
		No	Yes	
	Total for SSR Supplementary Table			**10**

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
Total for SSR Supplementary Table			**10**

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
otal for SSR Supplementary Table			**10**

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
tal for SSR Supplementary Table			**10**

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
Total for SSR Supplementary Table			**10**

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
Total for SSR Supplementary Table			**10**

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
tal for SSR Supplementary Table			**10**

Final habitat quality score (weighted)	**AU1**	**AU2**	**AU3**	**AU4**	**AU5**	**AU6**	**AU7**	**AU8**	**Average/Final**
Site Condition score (out of 3)	2.04	1.89	1.85	1.97	1.65	2.09	1.47	1.41	
Site Context Score (out of 3)	2.42	2.06	2.22	2.54	2.17	2.36	2.36	1.59	
Species Stocking Rate Score (out of 4)	1.71	1.71	3.43	1.71	1.71	1.71	1.71	1.43	
Habitat Quality score - out of 10	**6.18**	**5.66**	**7.50**	**6.22**	**5.53**	**6.16**	**5.54**	**4.43**	**5.90**
Assessment Unit Area	128.32	165.02	12.01	67.55	52.7	13.29	34.6	24.62	
Total Impact Area (ha) for MNES	498.11	498.11	498.11	498.11	498.11	498.11	498.11	498.11	
Size weighting	0.26	0.33	0.02	0.14	0.11	0.03	0.07	0.05	
Weighted Habitat Quality	**1.59**	**1.88**	**0.18**	**0.84**	**0.59**	**0.16**	**0.38**	**0.22**	**5.85**

BC82_MIWF			BC82B_MIWF			BC227_MIWF			Average Score	Maximum Score
Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchmar	Score		
10	23	5	12	28	5	7	16	5	5	15
14	90	5	14	90	5	11	73	5	5	5
100	100	5	100	100	5	100	100	5	5	5
37	110	5	51	153	5	40	119	5	5	5
0	0	0	3	30	3	6	66	5	1.6	5
630	49	2	1210	94	5	1340	104	5	3.8	5
3	100	5	6	200	5	4	133	5	5	5
2	29	2.5	10	143	5	11	157	5	4	5
4	57	2.5	5	71	2.5	3	43	2.5	3	5
3	15	0	7	35	2.5	8	40	2.5	2.5	5
0.001	100	10	0.001	100	10	0.0001	100	10	10	10
0	20	1	1	70	3	0	20	1	3	5
94	105	5	90	101	5	96	107	5	5	5
		5			10			5	5.2	10
		5			5			1	2.6	10
										100
		58.0			76.0			67.0		
									65.7	
									1.97	
		10			10			10	10	10
		5			5			5	5	5
		5			5			5	4.8	5
		6			6			6	5.6	6
		5			5			5	5	5
		7			7			7	7	15
		10			10			10	10	10
										56
		48.0			48.0			48.0		
									47.4	
									2.54	

AU5_MIWF_13.11.6_Regrowth														
Benchmark	BC71_MIWF			BC74_MIWF			BC79_MIWF			BC80_MIWF			Average Score	Maximum Score
13.11.6	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score		
43	0	0	0	0	0	0	0	0	0	0	0	0	0	15
15	7	43	3	0	2	0	11	74	5	9	59	3	2.75	5
100	100	100	5	0	0	0	100	100	5	100	100	5	3.75	5
33.5	15	46	2	0	0	0	27	81	5	25	73	5	3	5
9	6	68	5	1	11	3	1	11	3	0	0	0	2.75	5
1292	495	38	2	530	41	2	671	52	5	720	56	5	3.5	5
3	6	200	5	1	33	2.5	3	100	5	5	167	5	4.375	5
7	4	57	2.5	7	100	5	4	57	2.5	3	43	2.5	3.125	5
7	4	57	2.5	10	143	5	16	229	5	16	229	5	4.375	5
20	6	30	2.5	10	50	2.5	20	100	5	25	125	5	3.75	5
0	0.001	100	10	0.001	100	10	2	98	10	1	99	10	10	10
2	28	1400	5	32	1600	5	15	750	5	9	430	5	5	5
89	38	43	3	22	24	3	43	48	3	63	71	5	3.5	5
			5			5			1			5	4	10
			1			1			1			1	1	10
														100
			53.5			44.0			60.5			61.5		
													54.9	
													1.65	
10			10			10			10			0	7.5	10
5			2			2			2			2	2	5
5			4			4			2			2	3	5
6			6			6			6			6	6	6
5			5			5			5			5	5	5
15			7			7			7			7	7	15
10			10			10			10			10	10	10
														56
			44.0			44.0			42.0			32.0		
													40.5	
													2.17	

AU6_MIWF_13.11.8_Remnant					
Benchmark	BC273_MIWF			Average Score	Maximum Score
13.11.8	Raw Data	% Benchm	Score		
34	9	26	5	5	15
12.5	11	86	5	5	5
100	100	100	5	5	5
29.5	44	149	5	5	5
22	2	10	3	3	5
568	1320	232	2	2	5
5	4	80	2.5	2.5	5
6	8	133	5	5	5
6	9	150	5	5	5
12	19	158	5	5	5
0	1	99	10	10	10
21	10	47	1	1	5
60	74	123	5	5	5
			10	10	10
			1	1	10
					100
			69.5		
				69.5	
				2.09	
10			10	10	10
5			4	4	5
5			4	4	5
6			4	4	6
5			5	5	5
15			7	7	15
10			10	10	10
					56
			44.0		
				44.0	
				2.36	

AU7_MIWF_13.11.8_Regrowth								
Benchmark	BC70_MIWF			BC72_MIWF			Average Score	Maximum Score
13.11.8	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score		
34	0	0	0	0	0	0	0	15
12.5	6	48	3	6	48	3	3	5
100	100	100	5	100	100	5	5	5
29.5	21	72	5	21	70	5	5	5
22	3	12	3	7	34	3	3	5
568	460	81	5	570	100	5	5	5
5	5	100	5	0	0	0	2.5	5
6	8	133	5	3	50	2.5	3.75	5
6	3	50	2.5	4	67	2.5	2.5	5
12	4	33	2.5	11	92	5	3.75	5
0	0.001	0	0	1	0	0	0	10
21	9	42	1	16	78	3	2	5
60	72	120	5	66	110	5	5	5
			10			5	7.5	10
			1			1	1	10
								100
			53.0			45.0		
							49.0	
							1.47	
10			10			10	10	10
5			2			2	2	5
5			4			4	4	5
6			6			6	6	6
5			5			5	5	5
15			7			7	7	15
10			10			10	10	10
								56
			44.0			44.0		
							44.0	
							2.36	

AU8_MIWF_Predominantly cleared																		**Total**
Benchmark	BC63_MIWF			BC76_MIWF			BC84_MIWF			BC87_MIWF			BC89_MIWF			Average Score	Maximum Score	**Average Score**
13.11.3	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score	Raw Data	% Benchm	Score			
20	5	25	5	2	10	5	1	5	5	2	10	5	0	0	0	4	15	3.73
11	6	55	3	12	110	5	8	75	5	7	63	3	10	95	5	4.2	5	4.37
100	0	0	0	100	100	5	100	100	5	100	100	5	0	0	0	3	5	4.49
31.5	11	36	2	7	21	2	19	60	5	0	0	0	0	0	0	1.8	5	4.12
23	0	0	0	1	4	0	0	0	0	1	6	0	1	6	0	0	5	2.12
1024	510	50	2	304	30	2	203	20	2	98	10	0	660	64	5	2.2	5	2.83
4	2	50	2.5	0	0	0	4	100	5	3	75	2.5	0	0	0	2	5	3.81
8	2	25	2.5	3	38	2.5	3	38	2.5	7	88	2.5	4	50	2.5	2.5	5	3.36
6	10	167	5	18	300	5	4	67	2.5	10	167	5	16	267	5	4.5	5	3.98
11	10	91	5	24	218	5	24	218	5	9	82	2.5	23	209	5	4.5	5	4.09
0	0.001	100	10	15	85	5	4	96	10	0.5	100	10	3	97	10	9	10	8.29
11	17	155	5	55	498	5	13	120	5	61	551	5	39	355	5	5	5	3.50
55	38	70	5	1	1	0	1	3	0	6	10	3	2	4	0	1.6	5	4.21
			1			1			5			1			1	1.8	10	5.25
			1			1			1			1			1	1	10	1.71
																	100	
			49.0			43.5			58.0			45.5			39.5			
																47.1		
																		7.5
																1.41		**2.5**
10			10			0			0			0			0	2	10	8.58
5			4			0			2			0			2	1.6	5	3.35
5			4			4			2			0			2	2.4	5	3.54
6			4			0			4			0			0	1.6	6	3.87
5			5			5			5			5			5	5	5	5.00
15			7			7			7			7			7	7	15	7.00
10			10			10			10			10			10	10	10	10.00
																	56	
			44.0			26.0			30.0			22.0			26.0			
																29.6		
																		5.2
																1.59		**1.7**

Scoring Table AU8						Score
Score	0	5		10		5
	No	Yes - adjacent		Yes - on-site		
Score	0	5	10	15		5
	Not habitat	Dispersal	Foraging	Breeding		
Score	0	10	20	30		10
	0%					
Score	0	5	10		15	5
(*Total*	0	5 - 15	20 - 35		40 - 45	
Total SRR score - out of 70						25
(converted to) **Total SRR score - out of 4**						1.43

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes/ Possibly	
Score	0	15	0
	No	Yes	
otal for SSR Supplementary Table			**10**

IMPACT - Regent Honeyeater

8.06

Assessment Unit - Regional Ecosystem	AU1_MIWF_13.11.3_Remnant						AU2_MIWF_13.11.6_Remnant											Total
Site Reference	Benchmark	BC82A_MIWF			Average	Maximum	Benchmark	BC02A_MIWF			BC82_MIWF			BC82B_MIWF			Average	Maximum	Average
Site Condition	**13.11.3**	Raw Data	% Benchma	Score	Score	Score	**13.11.6**	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data	% Benchm	Score	Score	Score	**Score**
Large trees (euc plus non-euc)	20	2	10	5	5	15	43	7	16	5	10	23	5	12	28	5	5	15	5.00
Tree canopy height (average of emergent, canopy, sub-canc	11	12	111	5	5	5	15	19	124	5	14	90	5	14	90	5	5	5	5.00
Recruitment of woody perennial species in EDL	100	100	100	5	5	5	100	80	80	5	100	100	5	100	100	5	5	5	5.00
Tree canopy cover (average of emergent, canopy, sub-canop	31.5	29	93	5	5	5	33.5	35	104	5	37	110	5	51	153	5	5	5	5.00
Shrub canopy cover	23	14	59	5	5	5	9	0	0	0	0	0	0	3	30	3	1	5	3.00
Coarse woody debris	1024	330	32	2	2	5	1292	760	59	5	630	49	2	1210	94	5	4	5	3.00
Native plant species richness - trees	4	4	100	5	5	5	3	5	167	5	3	100	5	6	200	5	5	5	5.00
Native plant species richness - shrubs	8	9	113	5	5	5	7	6	86	2.5	2	29	2.5	10	143	5	3.3333333	5	4.17
Native plant species richness - grasses	6	8	133	5	5	5	7	5	71	2.5	4	57	2.5	5	71	2.5	2.5	5	3.75
Native plant species richness - forbes	11	9	82	2.5	2.5	5	20	13	65	2.5	3	15	0	7	35	2.5	1.6666667	5	2.08
Non-native plant cover	0	0.001	100	10	10	10	0	1	99	10	0.001	100	10	0.001	100	10	10	10	10.00
Native grass cover	11	16	149	5	5	5	2	15	750	5	0	20	1	1	70	3	3	5	4.00
Organic litter	55	62	113	5	5	5	89	63	71	5	94	105	5	90	101	5	5	5	5.00
Quality and availability of food and foraging habitat				1	1	10				10			10			10	10	10	5.50
Quality and availability of shelter habitat		0		1	1	10		0		1	0		1	0		1	1	10	1.00
MAX Site Condition Score						*100*												*100*	
Score for sampling site				66.5						68.5			59.0			72.0			
Score for assessment unit					*66.5*												*66.5*		
Score for the site																			**8.3**
(converted to) **Site Condition Score - out of 3**					**2.00**												**2.00**		**2.8**
Site Context																			
Size of patch	**10**			10	10	10	**10**			10			10			10	10	10	10.00
Connectedness	**5**			5	5	5	**5**			5			5			5	5	5	5.00
Context	**5**			5	5	5	**5**			4			5			5	4.6666667	5	4.83
Ecological Corridors	**6**			6	6	6	**6**			4			6			6	5.3333333	6	5.67
Role of site location to species overall population in the stat	**5**			5	5	5	**5**			5			5			5	5	5	5.00
Threats to the species	**15**			1	1	15	**15**			1			1			1	1	15	1.00
Species mobility capacity	**10**			5	5	10	**10**			5			5			5	5	10	5.00
MAX Site Context Score						*56*												*56*	
Score for sampling site				37.0						34.0			37.0			37.0			
Score for assessment unit					*37.0*												*36.0*		
Score for the site																			**4.6**
(converted to) **Site Context Score - out of 3**					**1.98**												**1.93**		**1.5**

Species Stocking Rate (SSR)	Scoring Table AU1					Score
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	Score	0	5	10		10
		No	Yes - adjacent	Yes - on-site		
Species usage of the site (habitat type & evidenced usage)	Score	0	5	10	15	10
		Not habitat	Dispersal	Foraging	Breeding	
Approximate density (per ha)	Score	0	10	20	30	n/a
		0%				
Role/importance of species population on site*	Score	0	5	10	15	10
	(*Total*	0	5 - 15	20 - 35	40 - 45	
					Total SRR score - out of 40	30
					(converted to) **Total SRR score - out of 4**	3.00

Scoring Table AU2						Score
Score		0	5	10		10
		No	Yes - adjacent	Yes - on-site		
Score		0	5	10	15	10
		Not habitat	Dispersal	Foraging	Breeding	
Score		0	10	20	30	n/a
		0%				
Score		0	5	10	15	10
(*Total*		0	5 - 15	20 - 35	40 - 45	
					Total SRR score - out of 40	30
					(converted to) **Total SRR score - out of 4**	3.00

***SSR Supplementary Table**	Scoring table			Score assigned
*Key source population for breeding	Score	0	10	10
		No	Yes/ Possibly	
*Key source population for dispersal	Score	0	5	5
		No	Yes/ Possibly	
*Necessary for maintaining genetic diversity	Score	0	15	15
		No	Yes/ Possibly	
*Near the limit of the species range	Score	0	15	0
		No	Yes	
	Total for SSR Supplementary Table			**30**

Scoring table				Score assigned
Score	0	10		10
	No	Yes/ Possibly		
Score	0	5		5
	No	Yes/ Possibly		
Score	0	15		15
	No	Yes/ Possibly		
Score	0	15		0
	No	Yes		
Total for SSR Supplementary Table				**30**

Final habitat quality score (weighted)	**AU1**	**AU2**	**Average/Final**
Site Condition score (out of 3)	2.00	2.00	
Site Context Score (out of 3)	1.98	1.93	
Species Stocking Rate Score (out of 4)	3.00	3.00	
Habitat Quality score - out of 10	**6.98**	**6.92**	**6.95**
Assessment Unit Area	2.43	5.63	
Total Impact Area (ha) for MNES	8.06	8.06	
Size weighting	0.30	0.70	
Weighted Habitat Quality	**2.10**	**4.84**	**6.94**

IMPACT - Squatter Pigeon

136.69

Assessment Unit - Regional Ecosystem	AU1_MIWF_13.11.3_Remnant																		AU2_MIWF_13.11.5_Remnant									
Site Reference	Benchmark	BC82A_MIWF			BC86_MIWF			BC83_MIWF			BC91_MIWF			BC93_MIWF			Average	Maximum	Benchma	BC01_MIWF			BC36_MIWF			Average	Maximum
Site Condition	**13.11.3**	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Score	Score	**13.11.5**	Raw Data	% Benchma	Score	Raw Data	% Benchma	Score	Score	Score
Large trees (euc plus non-euc)	20	2	10	5	4	20	5	1	5	5	0	0	0	18	90	10	5	15	51	13	25	5	9	18	5	5	15
Tree canopy height (average of emergent, canopy, sub-canop	11	12	111	5	11	99	5	8	73	5	9	84	5	11	101	5	5	5	16	12	72	5	14	88	5	5	5
Recruitment of woody perennial species in EDL	100	100	100	5	100	100	5	66	66	3	67	67	3	100	100	5	4.2	5	100	100	100	5	100	100	5	5	5
Tree canopy cover (average of emergent, canopy, sub-canopy	31.5	29	93	5	20	62	5	34	108	5	28	88	5	26	82	5	5	5	27	20	75	5	31	114	5	5	5
Shrub canopy cover	23	14	59	5	1	5	0	0	0	0	5	21	3	20	85	5	2.6	5	18	7	38	3	3	16	3	3	5
Coarse woody debris	1024	330	32	2	297	29	2	199	19	2	297	29	2	86	8	0	1.6	5	947	220	23	2	2210	233	2	2	5
Native plant species richness - trees	4	4	100	5	3	75	2.5	6	150	5	6	150	5	5	125	5	4.5	5	5	5	100	5	7	140	5	5	5
Native plant species richness - shrubs	8	9	113	5	4	50	2.5	4	50	2.5	8	100	5	6	75	2.5	3.5	5	8	7	88	2.5	4	50	2.5	2.5	5
Native plant species richness - grasses	6	8	133	5	9	150	5	17	283	5	16	267	5	9	150	5	5	5	7	6	86	2.5	5	71	2.5	2.5	5
Native plant species richness - forbes	11	9	82	2.5	21	191	5	26	236	5	38	345	5	14	127	5	4.5	5	11	10	91	5	9	82	2.5	3.75	5
Non-native plant cover	0	0.001	100	10	1	99	10	0.1	100	10	5	95	5	1	99	10	9	10	0	1	99	10	0.0001	100	10	10	10
Native grass cover	11	16	149	5	31	285	5	31	282	5	25	224	5	43	393	5	5	5	7	4	51	3	3	46	1	2	5
Organic litter	55	62	113	5	36	66	5	25	45	3	35	63	5	29	53	5	4.6	5	64	58	91	5	78	122	5	5	5
Quality and availability of food and foraging habitat				5			5			5			1			1	3.4	10				10			10	10	10
Quality and availability of shelter habitat				10			10			1			5			5	6.2	10				10			10	10	10
MAX Site Condition Score																		*100*									*100*
Score for sampling site				79.5			72.0			61.5			59.0			73.5						78.0			73.5		
Score for assessment unit																	*69.1*									*75.8*	
Score for the site																											
(converted to) **Site Condition Score - out of 3**																	**2.07**									**2.27**	
Site Context																											
Size of patch	**10**			10			10			10			10			10	10	10	**10**			10			10	10	10
Connectedness	**5**			5			5			5			5			5	5	5	**5**			5			4	4.5	5
Context	**5**			5			4			2			4			4	3.8	5	**5**			2			4	3	5
Ecological Corridors	**6**			6			4			4			4			4	4.4	6	**6**			0			4	2	6
Role of site location to species overall population in the state	**5**			5			5			5			5			5	5	5	**5**			5			5	5	5
Threats to the species	**15**			1			1			1			1			1	1	15	**15**			1			1	1	15
Species mobility capacity	**10**			10			10			7			10			7	8.8	10	**10**			10			10	10	10
MAX Site Context Score																		*56*									*56*
Score for sampling site				42.0			39.0			34.0			39.0			36.0						33.0			38.0		
Score for assessment unit																	*38.0*									*35.5*	
Score for the site																											
(converted to) **Site Context Score - out of 3**																	**2.04**									**1.90**	

Species Stocking Rate (SSR)	Scoring Table AU1					Score
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	Score	0	5		10	10
		No	Yes - adjacent		Yes - on-site	
Species usage of the site (habitat type & evidenced usage)	Score	0	5	10	15	10
		Not habitat	Dispersal	Foraging	Breeding	
Approximate density (per ha)	Score	0	10	20	30	n/a
		0%				
Role/importance of species population on site*	Score	0	5	10	15	15
	(*Total*	0	5 - 15	20 - 35	40 - 45	
					Total SRR score - out of 40	35
					(converted to) **Total SRR score - out of 4**	3.50

*SSR Supplementary Table	Scoring table			Score assigned
*Key source population for breeding	Score	0	10	10
		No	Yes/ Possibly	
*Key source population for dispersal	Score	0	5	5
		No	Yes/ Possibly	
*Necessary for maintaining genetic diversity	Score	0	15	15
		No	Yes/ Possibly	
*Near the limit of the species range	Score	0	15	15
		No	Yes	
	Total for SSR Supplementary Table			**45**

Scoring Table AU2					Score
Score	0	5		10	10
	No	Yes - adjacent		Yes - on-site	
Score	0	5	10	15	10
	Not habitat	Dispersal	Foraging	Breeding	
Score	0	10	20	30	n/a
	0%				
Score	0	5	10	15	15
(*Total*	0	5 - 15	20 - 35	40 - 45	
				Total SRR score - out of 40	35
				(converted to) **Total SRR score - out of 4**	3.50

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	5
	No	Yes/ Possibly	
Score	0	15	15
	No	Yes/ Possibly	
Score	0	15	15
	No	Yes	
Total for SSR Supplementary Table			**45**

Scoring Table AU3					Score
Score	0	5		10	10
	No	Yes - adjacent		Yes - on-site	
Score	0	5	10	15	10
	Not habitat	Dispersal	Foraging	Breeding	
Score	0	10	20	30	n/a
	0%				
Score	0	5	10	15	15
(*Total*	0	5 - 15	20 - 35	40 - 45	
				Total SRR score - out of 40	35
				(converted to) **Total SRR score - out of 4**	3.50

Scoring table			Score assigned
Score	0	10	10
	No	Yes/ Possibly	
Score	0	5	5
	No	Yes/ Possibly	
Score	0	15	15
	No	Yes/ Possibly	
Score	0	15	15
	No	Yes	
Total for SSR Supplementary Table			**45**

Final habitat quality score (weighted)	AU1	AU2	AU3	AU4	Average/Final
Site Condition score (out of 3)	2.07	2.27	2.28	2.21	
Site Context Score (out of 3)	2.04	1.90	2.09	2.04	
Species Stocking Rate Score (out of 4)	3.50	3.50	3.50	3.50	
Habitat Quality score - out of 10	**7.61**	**7.67**	**7.87**	**7.74**	**7.72**
Assessment Unit Area	113.91	6.74	10.24	5.8	
Total Impact Area (ha) for MNES	136.69	136.69	136.69	136.69	
Size weighting	0.83	0.05	0.07	0.04	
Weighted Habitat Quality	**6.34**	**0.38**	**0.59**	**0.33**	**7.64**

AU3_MIWF_13.11.6_Remnant									AU4_MIWF_13.11.8_Remnant						Total
Benchm		BC82B_MIWF			BC227_MIWF		Average	Maximum	Benchm		BC273_MIWF		Average	Maximum	Average
13.11.6	Raw Data	% Benchmar	Score	Raw Data	% Benchmar	Score	Score	Score	13.11.8	Raw Data	% Benchm	Score	Score	Score	Score
43	12	28	5	7	16	5	5	15	34	9	26	5	5	15	5.00
15	14	90	5	11	73	5	5	5	12.5	11	86	5	5	5	5.00
100	100	100	5	100	100	5	5	5	100	100	100	5	5	5	4.80
33.5	51	153	5	40	119	5	5	5	29.5	44	149	5	5	5	5.00
9	3	30	3	6	66	5	4	5	22	2	10	3	3	5	3.15
1292	1210	94	5	1340	104	5	5	5	568	1320	232	2	2	5	2.65
3	6	200	5	4	133	5	5	5	5	4	80	2.5	2.5	5	4.25
7	10	143	5	11	157	5	5	5	6	8	133	5	5	5	4.00
7	5	71	2.5	3	43	2.5	2.5	5	6	9	150	5	5	5	3.75
20	7	35	2.5	8	40	2.5	2.5	5	12	19	158	5	5	5	3.94
0	0.001	100	10	0.0001	100	10	10	10	0	1	99	10	10	10	9.75
2	1	70	3	0	20	1	2	5	21	10	47	1	1	5	2.50
89	90	101	5	96	107	5	5	5	60	74	123	5	5	5	4.90
			5			5	5	10				5	5	10	5.85
			10			10	10	10				10	10	10	9.05
								100						*100*	
			76.0			76.0						73.5			
							76.0						*73.5*		
															9.2
							2.28						**2.21**		**3.1**
10			10			10	10	10	**10**			10	10	10	10.00
5			5			5	5	5	**5**			4	4	5	4.63
5			5			5	5	5	**5**			4	4	5	3.95
6			6			6	6	6	**6**			4	4	6	4.10
5			5			5	5	5	**5**			5	5	5	5.00
15			1			1	1	15	**15**			1	1	15	1.00
10			7			7	7	10	**10**			10	10	10	8.95
								56						*56*	
			39.0			39.0						38.0			
							39.0						*38.0*		
															4.7
							2.09						**2.04**		**1.6**

Table AU4			Score
	10		10
cent	Yes - on-site		
10	15		10
Foragin g	Breeding		
20	30		n/a
10		15	15
20 - 35		40 - 45	
Total SRR score - out of 40			35
ted to) **Total SRR score - out of 4**			3.50

Score assigned
10
5
15
15
45

OFFSET - Fauna Species

Assessment Unit - Regional Ecosystem	**AU1 - 13.11.3 Remnant**																				
Site Reference	**Benchmark**	**BC09**			**BC12**			**BC18**			**BC19**			**BC23**			**BC24**			**Average**	**Max**
Site Condition	**13.11.3**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**
Large trees (euc plus non-euc)	**20**	7	35.00	5	0	0.00	0	0	0.00	0	8	40.00	5	2	10.00	5	1	5.00	5	**3.33**	**15**
Tree canopy height (average of emergent, canopy, sub-canopy)	**11**	6.75	61.364	3	7	63.64	3	7.75	70.45	5	10.75	97.73	5	9	81.82	5	6.75	61.36	3	**4.00**	**5**
Recruitment of woody perennial species in EDL	**100**	100	100.00	5	85	85.00	5	80	80.00	5	100	100.00	5	100	100.00	5	100	100.00	5	**5.00**	**5**
Tree canopy cover (average of emergent, canopy, sub-canopy)	**31.5**	51.4	163.17	5	12.3	39.05	2	24.4	77.46	5	9.35	29.68	2	20.5	65.08	5	35.35	112.22	5	**4.00**	**5**
Shrub canopy cover	**23**	2	8.70	0	14.6	63.48	5	7.9	34.35	3	18.7	81.30	5	5.6	24.35	3	5.2	22.61	3	**3.17**	**5**
Coarse woody debris	**1024**	695	67.87	5	610	59.57	5	270	26.37	2	660	64.45	5	485	47.36	2	445	43.46	2	**3.50**	**5**
Native plant species richness - trees	**4**	4	100.00	5	5	125.00	5	5	125.00	5	5	125.00	5	2	50.00	2.5	6	150.00	5	**4.58**	**5**
Native plant species richness - shrubs	**8**	8	100.00	5	8	100.00	5	8	100.00	5	7	87.50	2.5	6	75.00	2.5	10	125.00	5	**4.17**	**5**
Native plant species richness - grasses	**6**	13	216.67	5	9	150.00	5	11	183.33	5	10	166.67	5	14	233.33	5	8	133.33	5	**5.00**	**5**
Native plant species richness - forbes	**11**	27	245.45	5	23	209.09	5	26	236.36	5	17	154.55	5	16	145.45	5	15	136.36	5	**5.00**	**5**
Non-native plant cover	**0**	1	99.00	10	1	99.00	10	1	99.00	10	1	99.00	10	7	93.00	5	1	99.00	10	**9.17**	**10**
Native grass cover	**11**	50.8	461.82	5	45	409.09	5	64.4	585.45	5	59.2	538.18	5	59	536.36	5	14	127.27	5	**5.00**	**5**
Organic litter	**55**	30.6	55.64	5	18	32.73	3	19	34.55	3	5.4	9.82	0	18.4	33.45	3	12.6	22.91	3	**2.83**	**5**
Quality and availability of food and foraging habitat				5			1			5			1			5			5	**3.67**	**10**
Quality and availability of shelter				1			1			5			1			5			1	**2.33**	**10**
Scores for sampling sites				69			60			68			61.5			63			67		
Scores for assessment units																				**64.75**	
MAX Site Condition Score																					**100**
Site Condition Score - out of 3																				**1.94**	
Site Context	**GIS**																				
Size of patch	**10**			7			10			10			10			10			10	**9.50**	**10**
Connectedness	**5**			2			0			2			2			0			5	**1.83**	**5**
Context	**5**			4			4			4			4			4			2	**3.67**	**5**
Ecological Corridors	**6**			0			0			0			0			0			4	**0.67**	**6**
Role of site location to species overall population in the state	**5**			5			5			5			5			5			5	**5.00**	**5**
Threats to the species	**15**			7			7			7			7			7			7	**7.00**	**15**
Species mobility capacity	**10**			10			7			7			10			7			10	**8.50**	**10**
Scores for sampling sites				35			33			35			38			33			43		
Scores for assessment units																					
																				36.17	
MAX Site Context Score																					**56**
Site Context Score - out of 3																				**1.94**	

Assessment Unit - Regional Ecosystem	**AU2 - 13.11.3 Regrowth**														
Site Reference	**Benchmark**	**BC15**			**BC16**			**BC20**			**BC22**			**Average**	**Max**
Site Condition	**13.11.3**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**
Large trees (euc plus non-euc)	**20**	0	0.00	0	0	0.00	0	0	0.00	0	10	50.00	10	**2.50**	**15**
Tree canopy height (average of emergent, canopy, sub-canopy)	**11**	7.75	70.45	5	7.75	70.45	5	4	36.36	3	12	109.09	5	**4.50**	**5**
Recruitment of woody perennial species in EDL	**100**	100	100.00	5	100	100.00	5	80	80.00	5	0	0.00	0	**3.75**	**5**
Tree canopy cover (average of emergent, canopy, sub-canopy)	**31.5**	16.5	52.38	5	4.85	15.40	2	31.85	101.11	5	10.05	31.90	2	**3.50**	**5**
Shrub canopy cover	**23**	4.2	18.26	3	63.7	276.96	3	11.7	50.87	5	26	113.04	5	**4.00**	**5**
Coarse woody debris	**1024**	65	6.35	0	0	0.00	0	1635	159.67	5	170	16.60	2	**1.75**	**5**
Native plant species richness - trees	**4**	2	50.00	2.5	1	25.00	2.5	5	125.00	5	5	125.00	5	**3.75**	**5**
Native plant species richness - shrubs	**8**	6	75.00	2.5	10	125.00	5	10	125.00	5	15	187.50	5	**4.38**	**5**
Native plant species richness - grasses	**6**	9	150.00	5	11	183.33	5	10	166.67	5	12	200.00	5	**5.00**	**5**
Native plant species richness - forbes	**11**	16	145.45	5	16	145.45	5	18	163.64	5	19	172.73	5	**5.00**	**5**
Non-native plant cover	**0**	7	93.00	5	1	99.00	10	1	99.00	10	1	99.00	10	**8.75**	**10**
Native grass cover	**11**	59.2	538.18	5	65	590.91	5	26.6	241.82	5	38	345.45	5	**5.00**	**5**
Organic litter	**55**	15	27.27	3	14	25.45	3	22.8	41.45	3	16	29.09	3	**3.00**	**5**
Quality and availability of food and foraging habitat				5			5			5			1	**4.00**	**10**
Quality and availability of shelter				1			1			1			10	**3.25**	**10**
Scores for sampling sites				52			56.5			67			73		
Scores for assessment units														**62.125**	
MAX Site Condition Score															**100**
Site Condition Score - out of 3														**1.86**	
Site Context															
Size of patch	**10**			5			10			10			5	**7.50**	**10**
Connectedness	**5**			0			2			5			5	**3.00**	**5**
Context	**5**			0			4			4			4	**3.00**	**5**
Ecological Corridors	**6**			0			4			0			0	**1.00**	**6**
Role of site location to species overall population in the state	**5**			5			5			5			5	**5.00**	**5**
Threats to the species	**15**			7			7			7			7	**7.00**	**15**
Species mobility capacity	**10**			7			7			7			10	**7.75**	**10**
Scores for sampling sites				24			39			38			36		
Scores for assessment units															
														34.25	
MAX Site Context Score															**56**
Site Context Score - out of 3														**1.83**	

Assessment Unit - Regional Ecosystem	**AU3 - 13.11.5 Remnant**					
Site Reference	**Benchmark**	**BC07**			**Average**	**Maximu**
Site Condition	**13.11.5**	Raw Data	% Bench	Score	**Score**	**m Score**
Large trees (euc plus non-euc)	**51**	0	0.00	0	**0.00**	**15**
Tree canopy height (average of emergent, canopy, sub-canopy)	**16**	14.5	90.63	5	**5.00**	**5**
Recruitment of woody perennial species in EDL	**100**	75	75.00	5	**5.00**	**5**
Tree canopy cover (average of emergent, canopy, sub-canopy)	**27**	35.3	130.74	5	**5.00**	**5**
Shrub canopy cover	**18**	3.3	18.33	3	**3.00**	**5**
Coarse woody debris	**947**	1165	123.02	5	**5.00**	**5**
Native plant species richness - trees	**5**	4	80.00	2.5	**2.50**	**5**
Native plant species richness - shrubs	**8**	10	125.00	5	**5.00**	**5**
Native plant species richness - grasses	**7**	11	157.14	5	**5.00**	**5**
Native plant species richness - forbes	**11**	14	127.27	5	**5.00**	**5**
Non-native plant cover	**0**	2	98.00	10	**10.00**	**10**
Native grass cover	**7**	26	371.43	5	**5.00**	**5**
Organic litter	**64**	48.6	75.94	5	**5.00**	**5**
Quality and availability of food and foraging habitat				5	**5.00**	**10**
Quality and availability of shelter				5	**5.00**	**10**
Scores for sampling sites				70.5		
Scores for assessment units					**70.5**	
MAX Site Condition Score						**100**
Site Condition Score - out of 3					**2.12**	
Site Context						
Size of patch	**10**			10	**10.00**	**10**
Connectedness	**5**			2	**2.00**	**5**
Context	**5**			4	**4.00**	**5**
Ecological Corridors	**6**			0	**0.00**	**6**
Role of site location to species overall population in the state	**5**			5	**5.00**	**5**
Threats to the species	**15**			7	**7.00**	**15**
Species mobility capacity	**10**			7	**7.00**	**10**
Scores for sampling sites				35		
Scores for assessment units						
					35.00	
MAX Site Context Score						**56**
Site Context Score - out of 3					**1.88**	

Assessment Unit - Regional Ecosystem	**AU4 - 13.11.6 Remnant**								
Site Reference	**Benchmark**	**BC11**			**BC21**			**Average**	**Max**
Site Condition	**13.11.6**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**
Large trees (euc plus non-euc)	**43**	0	0.00	0	9	20.93	5	**2.50**	**15**
Tree canopy height (average of emergent, canopy, sub-canopy)	**15**	10.75	71.67	5	12.5	83.33	5	**5.00**	**5**
Recruitment of woody perennial species in EDL	**100**	100	100.00	5	100	100.00	5	**5.00**	**5**
Tree canopy cover (average of emergent, canopy, sub-canopy)	**33.5**	23.5	70.15	5	26.22	78.27	5	**5.00**	**5**
Shrub canopy cover	**9**	24.2	268.89	3	53.3	592.22	3	**3.00**	**5**
Coarse woody debris	**1292**	870	67.34	5	610	47.21	2	**3.50**	**5**
Native plant species richness - trees	**3**	8	266.67	5	4	133.33	5	**5.00**	**5**
Native plant species richness - shrubs	**7**	14	200.00	5	12	171.43	5	**5.00**	**5**
Native plant species richness - grasses	**7**	2	28.57	2.5	11	157.14	5	**3.75**	**5**
Native plant species richness - forbes	**20**	15	75.00	2.5	16	80.00	2.5	**2.50**	**5**
Non-native plant cover	**0**	2	98.00	10	1	99.00	10	**10.00**	**10**
Native grass cover	**2**	43.4	2170.00	5	48	2400.00	5	**5.00**	**5**
Organic litter	**89**	30	33.71	3	32	35.96	3	**3.00**	**5**
Quality and availability of food and foraging habitat				5			5	**5.00**	**10**
Quality and availability of shelter				1			1	**1.00**	**10**
Scores for sampling sites				62			66.5		
Scores for assessment units								**64.25**	
MAX Site Condition Score									**100**
Site Condition Score - out of 3								**1.93**	
Site Context									
Size of patch	**10**			0			10	**5.00**	**10**
Connectedness	**5**			0			4	**2.00**	**5**
Context	**5**			2			2	**2.00**	**5**
Ecological Corridors	**6**			0			0	**0.00**	**6**
Role of site location to species overall population in the state	**5**			5			5	**5.00**	**5**
Threats to the species	**15**			7			7	**7.00**	**15**
Species mobility capacity	**10**			7			10	**8.50**	**10**
Scores for sampling sites				21			38		
Scores for assessment units									
								29.50	
MAX Site Context Score									**56**
Site Context Score - out of 3								**1.58**	

Species Stocking Rate (SSR)	**AU1 - 13.11.3 Remnant**					Score given
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	Score	0	5		10	10
		No	Yes - adjacent		Yes - on site	
Species usage of the site (habitat type & evidenced usage)	Score	0	5	10	15	15
		Not habitat	Dispersal	Foraging	Breeding	
Approximate density (per ha)	Score	0	10	20	30	0
		0%				
Role/importance of species population on site*	Score (*total from table below*)	0	5	10	15	10
		0	5 - 15	20 - 35	40 - 45	
Total SRR score (out of 70)						35
SRR Score (out of 4)						2.00

***SSR Supplementary Table**	**AU1 - 13.11.3 Remnant**			Score given
*Key source population for breeding	Score	0	10	
		No	Yes/ Possibly	10
*Key source population for dispersal	Score	0	5	
		No	Yes/ Possibly	5
*Necessary for maintaining genetic diversity	Score	0	15	
		No	Yes/ Possibly	15
*Near the limit of the species range	Score	0	15	
		No	Yes	0
	Total for SSR Supplementary Table			**30**

Final habitat quality score (weighted)	**AU1**	**AU2**	**AU3**	**AU4**	**AU5**	**AU6**	**AU7**	**AU8**	**Average/Final**
Site Condition score (out of 3)	1.94	1.86	2.12	1.93	1.82	1.22	1.62	1.45	
Site Context Score (out of 3)	1.94	1.83	1.88	1.58	1.90	1.29	1.20	1.17	
Species Stocking Rate Score (out of 4)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Habitat Quality score (out of 10)	***6***	***6***	***6***	***6***	***6***	***5***	***5***	***5***	***5.34***
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.12	0.01	0.01	0.03	0.22	0.03	0.25	
Weighted Habitat Quality Score	***1.91***	***0.68***	***0.07***	***0.07***	***0.17***	***0.99***	***0.14***	***1.16***	***5.20***

3330.14

AU Areas have been Updated 27/04/2023

AU5 - 13.11.8 Remnant

Benchmark 13.11.8	BC10			BC27			Average Score	Max Score
	Raw Data	% Bench	Score	Raw Data	% Bench	Score		
34	0	0.00	0	2	5.88	5	2.50	15
12.5	11.75	94.00	5	13.55	108.40	5	5.00	5
100	100	100.00	5	100	100.00	5	5.00	5
29.5	35.45	120.17	5	36.15	122.54	5	5.00	5
22	47.3	215.00	3	4	18.18	3	3.00	5
568	1435	252.64	2	12570	2213.03	2	2.00	5
5	6	120.00	5	0	0.00	0	2.50	5
6	5	83.33	2.5	5	83.33	2.5	2.50	5
6	0	0.00	0	16	266.67	5	2.50	5
12	7	58.33	2.5	12	100.00	5	3.75	5
0	1	99.00	10	1	99.00	10	10.00	10
21	1	4.76	0	58.2	277.14	5	2.50	5
60	48.6	81.00	5	25	41.67	3	4.00	5
			10			1	5.50	10
			5			5	5.00	10
			60			61.5		
							60.75	
								100
							1.82	
10			10			5	7.50	10
5			4			5	4.50	5
5			4			4	4.00	5
6			4			0	2.00	6
5			5			5	5.00	5
15			7			7	7.00	15
10			4			7	5.50	10
			38			33		
							35.50	
								56
							1.90	

AU6 - 13.11.3 Predominantly Cleared

Benchmark 13.11.3	BC01			BC04			BC05			Average Score	Max Score
	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score		
20	0	0.00	0	2	10.00	5	0	0.00	0	1.67	15
11	4.5	40.91	3	15	136.36	5	5	45.45	3	3.67	5
100	66	66.00	3	0	0.00	0	66	66.00	3	2.00	5
31.5	0	0.00	0	5.4	17.14	2	1.9	6.03	0	0.67	5
23	3.3	14.35	3	11.8	51.30	5	0	0.00	0	2.67	5
1024	235	22.95	2	140	13.67	2	0	0.00	0	1.33	5
4	3	75.00	2.5	1	25.00	2.5	3	75.00	2.5	2.50	5
8	8	100.00	5	5	62.50	2.5	7	87.50	2.5	3.33	5
6	7	116.67	5	2	33.33	2.5	11	183.33	5	4.17	5
11	9	81.82	2.5	4	36.36	2.5	13	118.18	5	3.33	5
0	2	98.00	10	1	99.00	10	7	93.00	5	8.33	10
11	56	509.09	5	89	809.09	5	46.4	421.82	5	5.00	5
55	3	5.45	0	2	3.64	0	1	1.82	0	0.00	5
			1			1			1	1.00	10
			1			1			1	1.00	10
			43			*46*			*33*		
										40.66667	
											100
										1.22	
10			0			0			0	0.00	10
5			0			0			2	0.67	5
5			0			4			0	1.33	5
6			0			0			6	2.00	6
5			5			5			5	5.00	5
15			7			7			7	7.00	15
10			7			10			7	8.00	10
			19			26			27		
										24.00	
											56
										1.29	

AU7 - 13.11.8 Regrowth

Bendchmark 13.11.8	BC02			BC14			BC35			Average score	Max score
	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score		
34	1	2.94	5	0	0.00	0	0	0.00	0	1.67	15
12.5	8.5	68.00	3	6.25	50.00	3	8.575	68.60	3	3.00	5
100	100	100.00	5	83	83.00	5	100	100.00	5	5.00	5
29.5	16.25	55.08	5	5.85	19.83	2	6.95	23.56	2	3.00	5
22	71.6	325.45	3	0.3	1.36	0	5.4	24.55	3	2.00	5
568	0	0.00	0	455	80.11	5	500	88.03	5	3.33	5
5	4	80.00	2.5	7	140.00	5	2	40.00	2.5	3.33	5
6	7	116.67	5	12	200.00	5	5	83.33	2.5	4.17	5
6	8	133.33	5	10	166.67	5	8	133.33	5	5.00	5
12	26	216.67	5	23	191.67	5	10	83.33	2.5	4.17	5
0	40	60.00	3	2	98.00	10	20	80.00	5	6.00	10
21	44	209.52	5	65.6	312.38	5	32	152.38	5	5.00	5
60	11	18.33	3	9.4	15.67	3	48.2	80.33	5	3.67	5
			5			5			1	3.67	10
			1			1			1	1.00	10
			55.5			*59*			*47.5*		
										54	
											100
										1.62	
10			5			0			5	3.33	10
5			0			0			0	0.00	5
5			2			4			2	2.67	5
6			0			0			0	0.00	6
5			1			5			1	2.33	5
15			7			7			7	7.00	15
10			7			7			7	7.00	10
			22			23			22		
										22.33	
											56
										1.20	

AU8 - 13.11.8 Predominately Cleared

12/12/2023 CHECK

Benchmark 13.11.8	BC03			BC06			BC17			BC31			Average score	Max score	AU Avg	GG CHECK	GHFF CHECK	RH CHECK	SQP CHECK
	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score							
34	1	2.94	5	1	5.00	5	4	11.76	5	0	0.00	0	3.75	15	2.60	2.60	2.60	n/a missing AU 4	2.60
12.5	9.5	76.00	5	15	136.36	5	12	96.00	5	7.05	56.40	3	4.50	5	4.20	4.20	4.20		4.20
100	100	100.00	5	100	100.00	5	66	66.00	3	100	100.00	5	4.50	5	4.36	4.36	4.36		4.36
29.5	0	0.00	0	0	0.00	0	7.35	24.92	2	3.75	12.71	2	1.00	5	3.12	3.12	3.12		3.12
22	0	0.00	0	9.2	40.00	3	1.1	5.00	0	0	0.00	0	0.75	5	2.68	2.68	2.68		2.68
568	375	66.02	5	205	20.02	2	480	84.51	5	500	88.03	5	4.25	5	3.00	3.00	3.00		3.00
5	2	40.00	2.5	3	75.00	2.5	3	60.00	2.5	1	20.00	0	1.88	5	3.40	3.40	3.40		3.40
6	4	66.67	2.5	11	137.50	5	5	83.33	2.5	3	50.00	2.5	3.13	5	3.90	3.90	3.90		3.90
6	12	200.00	5	16	266.67	5	12	200.00	5	12	200.00	5	5.00	5	4.60	4.60	4.60		4.60
12	15	125.00	5	11	100.00	5	11	91.67	5	18	150.00	5	5.00	5	4.40	4.40	4.40		4.40
0	5	95.00	5	12	88.00	5	2	98.00	10	30	70.00	3	5.75	10	8.24	8.24	8.24		8.24
21	83.8	399.05	5	52.4	476.36	5	48	228.57	5	36.6	174.29	5	5.00	5	4.80	4.80	4.80		4.80
60	2.8	4.67	0	1	1.82	0	1	1.67	0	12.6	21.00	3	0.75	5	2.48	2.48	2.48		2.48
			5			1			1			1	2.00	10	3.44				
			1			1			1			1	1.00	10	2.16				
			51			49.5			52			40.5			51.78				
													48.25		5.60				
															57.38				
														100		0	0		0
													1.45		1.72	0	0		0
																0	0		0
10			0			0			0			0	0.00	10	5.28	0	0		0
5			0			0			2			2	1.00	5	1.76	0	0		0
5			4			2			4			2	3.00	5	2.96	0	0		0
6			0			0			4			0	1.00	6	0.88	0	0		0
5			1			5			1			1	2.00	5	4.20	0	0		0
15			7			7			7			7	7.00	15	7.00	0	0		0
10			7			7			10			7	7.75	10	7.72	0	0		0
																0	0		0
			19			21			28			19			10.88	0	0		0
															18.92	0	0		0
													21.75		29.80				
														56					
													1.17		1.60				

OFFSET - Fauna Species

Assessment Unit - Regional Ecosystem	AU1 - 13.11.3 Remnant																						AU2 - 13.11.3 Regrowth																						AU3 - 13.11.5 Remnant						AU4 - 13.11.6 Remnant									
Site Reference	**Benchmark**	**BC9**			**BC12**			**BC18**			**BC19**			**BC23**			**BC24**			**Average**	**Max**	**Benchmark**	**BC15**			**BC16**			**BC 20**			**BC 22**			**Average**	**Max**	**Benchmark**	**BC 7**			**Average**	**Max**	**Benchmark**	**BC 11**			**BC21**		
Site Condition	**13.11.3**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.3**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.5**	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.6**	Raw Data	% Bench	Score	Raw Data	% Bench
Large trees (euc plus non-euc)	**20**	7	35.00	5	0	0.00	0	0	0.00	0	8	40.00	5	2	10.00	5	1	5.00	5	**3.33**	**15**	**20**	0	0.00	0	0	0.00	0	0	0.00	0	10	50.00	10	**2.50**	**15**	**51**	0	0.00	0	**0.00**	**15**	**43**	0	0.00	0	9	20.93
Tree canopy height (average of emergent, canopy, sub-canopy)	**11**	6.75	61.364	3	7	63.64	3	7.75	70.45	5	10.75	97.73	5	9	81.82	5	6.75	61.36	3	**4.00**	**5**	**11**	7.75	70.45	5	7.75	70.45	5	4	36.36	3	12	109.09	5	**4.50**	**5**	**16**	14.5	90.63	5	**5.00**	**5**	**15**	10.75	71.67	5	12.5	83.33
Recruitment of woody perennial species in EDL	**100**	100	100.00	5	85	85.00	5	80	80.00	5	100	100.00	5	100	100.00	5	100	100.00	5	**5.00**	**5**	**100**	100	100.00	5	100	100.00	5	80	80.00	5	0	0.00	0	**3.75**	**5**	**100**	75	75.00	5	**5.00**	**5**	**100**	100	100.00	5	100	100.00
Tree canopy cover (average of emergent, canopy, sub-canopy)	**31.5**	51.4	163.17	5	12.3	39.05	2	24.4	77.46	5	9.35	29.68	2	20.5	65.08	5	35.35	112.22	5	**4.00**	**5**	**31.5**	16.5	52.38	5	4.85	15.40	2	31.85	101.11	5	10.05	31.90	2	**3.50**	**5**	**27**	35.3	130.74	5	**5.00**	**5**	**33.5**	23.5	70.15	5	26.22	78.27
Shrub canopy cover	**23**	2	8.70	0	14.6	63.48	5	7.9	34.35	3	18.7	81.30	5	5.6	24.35	3	5.2	22.61	3	**3.17**	**5**	**23**	4.2	18.26	3	63.7	276.96	3	11.7	50.87	5	26	113.04	5	**4.00**	**5**	**18**	3.3	18.33	3	**3.00**	**5**	**9**	24.2	268.89	3	53.3	592.22
Coarse woody debris	**1024**	695	67.87	5	610	59.57	5	270	26.37	2	660	64.45	5	485	47.36	2	445	43.46	2	**3.50**	**5**	**1024**	65	6.35	0	0	0.00	0	1635	159.67	5	170	16.60	2	**1.75**	**5**	**947**	1165	123.02	5	**5.00**	**5**	**1292**	870	67.34	5	610	47.21
Native plant species richness - trees	**4**	4	100.00	5	5	125.00	5	5	125.00	5	5	125.00	5	2	50.00	2.5	6	150.00	5	**4.58**	**5**	**4**	2	50.00	2.5	1	25.00	2.5	5	125.00	5	5	125.00	5	**3.75**	**5**	**5**	4	80.00	2.5	**2.50**	**5**	**3**	8	266.67	5	4	133.33
Native plant species richness - shrubs	**8**	8	100.00	5	8	100.00	5	8	100.00	5	7	87.50	2.5	6	75.00	2.5	10	125.00	5	**4.17**	**5**	**8**	6	75.00	2.5	10	125.00	5	10	125.00	5	15	187.50	5	**4.38**	**5**	**8**	10	125.00	5	**5.00**	**5**	**7**	14	200.00	5	12	171.43
Native plant species richness - grasses	**6**	13	216.67	5	9	150.00	5	11	183.33	5	10	166.67	5	14	233.33	5	8	133.33	5	**5.00**	**5**	**6**	9	150.00	5	11	183.33	5	10	166.67	5	12	200.00	5	**5.00**	**5**	**7**	11	157.14	5	**5.00**	**5**	**7**	2	28.57	2.5	11	157.14
Native plant species richness - forbes	**11**	27	245.45	5	23	209.09	5	26	236.36	5	17	154.55	5	16	145.45	5	15	136.36	5	**5.00**	**5**	**11**	16	145.45	5	16	145.45	5	18	163.64	5	19	172.73	5	**5.00**	**5**	**11**	14	127.27	5	**5.00**	**5**	**20**	15	75.00	2.5	16	80.00
Non-native plant cover	**0**	1	99.00	10	1	99.00	10	1	99.00	10	1	99.00	10	7	93.00	5	1	99.00	10	**9.17**	**10**	**0**	7	93.00	5	1	99.00	10	1	99.00	10	1	99.00	10	**8.75**	**10**	**0**	2	98.00	10	**10.00**	**10**	**0**	2	98.00	10	1	99.00
Native grass cover	**11**	50.8	461.82	5	45	409.09	5	64.4	585.45	5	59.2	538.18	5	59	536.36	5	14	127.27	5	**5.00**	**5**	**11**	59.2	538.18	5	65	590.91	5	26.6	241.82	5	38	345.45	5	**5.00**	**5**	**7**	26	371.43	5	**5.00**	**5**	**2**	43.4	2170.00	5	48	2400.00
Organic litter	**55**	30.6	55.64	5	18	32.73	3	19	34.55	3	5.4	9.82	0	18.4	33.45	3	12.6	22.91	3	**2.83**	**5**	**55**	15	27.27	3	14	25.45	3	22.8	41.45	3	16	29.09	3	**3.00**	**5**	**64**	48.6	75.94	5	**5.00**	**5**	**89**	30	33.71	3	32	35.96
Quality and availability of food and foraging habitat				5			1			1			1			1			1	**1.67**	**10**				1			1			1			1	**1.00**	**10**				5	**5.00**	**10**				5		
Quality and availability of shelter				10			1			1			1			1			1	**2.50**	**10**				1			1			1			1	**2.00**	**10**				5	**5.00**	**10**				1		
Scores for sampling sites				*78*		60			*60*			*61.5*			*55*			*63*						*48*			*52.5*			*63*			*68*						*70.5*			*62*				
Scores for assessment units																				**62.92**															**57.875**						**70.5**							
MAX Site Condition Score																					***100***														***100***						***100***							
Site Condition Score - out of 3																				**1.89**															**1.74**						**2.12**							
Site Context	**GIS - 4**																																																
Size of patch	**10**			7			10			10			10			10			10	**10.00**	**10**	**10**			5			10			10			5	**6.00**	**10**	**10**			10	**10.00**	**10**	**10**			0		
Connectedness	**5**			2			0			2			2			0			5	**1.80**	**5**	**5**			0			2			5			5	**2.40**	**5**	**5**			2	**2.00**	**5**	**5**			0		
Context	**5**			4			4			4			4			4			2	**3.60**	**5**	**5**			0			4			4			4	**3.20**	**5**	**5**			4	**4.00**	**5**	**5**			2		
Ecological Corridors	**6**			0			0			0			0			0			4	**0.80**	**6**	**6**			0			4			0			0	**0.80**	**6**	**6**			0	**0.00**	**6**	**6**			0		
Role of site location to species overall population in the state	**5**			1			1			1			1			1			1	**1.00**	**5**	**5**			1			1			1			1	**1.00**	**5**	**5**			1	**1.00**	**5**	**5**			1		
Threats to the species	**15**			7			7			7			7			7			7	**7.00**	**15**	**15**			7			7			7			7	**7.00**	**15**	**15**			7	**7.00**	**15**	**15**			7		
Species mobility capacity	**10**			4			1			1			4			1			1	**1.60**	**10**	**10**			1			1			1			4	**1.60**	**10**	**10**			1	**1.00**	**10**	**10**			1		
Scores for sampling sites				25			23			25			28			23			30						14			29			28			26						25						11		
Scores for assessment units																				**25.80**															**22.00**						**25.00**							
MAX Site Context Score																					***56***																					***56***							
Site Context Score - out of 3																				**1.38**															**1.18**						**1.34**							

Species Stocking Rate (SSR)	**AU1 - 13.11.3 Remnant**					**Score given**
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	Score	0		5	10	5
		No	Yes - adjacent		Yes - on site	
Species usage of the site (habitat type & evidenced usage)	Score	0	5	10	15	10
		Not habitat	Dispersal	Foraging	Breeding	
Approximate density (per ha) (N/A)	Score	0	10	20	30	n/a
		0%				
Role/importance of species population on site*	Score (*Total from supplement ary table*)	0	5	10	15	0
		0	5 - 15	20 - 35	40 - 45	
Total SRR score (out of 40)						15
SRR Score (out of 4)						1.50

***SSR Supplementary Table**	**AU1 - 13.11.3 Remnant**			**Score given**
*Key source population for breeding	Score	0	10	0
		No	Yes/ Possibly	
*Key source population for dispersal	Score	0	5	0
		No	Yes/ Possibly	
*Necessary for maintaining genetic diversity	Score	0	15	0
		No	Yes/ Possibly	
*Near the limit of the species range	Score	0	15	0
		No	Yes	
Total for SSR Supplementary Table				**0**

Final habitat quality score (weighted)	**AU1**	**AU2**	**AU3**	**AU4**	**AU5**	**AU6**	**AU7**	**AU8**	**Average/Final**
Site Condition score (out of 3)	1.89	1.74	2.12	1.93	1.69	1.22	1.62	1.42	
Site Context Score (out of 3)	1.38	1.18	1.34	0.96	1.45	0.70	0.80	0.75	
Species Stocking Rate Score (out of 4)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
Habitat Quality score (out of 10)	***5***	***4***	***5***	***4***	***5***	***3***	***4***	***4***	***4.27***
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.12	0.01	0.01	0.03	0.22	0.03	0.25	
Weighted Habitat Quality Score	***1.55***	***0.53***	***0.06***	***0.06***	***0.14***	***0.75***	***0.11***	***0.92***	***4.12***

3330.14 AU Areas have been Updated 1/12/2023

AU Areas have been Updated 27/04/2023

			AU5 - 13.11.8 Remnant									AU6 - 13.11.3 Predominantly Cleared											AU7 - 13.11.8 Regrowth											AU8 - 13.11.8 Cleared												
					BC 10			BC27						BC 1			BC 4			BC5						BC2			BC14			BC35						BC3			BC 6			BC17			BC31				
Score	Average Score	Max Score	Benchmark 13.11.8	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Average Score	Max Score	Benchmark 13.11.3	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Average Score	Max Score	Bendchmark 13.11.8	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Average score	Max score	Benchmark 13.11.8	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Average score	Max score	Average All Sites
5	**2.50**	**15**	**34**	0	0.00	0	2	5.88	5	**2.50**	**15**	**20**	0	0.00	0	2	10.00	5	0	0.00	0	**1.67**	**15**	**34**	1	2.94	5	0	0.00	0	0	0.00	0	**1.67**	**15**	**34**	1	2.94	5	1	5.00	5	4	11.76	5	0	0.00	0	**3.75**	**15**	2.60
5	**5.00**	**5**	**12.5**	11.75	94.00	5	13.55	108.40	5	**5.00**	**5**	**11**	4.5	40.91	3	15	136.36	5	5	45.45	3	**3.67**	**5**	**12.5**	8.5	68.00	3	6.25	50.00	3	8.575	68.60	3	**3.00**	**5**	**12.5**	9.5	76.00	5	15	136.36	5	12	96.00	5	7.05	56.40	3	**4.50**	**5**	4.20
5	**5.00**	**5**	**100**	100	100.00	5	100	100.00	5	**5.00**	**5**	**100**	66	66.00	3	0	0.00	0	66	66.00	3	**2.00**	**5**	**100**	100	100.00	5	83	83.00	5	100	100.00	5	**5.00**	**5**	**100**	100	100.00	5	100	100.00	5	66	66.00	3	100	100.00	5	**4.50**	**5**	4.36
5	**5.00**	**5**	**29.5**	35.45	120.17	5	36.15	122.54	5	**5.00**	**5**	**31.5**	0	0.00	0	5.4	17.14	2	1.9	6.03	0	**0.67**	**5**	**29.5**	16.25	55.08	5	5.85	19.83	2	6.95	23.56	2	**3.00**	**5**	**29.5**	0	0.00	0	0	0.00	0	7.35	24.92	2	3.75	12.71	2	**1.00**	**5**	3.12
3	**3.00**	**5**	**22**	47.3	215.00	3	4	18.18	3	**3.00**	**5**	**23**	3.3	14.35	3	11.8	51.30	5	0	0.00	0	**2.67**	**5**	**22**	71.6	325.45	3	0.3	1.36	0	5.4	24.55	3	**2.00**	**5**	**22**	0	0.00	0	9.2	40.00	3	1.1	5.00	0	0	0.00	0	**0.75**	**5**	2.68
2	**3.50**	**5**	**568**	1435	252.64	2	12570	2213.03	2	**2.00**	**5**	**1024**	235	22.95	2	140	13.67	2	0	0.00	0	**1.33**	**5**	**568**	0	0.00	0	455	80.11	5	500	88.03	5	**3.33**	**5**	**568**	375	66.02	5	205	20.02	2	480	84.51	5	500	88.03	5	**4.25**	**5**	3.00
5	**5.00**	**5**	**5**	6	120.00	5	0	0.00	0	**2.50**	**5**	**4**	3	75.00	2.5	1	25.00	2.5	3	75.00	2.5	**2.50**	**5**	**5**	4	80.00	2.5	7	140.00	5	2	40.00	2.5	**3.33**	**5**	**5**	2	40.00	2.5	3	75.00	2.5	3	60.00	2.5	1	20.00	0	**1.88**	**5**	3.40
5	**5.00**	**5**	**6**	5	83.33	2.5	5	83.33	2.5	**2.50**	**5**	**8**	8	100.00	5	5	62.50	2.5	7	87.50	2.5	**3.33**	**5**	**6**	7	116.67	5	12	200.00	5	5	83.33	2.5	**4.17**	**5**	**6**	4	66.67	2.5	11	137.50	5	5	83.33	2.5	3	50.00	2.5	**3.13**	**5**	3.90
5	**3.75**	**5**	**6**	0	0.00	0	16	266.67	5	**2.50**	**5**	**6**	7	116.67	5	2	33.33	2.5	11	183.33	5	**4.17**	**5**	**6**	8	133.33	5	10	166.67	5	8	133.33	5	**5.00**	**5**	**6**	12	200.00	5	16	266.67	5	12	200.00	5	12	200.00	5	**5.00**	**5**	4.60
2.5	**2.50**	**5**	**12**	7	58.33	2.5	12	100.00	5	**3.75**	**5**	**11**	9	81.82	2.5	4	36.36	2.5	13	118.18	5	**3.33**	**5**	**12**	26	216.67	5	23	191.67	5	10	83.33	2.5	**4.17**	**5**	**12**	15	125.00	5	11	100.00	5	11	91.67	5	18	150.00	5	**5.00**	**5**	4.40
10	**10.00**	**10**	**0**	1	99.00	10	1	99.00	10	**10.00**	**10**	**0**	2	98.00	10	1	99.00	10	7	93.00	5	**8.33**	**10**	**0**	40	60.00	3	2	98.00	10	20	80.00	5	**6.00**	**10**	**0**	5	95.00	5	12	88.00	5	2	98.00	10	30	70.00	3	**5.75**	**10**	8.24
5	**5.00**	**5**	**21**	1	4.76	0	58.2	277.14	5	**2.50**	**5**	**11**	56	509.09	5	89	809.09	5	46.4	421.82	5	**5.00**	**5**	**21**	44	209.52	5	65.6	312.38	5	32	152.38	5	**5.00**	**5**	**21**	83.8	399.05	5	52.4	476.36	5	48	228.57	5	36.6	174.29	5	**5.00**	**5**	4.80
3	**3.00**	**5**	**60**	48.6	81.00	5	25	41.67	3	**4.00**	**5**	**55**	3	5.45	0	2	3.64	0	1	1.82	0	**0.00**	**5**	**60**	11	18.33	3	9.4	15.67	3	48.2	80.33	5	**3.67**	**5**	**60**	2.8	4.67	0	1	1.82	0	1	1.67	0	12.6	21.00	3	**0.75**	**5**	2.48
5	**5.00**	**10**				5			1	**3.00**	**10**				1			1			1	**1.00**	**10**				5			1			**2.33**	**10**				1			1			1			1	**1.00**	**10**	1.96
1	**1.00**	**10**				5			1	**3.00**	**10**				1			1			1	**1.00**	**10**				5			1			**2.33**	**10**				1			1			1			1	**1.00**	**10**	2.00
66.5						*55*			*57.5*						*43*			*46*			*33*						*59.5*			*55*			*47.5*						*47*			*49.5*			*52*			*40.5*			51.78
	64.25									***56.25***											***40.67***												***54***														***47.25***		3.96
		100																																	***100***													***100***		55.74
	1.93									**1.69**	***100***										**1.22**	***100***											**1.62**														**1.42**		1.67
10	**5.00**	**10**	**10**			10			5	**7.50**	**10**	**10**			0			0			0	**0.00**	**10**	**10**			5			0			**3.33**	**10**	**10**			0			0			0			0	**0.00**	**10**	5.28
4	**2.00**	**5**	**5**			4			5	**4.50**	**5**	**5**			0			0			2	**0.67**	**5**	**5**			0			0			**0.00**	**5**	**5**			0			0			2			2	**1.00**	**5**	1.76
2	**2.00**	**5**	**5**			4			4	**4.00**	**5**	**5**			0			4			0	**1.33**	**5**	**5**			2			4			**2.67**	**5**	**5**			4			2			4			2	**3.00**	**5**	2.96
0	**0.00**	**6**	**6**			4			0	**2.00**	**6**	**6**			0			0			6	**2.00**	**6**	**6**			0			0			**0.00**	**6**	**6**			0			0			4			2	**1.00**	**6**	0.88
1	**1.00**	**5**	**5**			1			1	**1.00**	**5**	**5**			1			1			1	**1.00**	**5**	**5**			1			1			**1.00**	**5**	**5**			1			1			1			1	**1.00**	**5**	1.00
7	**7.00**	**15**	**15**			7			7	**7.00**	**15**	**15**			7			7			7	**7.00**	**15**	**15**			7			7			**7.00**	**15**	**15**			7			7			7			7	**7.00**	**15**	7.00
1	**1.00**	**10**	**10**			1			1	**1.00**	**10**	**10**			1			1			1	**1.00**	**10**	**10**			1			1			**1.00**	**10**	**10**			1			1			1			1	**1.00**	**10**	1.36
25						31			23						9			13			17						16			13			16						13			11			19			13			10.88
	18.00									**27.00**											**13.00**												**15.00**														**14.00**		9.36 20.24
		56									***56***											***56***													***56***													***56***		
	0.96									**1.45**											**0.70**												**0.80**														**0.75**		1.08

OFFSET - Fauna Species

Assessment Unit - Regional Ecosystem	AU1 - 13.11.3 Remnant																					AU2 - 13.11.3 Regrowth																	AU3 - 13.11.5 Remnant						AU4 - 13.11.6 Remnant								
Site Reference	**Benchmark**	**BC9**			**BC12**			**BC18**			**BC19**			**BC23**			**BC24**			**Average**	**Max**	**Benchmark**	**BC15**			**BC16**			**BC 20**			**BC 22**			**Average**	**Max**	**Benchmark**	**BC 7**			**Average**	**Max**	**Benchmark**	**BC 11**			**BC 21**		
Site Condition	**13.11.3**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.3**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.5**	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.6**	Raw Data	% Bench	Score	Raw Data	% Bench
Large trees (euc plus non-euc)	**20**	7	35.00	5	0	0.00	0	0	0.00	0	8	40.00	5	2	10.00	5	1	5.00	5	**3.33**	**15**	**20**	0	0.00	0	0	0.00	0	0	0.00	0	10	50.00	10	**2.50**	**15**	**51**	0	0.00	0	**0.00**	**15**	**43**	0	0.00	0	9	20.93
Tree canopy height (average of emergent, canopy, sub-canopy)	**11**	6.75	61.36	3	7	63.64	3	7.75	70.45	5	10.75	97.73	5	9	81.82	5	6.75	61.36	3	**4.00**	**5**	**11**	7.75	70.45	5	7.75	70.45	5	4	36.36	3	12	109.09	5	**4.50**	**5**	**16**	14.5	90.63	5	**5.00**	**5**	**15**	10.75	71.67	5	12.5	83.33
Recruitment of woody perennial species in EDL	**100**	100	100.00	5	85	85.00	5	80	80.00	5	100	100.00	5	100	100.00	5	100	100.00	5	**5.00**	**5**	**100**	100	100.00	5	100	100.00	5	80	80.00	5	0	0.00	0	**3.75**	**5**	**100**	75	75.00	5	**5.00**	**5**	**100**	100	100.00	5	100	100.00
Tree canopy cover (average of emergent, canopy, sub-canopy)	**31.5**	51.4	163.17	5	12.3	39.05	2	24.4	77.46	5	9.35	29.68	2	20.5	65.08	5	35.35	112.22	5	**4.00**	**5**	**31.5**	16.5	52.38	5	4.85	15.40	2	31.85	101.11	5	10.05	31.90	2	**3.50**	**5**	**27**	35.3	130.74	5	**5.00**	**5**	**33.5**	23.5	70.15	5	26.22	78.27
Shrub canopy cover	**23**	2	8.70	0	14.6	63.48	5	7.9	34.35	3	18.7	81.30	5	5.6	24.35	3	5.2	22.61	3	**3.17**	**5**	**23**	4.2	18.26	3	63.7	276.96	3	11.7	50.87	5	26	113.04	5	**4.00**	**5**	**18**	3.3	18.33	3	**3.00**	**5**	**9**	24.2	268.89	3	53.3	592.22
Coarse woody debris	**1024**	695	67.87	5	610	59.57	5	270	26.37	2	660	64.45	5	485	47.36	2	445	43.46	2	**3.50**	**5**	**1024**	65	6.35	0	0	0.00	0	1635	159.67	5	170	16.60	2	**1.75**	**5**	**947**	1165	123.02	5	**5.00**	**5**	**1292**	870	67.34	5	610	47.21
Native plant species richness - trees	**4**	4	100.00	5	5	125.00	5	5	125.00	5	5	125.00	5	2	50.00	2.5	6	150.00	5	**4.58**	**5**	**4**	2	50.00	2.5	1	25.00	2.5	5	125.00	5	5	125.00	5	**3.75**	**5**	**5**	4	80.00	2.5	**2.50**	**5**	**3**	8	266.67	5	4	133.33
Native plant species richness - shrubs	**8**	8	100.00	5	8	100.00	5	8	100.00	5	7	87.50	2.5	6	75.00	2.5	10	125.00	5	**4.17**	**5**	**8**	6	75.00	2.5	10	125.00	5	10	125.00	5	15	187.50	5	**4.38**	**5**	**8**	10	125.00	5	**5.00**	**5**	**7**	14	200.00	5	12	171.43
Native plant species richness - grasses	**6**	13	216.67	5	9	150.00	5	11	183.33	5	10	166.67	5	14	233.33	5	8	133.33	5	**5.00**	**5**	**6**	9	150.00	5	11	183.33	5	10	166.67	5	12	200.00	5	**5.00**	**5**	**7**	11	157.14	5	**5.00**	**5**	**7**	2	28.57	2.5	11	157.14
Native plant species richness - forbes	**11**	27	245.45	5	23	209.09	5	26	236.36	5	17	154.55	5	16	145.45	5	15	136.36	5	**5.00**	**5**	**11**	16	145.45	5	16	145.45	5	18	163.64	5	19	172.73	5	**5.00**	**5**	**11**	14	127.27	5	**5.00**	**5**	**20**	15	75.00	2.5	16	80.00
Non-native plant cover	**0**	1	99.00	10	1	99.00	10	1	99.00	10	1	99.00	10	7	93.00	5	1	99.00	10	**9.17**	**10**	**0**	7	93.00	5	1	99.00	10	1	99.00	10	1	99.00	10	**8.75**	**10**	**0**	2	98.00	10	**10.00**	**10**	**0**	2	98.00	10	1	99.00
Native grass cover	**11**	50.8	461.82	5	45	409.09	5	64.4	585.45	5	59.2	538.18	5	59	536.36	5	14	127.27	5	**5.00**	**5**	**11**	59.2	538.18	5	65	590.91	5	26.6	241.82	5	38	345.45	5	**5.00**	**5**	**7**	26	371.43	5	**5.00**	**5**	**2**	43.4	2170.00	5	48	2400.00
Organic litter	**55**	30.6	55.64	5	18	32.73	3	19	34.55	3	5.4	9.82	0	18.4	33.45	3	12.6	22.91	3	**2.83**	**5**	**55**	15	27.27	3	14	25.45	3	22.8	41.45	3	16	29.09	3	**3.00**	**5**	**64**	48.6	75.94	5	**5.00**	**5**	**89**	30	33.71	3	32	35.96
Quality and availability of food and foraging habitat				5			1			5			1			5			1	**3.00**	**10**				1			1			1			1	**1.00**	**10**				10	**10.00**	**10**				5		
Quality and availability of shelter (N/A)																																																	
Scores for sampling sites				*68*			59			*63*			*60.5*			*58*			*62*						*47*			*51.5*			62			63						*70.5*					61		
Scores for assessment units																				***61.75***																**55.875**					***70.5***							
MAX Site Condition Score																					***90***															***90***					***90***							
Site Condition Score - out of 3																				**2.06**																**1.86**					**2.35**							
Site Context	**GIS - 4**																																																
Size of patch	**10**			7			10			10			10			10			10	**9.50**	**10**	**10**			5			10			10			5	**7.50**	**10**	**10**			10	**10.00**	**10**	**10**			0		
Connectedness	**5**			2			0			2			2			0			5	**1.83**	**5**	**5**			0			2			5			3	**3.00**	**5**	**5**			2	**2.00**	**5**	**5**			0		
Context	**5**			4			4			4			4			4			2	**3.67**	**5**	**5**			0			4			4			4	**3.00**	**5**	**5**			4	**4.00**	**5**	**5**			2		
Ecological Corridors	**6**			0			0			0			0			0			4	**0.67**	**6**	**6**			0			4			0			0	**1.00**	**6**	**6**			0	**0.00**	**6**	**6**			0		
Role of site location to species overall population in the state	**5**			1			1			1			1			1			1	**1.00**	**5**	**5**			1			1			1			1	**1.00**	**5**	**5**			1	**1.00**	**5**	**5**			1		
Threats to the species	**15**			7			7			7			7			7			7	**7.00**	**15**	**15**			7			7			7			7	**7.00**	**15**	**15**			7	**7.00**	**15**	**15**			7		
Species mobility capacity	**10**			7			7			7			7			7			7	**7.00**	**10**	**10**			7			7			7			7	**7.00**	**10**	**10**			7	**7.00**	**10**	**10**			7		
Scores for sampling sites				28			29			31			31			29			36						20			35			34			29						31					17		
Scores for assessment units																				**30.67**																**29.50**					**31.00**							
MAX Site Context Score																					***56***															***56***					***56***							
Site Context Score - out of 3																				**1.64**																**1.58**					**1.66**							

Species Stocking Rate (SSR)	**AU1 - 13.11.3 Remnant**								**Score given**
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	Score	0		5		10			0
		No		Yes - adjacent		Yes - on site			
Species usage of the site (habitat type & evidenced usage)	Score	0		5	10		15		10
		Not habitat		Dispersal	Foraging		Breeding N/A		
Approximate density (per ha)	Score	0		10		20		30	n/a
		0%							
Role/importance of species population on site*	Score (*total from table below*)	0		5		10		15	0
		0		5 - 15		20 - 35		40 - 45	
Total SRR score (out of 40)									10
SRR Score (out of 4)									1.00

Site Condition Scores are Correct 11/12/2023
Site Context Scores Updated (by Darren & Tim) - Finished 13/12/2023
SSR Scores are correct 11/12/2023

***SSR Supplementary Table**	**AU1 - 13.11.3 Remnant**			**Score given**
*Key source population for breeding	Score	0	10	0
	No		Yes/ Possibly	
*Key source population for dispersal	Score	0	5	0
	No		Yes/ Possibly	
*Necessary for maintaining genetic diversity	Score	0	15	0
	No		Yes/ Possibly	
*Near the limit of the species range	Score	0	15	0
	No		Yes	
Total for SSR Supplementary Table				**0**

Final habitat quality score (weighted)	**AU1**	**AU2**	**AU3**	**AU4**	**AU5**	**AU6**	**AU7**	**AU8**	**Average/Final**
Site Condition score (out of 3)	2.06	1.86	2.35	2.04	1.86	1.32	1.77	1.54	
Site Context Score (out of 3)	1.64	1.58	1.66	1.47	1.77	1.02	1.13	1.07	
Species Stocking Rate Score (out of 4)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Habitat Quality score (out of 10)	***5***	***4***	***5***	***5***	***5***	***3***	***4***	***4***	***4.27***
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.12	0.01	0.01	0.03	0.22	0.03	0.25	
Weighted Habitat Quality Score	***1.53***	***0.53***	***0.06***	***0.06***	***0.14***	***0.73***	***0.11***	***0.91***	***4.07***

			AU5 - 13.11.8 Remnant								
			Benchmark	BC 10			BC27				
Score	Average Score	Max Score	13.11.8	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Average Score	Max Score
5	**2.50**	**15**	**34**	0	0.00	0	2	5.88	5	**2.50**	**15**
5	**5.00**	**5**	**12.5**	11.75	94.00	5	13.55	108.40	5	**5.00**	**5**
5	**5.00**	**5**	**100**	100	100.00	5	100	100.00	5	**5.00**	**5**
5	**5.00**	**5**	**29.5**	35.45	120.17	5	36.15	122.54	5	**5.00**	**5**
3	**3.00**	**5**	**22**	47.3	215.00	3	4	18.18	3	**3.00**	**5**
2	**3.50**	**5**	**568**	1435	252.64	2	12570	2213.03	2	**2.00**	**5**
5	**5.00**	**5**	**5**	6	120.00	5	0	0.00	0	**2.50**	**5**
5	**5.00**	**5**	**6**	5	83.33	2.5	5	83.33	2.5	**2.50**	**5**
5	**3.75**	**5**	**6**	0	0.00	0	16	266.67	5	**2.50**	**5**
2.5	**2.50**	**5**	**12**	7	58.33	2.5	12	100.00	5	**3.75**	**5**
10	**10.00**	**10**	**0**	1	99.00	10	1	99.00	10	**10.00**	**10**
5	**5.00**	**5**	**21**	1	4.76	0	58.2	277.14	5	**2.50**	**5**
3	**3.00**	**5**	**60**	48.6	81.00	5	25	41.67	3	**4.00**	**5**
1	**3.00**	**10**				10			1	**5.50**	**10**
						55			*56.5*		
	61.25									***55.75***	
		90									***90***
	2.04									**1.86**	
10	**5.00**	**10**	**10**			10			5	**7.50**	**10**
4	**2.00**	**5**	**5**			4			5	**4.50**	**5**
2	**2.00**	**5**	**5**			4			4	**4.00**	**5**
0	**0.00**	**6**	**6**			4			0	**2.00**	**6**
5	**3.00**	**5**	**5**			1			1	**1.00**	**5**
7	**7.00**	**15**	**15**			7			7	**7.00**	**15**
10	**8.50**	**10**	**10**			7			7	**7.00**	**10**
38						37			29		
	27.50									**33.00**	
		56									***56***
	1.47									**1.77**	

AU6 - 13.11.3 Predominantly Cleared											
Benchmark	BC 1			BC 4			BC5				
13.11.3	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Average Score	Max Score
20	0	0.00	0	2	10.00	5	0	0.00	0	**1.67**	**15**
11	4.5	40.91	3	15	136.36	5	5	45.45	3	**3.67**	**5**
100	66	66.00	3	0	0.00	0	66	66.00	3	**2.00**	**5**
31.5	0	0.00	0	5.4	17.14	2	1.9	6.03	0	**0.67**	**5**
23	3.3	14.35	3	11.8	51.30	5	0	0.00	0	**2.67**	**5**
1024	235	22.95	2	140	13.67	2	0	0.00	0	**1.33**	**5**
4	3	75.00	2.5	1	25.00	2.5	3	75.00	2.5	**2.50**	**5**
8	8	100.00	5	5	62.50	2.5	7	87.50	2.5	**3.33**	**5**
6	7	116.67	5	2	33.33	2.5	11	183.33	5	**4.17**	**5**
11	9	81.82	2.5	4	36.36	2.5	13	118.18	5	**3.33**	**5**
0	2	98.00	10	1	99.00	10	7	93.00	5	**8.33**	**10**
11	56	509.09	5	89	809.09	5	46.4	421.82	5	**5.00**	**5**
55	3	5.45	0	2	3.64	0	1	1.82	0	**0.00**	**5**
			1			1			1	**1.00**	**10**
			42			*45*			*32*		
										39.67	
											90
										1.32	
10			0			0			0	**0.00**	**10**
5			0			0			2	**0.67**	**5**
5			0			4			0	**1.33**	**5**
6			0			0			6	**2.00**	**6**
5			1			1			1	**1.00**	**5**
15			7			7			7	**7.00**	**15**
10			7			7			7	**7.00**	**10**
			15			19			23		
										19.00	
											56
										1.02	

AU7 - 13.11.8 Regrowth											
	BC2			BC14			BC35				
Bendchmark 13.11.8	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Average score	Max score
34	1	2.94	5	0	0.00	0	0	0.00	0	**1.67**	**15**
12.5	8.5	68.00	3	6.25	50.00	3	8.575	68.60	3	**3.00**	**5**
100	100	100.00	5	83	83.00	5	100	100.00	5	**5.00**	**5**
29.5	16.25	55.08	5	5.85	19.83	2	6.95	23.56	2	**3.00**	**5**
22	71.6	325.45	3	0.3	1.36	0	5.4	24.55	3	**2.00**	**5**
568	0	0.00	0	455	80.11	5	500	88.03	5	**3.33**	**5**
5	4	80.00	2.5	7	140.00	5	2	40.00	2.5	**3.33**	**5**
6	7	116.67	5	12	200.00	5	5	83.33	2.5	**4.17**	**5**
6	8	133.33	5	10	166.67	5	8	133.33	5	**5.00**	**5**
12	26	216.67	5	23	191.67	5	10	83.33	2.5	**4.17**	**5**
0	40	60.00	3	2	98.00	10	20	80.00	5	**6.00**	**10**
21	44	209.52	5	65.6	312.38	5	32	152.38	5	**5.00**	**5**
60	11	18.33	3	9.4	15.67	3	48.2	80.33	5	**3.67**	**5**
			5			1			5	**3.67**	**10**
			54.5			*54*			*50.5*		
										53	
											90
										1.77	
10			5			0			5	**3.33**	**10**
5			0			0			0	**0.00**	**5**
5			2			4			2	**2.67**	**5**
6			0			0			0	**0.00**	**6**
5			1			1			1	**1.00**	**5**
15			7			7			7	**7.00**	**15**
10			7			7			7	**7.00**	**10**
			22			19			22		
										21.00	
											56
										1.13	

AU8 - 13.11.8 Cleared															Average All Sites
	BC3			BC 6			BC17			BC31					
Benchmark 13.11.8	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Average score	Max score	
34	1	2.94	5	1	2.94	5	4	11.76	5	0	0.00	0	**3.75**	**15**	2.60
12.5	9.5	76.00	5	15	120.00	5	12	96.00	5	7.05	56.40	3	**4.50**	**5**	4.20
100	100	100.00	5	100	100.00	5	66	66.00	3	100	100.00	5	**4.50**	**5**	4.36
29.5	0	0.00	0	0	0.00	0	7.35	24.92	2	3.75	12.71	2	**1.00**	**5**	3.12
22	0	0.00	0	9.2	41.82	3	1.1	5.00	0	0	0.00	0	**0.75**	**5**	2.68
568	375	66.02	5	205	36.09	2	480	84.51	5	500	88.03	5	**4.25**	**5**	3.00
5	2	40.00	2.5	3	60.00	2.5	3	60.00	2.5	1	20.00	0	**1.88**	**5**	3.40
6	4	66.67	2.5	11	183.33	5	5	83.33	2.5	3	50.00	2.5	**3.13**	**5**	3.90
6	12	200.00	5	16	266.67	5	12	200.00	5	12	200.00	5	**5.00**	**5**	4.60
12	15	125.00	5	11	91.67	5	11	91.67	5	18	150.00	5	**5.00**	**5**	4.40
0	5	95.00	5	12	88.00	5	2	98.00	10	30	70.00	3	**5.75**	**10**	8.24
21	83.8	399.05	5	52.4	249.52	5	48	228.57	5	36.6	174.29	5	**5.00**	**5**	4.80
60	2.8	4.67	0	1	1.67	0	1	1.67	0	12.6	21.00	3	**0.75**	**5**	2.48
			1			1			1			1	**1.00**	**10**	2.68
			46			48.5			51			*39.5*			51.78
													46.25		2.68
															54.46
														90	
													1.54		1.82
10			0			0			0			0	**0.00**	**10**	2.60
5			0			0			2			2	**1.00**	**5**	2.60
5			4			2			4			2	**3.00**	**5**	2.60
6			0			0			4			0	**1.00**	**6**	2.60
5			1			1			1			1	**1.00**	**5**	2.60
15			7			7			7			7	**7.00**	**15**	2.60
10			7			7			7			7	**7.00**	**10**	2.60
			19			17			25			19			10.40
															7.80
													20.00		18.20
														56	
													1.07		0.98

OFFSET - Fauna Species

Assessment Unit - Regional Ecosystem	AU1 - 13.11.3 Remnant																					AU2 - 13.11.3 Regrowth																	AU3 - 13.11.5 Remnant						AU4 - 13.11.6 Remnant					
Site Reference	**Benchmark**	**BC9**			**BC12**			**BC18**			**BC19**			**BC23**			**BC24**			**Average**	**Max**	**Benchmark**	**BC15**			**BC16**			**BC 20**			**BC 22**			**Average**	**Max**	**Benchmark**	**BC 7**			**Average**	**Max**	**Benchmark**	**BC 11**			**BC 21**		
Site Condition	**13.11.3**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.3**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.5**	Raw Data	% Bench	Score	**Score**	**Score**		Raw Data	% Bench	Score	Raw Data	% Bench
Large trees (euc plus non-euc)	**20**	7	35.00	5	0	0.00	0	0	0.00	0	8	40.00	5	2	10.00	5	1	5.00	5	**3.33**	**15**	**20**	0	0.00	0	0	0.00	0	0	0.00	0	10	50.00	10	**2.50**	**15**	**51**	0	0.00	0	**0.00**	**15**						
Tree canopy height (average of emergent, canopy, sub-canopy)	**11**	6.75	61.36	3	7	63.64	3	7.75	70.45	5	10.75	97.73	5	9	81.82	5	6.75	61.36	3	**4.00**	**5**	**11**	7.75	70.45	5	7.75	70.45	5	4	36.36	3	12	109.09	5	**4.50**	**5**	**16**	14.5	90.63	5	**5.00**	**5**						
Recruitment of woody perennial species in EDL	**100**	100	100.00	5	85	85.00	5	80	80.00	5	100	100.00	5	100	100.00	5	100	100.00	5	**5.00**	**5**	**100**	100	100.00	5	100	100.00	5	80	80.00	5	0	0.00	0	**3.75**	**5**	**100**	75	75.00	5	**5.00**	**5**						
Tree canopy cover (average of emergent, canopy, sub-canopy)	**31.5**	51.4	163.17	5	12.3	39.05	2	24.4	77.46	5	9.35	29.68	2	20.5	65.08	5	35.35	112.22	5	**4.00**	**5**	**31.5**	16.5	52.38	5	4.85	15.40	2	31.85	101.11	5	10.05	31.90	2	**3.50**	**5**	**27**	35.3	130.74	5	**5.00**	**5**						
Shrub canopy cover	**23**	2	8.70	0	14.6	63.48	5	7.9	34.35	3	18.7	81.30	5	5.6	24.35	3	5.2	22.61	3	**3.17**	**5**	**23**	4.2	18.26	3	63.7	276.96	3	11.7	50.87	5	26	113.04	5	**4.00**	**5**	**18**	3.3	18.33	3	**3.00**	**5**						
Coarse woody debris	**1024**	695	67.87	5	610	59.57	5	270	26.37	2	660	64.45	5	485	47.36	2	445	43.46	2	**3.50**	**5**	**1024**	65	6.35	0	0	0.00	0	1635	159.67	5	170	16.60	2	**1.75**	**5**	**947**	1165	123.02	5	**5.00**	**5**						
Native plant species richness - trees	**4**	4	100.00	5	5	125.00	5	5	125.00	5	5	125.00	5	2	50.00	2.5	6	150.00	5	**4.58**	**5**	**4**	2	50.00	2.5	1	25.00	2.5	5	125.00	5	5	125.00	5	**3.75**	**5**	**5**	4	80.00	2.5	**2.50**	**5**						
Native plant species richness - shrubs	**8**	8	100.00	5	8	100.00	5	8	100.00	5	7	87.50	2.5	6	75.00	2.5	10	125.00	5	**4.17**	**5**	**8**	6	75.00	2.5	10	125.00	5	10	125.00	5	15	187.50	5	**4.38**	**5**	**8**	10	125.00	5	**5.00**	**5**						
Native plant species richness - grasses	**6**	13	216.67	5	9	150.00	5	11	183.33	5	10	166.67	5	14	233.33	5	8	133.33	5	**5.00**	**5**	**6**	9	150.00	5	11	183.33	5	10	166.67	5	12	200.00	5	**5.00**	**5**	**7**	11	157.14	5	**5.00**	**5**						
Native plant species richness - forbes	**11**	27	245.45	5	23	209.09	5	26	236.36	5	17	154.55	5	16	145.45	5	15	136.36	5	**5.00**	**5**	**11**	16	145.45	5	16	145.45	5	18	163.64	5	19	172.73	5	**5.00**	**5**	**11**	14	127.27	5	**5.00**	**5**						
Non-native plant cover	**0**	1	99.00	10	1	99.00	10	1	99.00	10	1	99.00	10	7	93.00	5	1	99.00	10	**9.17**	**10**	**0**	7	93.00	5	1	99.00	10	1	99.00	10	1	99.00	10	**8.75**	**10**	**0**	2	98.00	10	**10.00**	**10**						
Native grass cover	**11**	50.8	461.82	5	45	409.09	5	64.4	585.45	5	59.2	538.18	5	59	536.36	5	14	127.27	5	**5.00**	**5**	**11**	59.2	538.18	5	65	590.91	5	26.6	241.82	5	38	345.45	5	**5.00**	**5**	**7**	26	371.43	5	**5.00**	**5**						
Organic litter	**55**	30.6	55.64	5	18	32.73	3	19	34.55	3	5.4	9.82	0	18.4	33.45	3	12.6	22.91	3	**2.83**	**5**	**55**	15	27.27	3	14	25.45	3	22.8	41.45	3	16	29.09	3	**3.00**	**5**	**64**	48.6	75.94	5	**5.00**	**5**						
Quality and availability of food and foraging habitat				5			1			1			1			1			1	**1.67**	**10**				1			1			1			1	**1.00**	**10**				5	**5.00**	**10**						
Quality and availability of shelter				1			1			1			1			1			1	**1.00**	**10**				1			1			1			1	**1.00**	**10**				5	**5.00**	**10**						
Scores for sampling sites				*69*			60			*60*			*61.5*			*55*			*63*						48			52.5			63			64					*70.5*								
Scores for assessment units																				***61.42***																**56.875**					***70.5***								
MAX Site Condition Score																					***100***															***100***						***100***								
Site Condition Score - out of 3																				**1.84**															**1.71**					**2.12**								
Site Context	**GIS - 4**																																																
Size of patch	**10**			7			10			10			10			10			10	**9.50**	**10**	**10**			5			10			10			5	**7.50**	**10**	**10**			10	**10.00**	**10**						
Connectedness	**5**			2			0			2			2			0			5	**1.83**	**5**	**5**			0			2			5			5	**3.00**	**5**	**5**			2	**2.00**	**5**						
Context	**5**			4			4			4			4			4			2	**3.67**	**5**	**5**			0			4			4			4	**3.00**	**5**	**5**			4	**4.00**	**5**						
Ecological Corridors	**6**			0			0			0			0			0			4	**0.67**	**6**	**6**			0			4			4			0	**1.00**	**6**	**6**			0	**0.00**	**6**						
Role of site location to species overall population in the state	**5**			1			5			5			5			5			5	**4.33**	**5**	**5**			5			5			5			5	**5.00**	**5**	**5**			5	**5.00**	**5**						
Threats to the species	**15**			1			1			1			1			1			1	**1.00**	**15**	**15**			1			1			1			1	**1.00**	**15**	**15**			1	**1.00**	**15**						
Species mobility capacity	**10**			10			5			10			10			10			10	**9.17**	**10**	**10**			10			10			5			5	**7.50**	**10**	**10**			5	**5.00**	**10**						
Scores for sampling sites				25			25			32			32			30			37						21			36			30			25					27								
Scores for assessment units																				**30.17**																**28.00**					**27.00**								
MAX Site Context Score																					***56***															***56***						***56***								
Site Context Score - out of 3																				**1.62**															**1.50**					**1.45**								

Species Stocking Rate (SSR)	AU1 - 13.11.3 Remnant						Score given
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	Score	0		5		10	5
		No		Yes - adjacent		Yes - on site	
Species usage of the site (habitat type & evidenced usage)	Score	0	5	10		15	10
		Not habitat		Dispersal	Foraging	Breeding	
Approximate density (per ha)	Score	0	10	20		30	n/a
		0%					
Role/importance of species population on site*	Score (*Total from supplement applicable*)	0	5		10	15	10
		0	5 - 15	20 - 35		40 - 45	
Total SRR score (out of 40)							25
SRR Score (out of 4)							2.50

***SSR Supplementary Table**	AU1 - 13.11.3 Remnant			Score given
*Key source population for breeding	Score	0	10	10
	No		Yes/ Possibly	
*Key source population for dispersal	Score	0	5	5
	No		Yes/ Possibly	
*Necessary for maintaining genetic diversity	Score	0	15	15
	No		Yes/ Possibly	
*Near the limit of the species range	Score	0	15	0
	No		Yes	
Total for SSR Supplementary Table				**30**

Final habitat quality score (weighted)	**AU1**	**AU2**	**AU3**	**AU4**	**AU5**	**AU6**	**AU7**	**AU8**	**Average/Final**
Site Condition score (out of 3)	1.84	1.71	n/a	n/a	1.76	1.22	1.58	1.45	
Site Context Score (out of 3)	1.62	1.50	n/a	n/a	1.39	1.07	0.98	1.07	
Species Stocking Rate Score (out of 4)	2.50	2.50	n/a	n/a	2.50	2.50	2.50	2.50	
Habitat Quality score (out of 10)	***6***	***6***			***6***	***5***	***5***	***5***	***5.37***
Assessment Unit area (ha)	108.39	20.05			23.9	23.58	18.71	74.17	
Total offset area (ha) for this MNES	268.8	268.8			268.8	268.8	268.8	268.8	
Size Weighting	0.40	0.07			0.09	0.09	0.07	0.28	
Weighted Habitat Quality Score	***2.40***	***0.43***			***0.50***	***0.42***	***0.35***	***1.38***	***5.49***

268.8

AU Areas have been Updated 30/04/2024

			AU5 - 13.11.8 Remnant								AU6 - 13.11.3 Predominantly Cleared												AU7 - 13.11.8 Regrowth												AU8 - 13.11.8 Cleared													
			Benchmark	BC10			BC27			Average	Max	Benchmark	BC 1			BC 4			BC5			Average	Max	Bendchmark	BC2			BC14			BC35			Average	Max	Benchmark	BC3			BC 6			BC17			BC31			Average	Max	Average
Score			13.11.8	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Score	Score	13.11.3	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Score	Score	13.11.8	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	score	score	13.11.8	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	score	score	All Sites
			34	0	0.00	0	2	5.88	5	**2.50**	**15**	**20**	0	0.00	0	2	10.00	5	0	0.00	0	**1.67**	**15**	**34**	1	2.94	5	0	0.00	0	0	0.00	0	**1.67**	**15**	**34**	1	2.94	5	1	2.94	5	4	11.76	5	0	0.00	0	**3.75**	**15**	2.61
			12.5	11.75	94.00	5	13.55	108.40	5	**5.00**	**5**	**11**	4.5	40.91	3	15	136.36	5	5	45.45	3	**3.67**	**5**	**12.5**	8.5	68.00	3	6.25	50.00	3	8.575	68.60	3	**3.00**	**5**	**12.5**	9.5	76.00	5	15	120.00	5	12	96.00	5	7.05	56.40	3	**4.50**	**5**	4.13
			100	100	100.00	5	100	100.00	5	**5.00**	**5**	**100**	66	66.00	3	0	0.00	0	66	66.00	3	**2.00**	**5**	**100**	100	100.00	5	83	83.00	5	100	100.00	5	**5.00**	**5**	**100**	100	100.00	5	100	100.00	5	66	66.00	3	100	100.00	5	**4.50**	**5**	4.30
			29.5	35.45	120.17	5	36.15	122.54	5	**5.00**	**5**	**31.5**	0	0.00	0	5.4	17.14	2	1.9	6.03	0	**0.67**	**5**	**29.5**	16.25	55.08	5	5.85	19.83	2	6.95	23.56	2	**3.00**	**5**	**29.5**	0	0.00	0	0	0.00	0	7.35	24.92	2	3.75	12.71	2	**1.00**	**5**	2.96
			22	47.3	215.00	3	4	18.18	3	**3.00**	**5**	**23**	3.3	14.35	3	11.8	51.30	5	0	0.00	0	**2.67**	**5**	**22**	71.6	325.45	3	0.3	1.36	0	5.4	24.55	3	**2.00**	**5**	**22**	0	0.00	0	9.2	41.82	3	1.1	5.00	0	0	0.00	0	**0.75**	**5**	2.65
			568	1435	252.64	2	12570	2213.03	2	**2.00**	**5**	**1024**	235	22.95	2	140	13.67	2	0	0.00	0	**1.33**	**5**	**568**	0	0.00	0	455	80.11	5	500	88.03	5	**3.33**	**5**	**568**	375	66.02	5	205	36.09	2	480	84.51	5	500	88.03	5	**4.25**	**5**	2.96
			5	6	120.00	5	0	0.00	0	**2.50**	**5**	**4**	3	75.00	2.5	1	25.00	2.5	3	75.00	2.5	**2.50**	**5**	**5**	4	80.00	2.5	7	140.00	5	2	40.00	2.5	**3.33**	**5**	**5**	2	40.00	2.5	3	60.00	2.5	3	60.00	2.5	1	20.00	0	**1.88**	**5**	3.26
			6	5	83.33	2.5	5	83.33	2.5	**2.50**	**5**	**8**	8	100.00	5	5	62.50	2.5	7	87.50	2.5	**3.33**	**5**	**6**	7	116.67	5	12	200.00	5	5	83.33	2.5	**4.17**	**5**	**6**	4	66.67	2.5	11	183.33	5	5	83.33	2.5	3	50.00	2.5	**3.13**	**5**	3.80
			6	0	0.00	0	16	266.67	5	**2.50**	**5**	**6**	7	116.67	5	2	33.33	2.5	11	183.33	5	**4.17**	**5**	**6**	8	133.33	5	10	166.67	5	8	133.33	5	**5.00**	**5**	**6**	12	200.00	5	16	266.67	5	12	200.00	5	12	200.00	5	**5.00**	**5**	4.67
			12	7	58.33	2.5	12	100.00	5	**3.75**	**5**	**11**	9	81.82	2.5	4	36.36	2.5	13	118.18	5	**3.33**	**5**	**12**	26	216.67	5	23	191.67	5	10	83.33	2.5	**4.17**	**5**	**12**	15	125.00	5	11	91.67	5	11	91.67	5	18	150.00	5	**5.00**	**5**	4.57
			0	1	99.00	10	1	99.00	10	**10.00**	**10**	**0**	2	98.00	10	1	99.00	10	7	93.00	5	**8.33**	**10**	**0**	40	60.00	3	2	98.00	10	20	80.00	5	**6.00**	**10**	**0**	5	95.00	5	12	88.00	5	2	98.00	10	30	70.00	3	**5.75**	**10**	8.09
			21	1	4.76	0	58.2	277.14	5	**2.50**	**5**	**11**	56	509.09	5	89	809.09	5	46.4	421.82	5	**5.00**	**5**	**21**	44	209.52	5	65.6	312.38	5	32	152.38	5	**5.00**	**5**	**21**	83.8	399.05	5	52.4	249.52	5	48	228.57	5	36.6	174.29	5	**5.00**	**5**	4.78
			60	48.6	81.00	5	25	41.67	3	**4.00**	**5**	**55**	3	5.45	0	2	3.64	0	1	1.82	0	**0.00**	**5**	**60**	11	18.33	3	9.4	15.67	3	48.2	80.33	5	**3.67**	**5**	**60**	2.8	4.67	0	1	1.67	0	1	1.67	0	12.6	21.00	3	**0.75**	**5**	2.43
						10			1	**5.50**	**10**				1			1			1	**1.00**	**10**				5			1			**2.33**	**10**				1			1			5	1		1	**2.00**	**10**	2.09
						5			1	**3.00**	**10**				1			1			1	**1.00**	**10**				1			1			**1.00**	**10**				1			1			1	1		1	**1.00**	**10**	1.35
						60			*57.5*						*43*			*46*			*33*						*55.5*			*55*			*47.5*						47			49.5			56			40.5			51.22
										58.75											***40.6667***											***52.6667***																	3.43
																																																	54.65
											100											***100***												***100***															***100***	
										1.76											**1.22**											**1.58**															**1.45**		1.64
			10			10			5	**7.50**	**10**	**10**			0			0			0	**0.00**	**10**	**10**			5			0			5	**3.33**	**10**	**10**			0			0			0			0	**0.00**	**10**	5.30
			5			4			5	**4.50**	**5**	**5**			0			0			2	**0.67**	**5**	**5**			0			0			0	**0.00**	**5**	**5**			0			0			2			2	**1.00**	**5**	1.74
			5			4			4	**4.00**	**5**	**5**			0			4			0	**1.33**	**5**	**5**			2			4			2	**2.67**	**5**	**5**			4			2			4			2	**3.00**	**5**	3.04
			6			4			0	**2.00**	**6**	**6**			0			0			6	**2.00**	**6**	**6**			0			0			0	**0.00**	**6**	**6**			4			0			4			0	**1.00**	**6**	0.96
			5			5			5	**5.00**	**5**	**5**			5			5			5	**5.00**	**5**	**5**			1			5			1	**2.33**	**5**	**5**			1			5			1			1	**2.00**	**5**	3.96
			15			1			1	**1.00**	**15**	**15**			1			1			1	**1.00**	**15**	**15**			1			1			1	**1.00**	**15**	**15**			7			1			7			7	**5.50**	**15**	1.78
			10			4			0	**2.00**	**10**	**10**			10			10			10	**10.00**	**10**	**10**			10			10			7	**9.00**	**10**	**10**			10			10			10			0	**7.50**	**10**	7.87
						32			20						16			20			24						19			20			16						22			18			28			12			11.04
																																																	13.61
										26.00											**20.00**											**18.33**															**20.00**		24.65
											56											***56***												***56***															***56***	
										1.39											**1.07**											**0.98**															**1.07**		1.32

OFFSET - Fauna Species

NEW NEW NEW

Assessment Unit - Regional Ecosystem	**AU1 - 13.11.3 Remnant**																					**AU2 - 13.11.3 Regrowth**																					**AU3 - 13.11.5 Remnant**									**AU4 - 13.11.6 Remnant**								
Site Reference	**Benchmark**	**BC9**			**BC12**			**BC18**			**BC19**			**BC23**			**BC24**			**Average**	**Max**	**Benchmark**	**BC15**			**BC16**			**BC20**			**BC22**			**Average**	**Max**	**Benchmark**	**BC 7**			**Average**	**Max**	**Benchmark**	**BC11**			**BC21**		
Site Condition	**13.11.3**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.3**	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.5**	Raw Data	% Bench	Score	**Score**	**Score**	**13.11.6**	Raw Data	% Bench	Score	Raw Data	% Bench
Large trees (euc plus non-euc)	**20**	7	35.00	5	0	0.00	0	0	0.00	0	8	40.00	5	2	10.00	5	1	5.00	5	**3.33**	**15**	**20**	0	0.00	0	0	0.00	0	0	0.00	0	10	50.00	10	**2.50**	**15**	**51**	0	0.00	0	**0.00**	**15**	**43**	0	0.00	0	9	20.93
Tree canopy height (average of emergent, canopy, sub-canopy)	**11**	6.75	61.36	3	7	63.64	3	7.75	70.45	5	10.75	97.73	5	9	81.82	5	6.75	61.36	3	**4.00**	**5**	**11**	7.75	70.45	5	7.75	70.45	5	4	36.36	3	12	109.09	5	**4.50**	**5**	**16**	14.5	90.63	5	**5.00**	**5**	**15**	10.75	71.67	5	12.5	83.33
Recruitment of woody perennial species in EDL	**100**	100	100.00	5	85	85.00	5	80	80.00	5	100	100.00	5	100	100.00	5	100	100.00	5	**5.00**	**5**	**100**	100	100.00	5	100	100.00	5	80	80.00	5	0	0.00	0	**3.75**	**5**	**100**	75	75.00	5	**5.00**	**5**	**100**	100	100.00	5	100	100.00
Tree canopy cover (average of emergent, canopy, sub-canopy)	**31.5**	51.4	163.17	5	12.3	39.05	2	24.4	77.46	5	9.35	29.68	2	20.5	65.08	5	35.35	112.22	5	**4.00**	**5**	**31.5**	16.5	52.38	5	4.85	15.40	2	31.85	101.11	5	10.05	31.90	2	**3.50**	**5**	**27**	35.3	130.74	5	**5.00**	**5**	**33.5**	23.5	70.15	5	26.22	78.27
Shrub canopy cover	**23**	2	8.70	0	14.6	63.48	5	7.9	34.35	3	18.7	81.30	5	5.6	24.35	3	5.2	22.61	3	**3.17**	**5**	**23**	4.2	18.26	3	63.7	276.96	3	11.7	50.87	5	26	113.04	5	**4.00**	**5**	**18**	3.3	18.33	3	**3.00**	**5**	**9**	24.2	268.89	3	53.3	592.22
Coarse woody debris	**1024**	695	67.87	5	610	59.57	5	270	26.37	2	660	64.45	5	485	47.36	2	445	43.46	2	**3.50**	**5**	**1024**	65	6.35	0	0	0.00	0	1635	159.67	5	170	16.60	2	**1.75**	**5**	**947**	1165	123.02	5	**5.00**	**5**	**1292**	870	67.34	5	610	47.21
Native plant species richness - trees	**4**	4	100.00	5	5	125.00	5	5	125.00	5	5	125.00	5	2	50.00	2.5	6	150.00	5	**4.58**	**5**	**4**	2	50.00	2.5	1	25.00	2.5	5	125.00	5	5	125.00	5	**3.75**	**5**	**5**	4	80.00	2.5	**2.50**	**5**	**3**	8	266.67	5	4	133.33
Native plant species richness - shrubs	**8**	8	100.00	5	8	100.00	5	8	100.00	5	7	87.50	2.5	6	75.00	2.5	10	125.00	5	**4.17**	**5**	**8**	6	75.00	2.5	10	125.00	5	10	125.00	5	15	187.50	5	**4.38**	**5**	**8**	10	125.00	5	**5.00**	**5**	**7**	14	200.00	5	12	171.43
Native plant species richness - grasses	**6**	13	216.67	5	9	150.00	5	11	183.33	5	10	166.67	5	14	233.33	5	8	133.33	5	**5.00**	**5**	**6**	9	150.00	5	11	183.33	5	10	166.67	5	12	200.00	5	**5.00**	**5**	**7**	11	157.14	5	**5.00**	**5**	**7**	2	28.57	2.5	11	157.14
Native plant species richness - forbes	**11**	27	245.45	5	23	209.09	5	26	236.36	5	17	154.55	5	16	145.45	5	15	136.36	5	**5.00**	**5**	**11**	16	145.45	5	16	145.45	5	18	163.64	5	19	172.73	5	**5.00**	**5**	**11**	14	127.27	5	**5.00**	**5**	**20**	15	75.00	2.5	16	80.00
Non-native plant cover	**0**	1	99.00	10	1	99.00	10	1	99.00	10	1	99.00	10	7	93.00	5	1	99.00	10	**9.17**	**10**	**0**	7	93.00	5	1	99.00	10	1	99.00	10	1	99.00	10	**8.75**	**10**	**0**	2	98.00	10	**10.00**	**10**	**0**	2	98.00	10	1	99.00
Native grass cover	**11**	50.8	461.82	5	45	409.09	5	64.4	585.45	5	59.2	538.18	5	59	536.36	5	14	127.27	5	**5.00**	**5**	**11**	59.2	538.18	5	65	590.91	5	26.6	241.82	5	38	345.45	5	**5.00**	**5**	**7**	26	371.43	5	**5.00**	**5**	**2**	43.4	2170.00	5	48	2400.00
Organic litter	**55**	30.6	55.64	5	18	32.73	3	19	34.55	3	5.4	9.82	0	18.4	33.45	3	12.6	22.91	3	**2.83**	**5**	**55**	15	27.27	3	14	25.45	3	22.8	41.45	3	16	29.09	3	**3.00**	**5**	**64**	48.6	75.94	5	**5.00**	**5**	**89**	30	33.71	3	32	35.96
Quality and availability of food and foraging habitat				1			1			5			1			1			1	**1.67**	**10**				1			1			1			1	**1.00**	**10**				1	**1.00**	**10**				5		
Quality and availability of shelter				1			1			5			5			5			1	**3.00**	**10**				1			5			1			5	**3.00**	**10**				10	**10.00**	**10**				5		
Scores for sampling sites				*65*			60			*68*			*65.5*			*59*			*63*						48			56.5			63			68					*71.5*					*66*		
Scores for assessment units																				***63.42***																**58.875**				***71.5***								
MAX Site Condition Score																					***100***															***100***					***100***							
Site Condition Score - out of 3																				**1.90**																**1.77**				**2.15**								
Site Context	**GIS - 4**																																																	
Size of patch	**10**			7			10			10			10			10			10	**9.50**	**10**	**10**			5			10			10			5	**7.50**	**10**	**10**			10	**10.00**	**10**	**10**			0		
Connectedness	**5**			2			0			2			2			0			5	**1.83**	**5**	**5**			0			2			5			5	**3.00**	**5**	**5**			2	**2.00**	**5**	**5**			0		
Context	**5**			4			4			4			4			2			2	**3.67**	**5**	**5**			0			4			4			4	**3.00**	**5**	**5**			4	**4.00**	**5**	**5**			2		
Ecological Corridors	**6**			0			0			0			0			0			4	**0.67**	**6**	**6**			0			4			0			0	**1.00**	**6**	**6**			0	**0.00**	**6**	**6**			0		
Role of site location to species overall population in the state	**5**			1			1			5			5			1			1	**3.00**	**5**	**5**			1			5			1			5	**3.00**	**5**	**5**			5	**5.00**	**5**	**5**			5		
Threats to the species	**15**			7			1			1			1			1			1	**2.00**	**15**	**15**			1			1			1			1	**1.00**	**15**	**15**			1	**1.00**	**15**	**15**			1		
Species mobility capacity	**10**			7			10			10			1			10			7	**7.50**	**10**	**10**			10			4			4			7	**6.25**	**10**	**10**			7	**7.00**	**10**	**10**			7		
Scores for sampling sites				28			26			32			23			30			30						17			30			25			27					29					15		
Scores for assessment units																				**28.17**																**24.75**				**29.00**								
MAX Site Context Score																					***56***															***56***					***56***							
Site Context Score - out of 3																				**1.51**																**1.33**				**1.55**								

Species Stocking Rate (SSR)	**AU1 - 13.11.3 Remnant**					**Score given**
Presence detected on or adjacent to site (neighbouring property with connecting habitat)	Score	0		5	10	5
		No	Yes - adjacent		Yes - on site	
Species usage of the site (habitat type & evidenced usage)	Score	0	5	10	15	15
		Not habitat	Dispersal	Foraging	Breeding	
Approximate density (per ha)	Score	0	10	20	30	n/a
		0%				
Role/importance of species population on site*	Score (*Total from supplement* per table	0	5	10	15	15
		0	5 - 15	20 - 35	40 - 45	
Total SRR score (out of 40)						35
SRR Score (out of 4)						3.50

***SSR Supplementary Table**	**AU1 - 13.11.3 Remnant**			**Score given**
*Key source population for breeding	Score	0	10	10
		No	Yes/ Possibly	
*Key source population for dispersal	Score	0	5	5
		No	Yes/ Possibly	
*Necessary for maintaining genetic diversity	Score	0	15	15
		No	Yes/ Possibly	
*Near the limit of the species range	Score	0	15	15
		No	Yes	
Total for SSR Supplementary Table				**45**

Final habitat quality score (weighted)	**AU1**	**AU2**	**AU3**	**AU4**	**AU5**	**AU6**	**AU7**	**AU8**	**Average/Final**
Site Condition score (out of 3)	1.90	1.77	2.15	1.99	1.76	1.26	1.67	1.51	
Site Context Score (out of 3)	1.51	1.33	1.55	1.42	1.47	0.93	1.02	1.21	
Species Stocking Rate Score (out of 4)	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	
Habitat Quality score (out of 10)	***7***	***7***	***7***	***7***	***7***	***6***	***6***	***6***	***6.55***
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.12	0.01	0.01	0.03	0.22	0.03	0.25	
Weighted Habitat Quality Score	***2.25***	***0.79***	***0.09***	***0.09***	***0.20***	***1.24***	***0.17***	***1.56***	***6.41***

3330.14

			AU5 - 13.11.8 Remnant									AU6 - 13.11.3 Predominantly Cleared											AU7 - 13.11.8 Regrowth											AU8 - 13.11.8 Predominately Cleared												
	Average Score	Max Score	Benchmark 13.11.8	BC10			BC27			Average Score	Max Score	Benchmark 13.11.3	BC1			BC4			BC5			Average Score	Max Score	Bendchmark 13.11.8	BC2			BC14			BC35			Average score	Max score	Benchmark 13.11.8	BC3			BC6			BC17			BC31			Average score	Max score	Average All Sites
Score				Raw Data	% Bench	Score	Raw Data	% Bench	Score				Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score				Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score				Raw Data	% Bench	Score	Raw Data	% Bench	Score	Raw Data	% Bench	Score			
5	**2.50**	**15**	**34**	0	0.00	0	2	5.88	5	**2.50**	**15**	**20**	0	0.00	0	2	10.00	5	0	0.00	0	**1.67**	**15**	**34**	1	2.94	5	0	0.00	0	0	0.00	0	**1.67**	**15**	**34**	1	2.94	5	1	2.94	5	4	11.76	5	0	0.00	0	**3.75**	**15**	2.60
5	**5.00**	**5**	**12.5**	11.75	94.00	5	13.55	108.40	5	**5.00**	**5**	**11**	4.5	40.91	3	15	136.36	5	5	45.45	3	**3.67**	**5**	**12.5**	8.5	68.00	3	6.25	50.00	3	8.575	68.60	3	**3.00**	**5**	**12.5**	9.5	76.00	5	15	120.00	5	12	96.00	5	7.05	56.40	3	**4.50**	**5**	4.20
5	**5.00**	**5**	**100**	100	100.00	5	100	100.00	5	**5.00**	**5**	**100**	66	66.00	3	0	0.00	0	66	66.00	3	**2.00**	**5**	**100**	100	100.00	5	83	83.00	5	100	100.00	5	**5.00**	**5**	**100**	100	100.00	5	100	100.00	5	66	66.00	3	100	100.00	5	**4.50**	**5**	4.36
5	**5.00**	**5**	**29.5**	35.45	120.17	5	36.15	122.54	5	**5.00**	**5**	**31.5**	0	0.00	0	5.4	17.14	2	1.9	6.03	0	**0.67**	**5**	**29.5**	16.25	55.08	5	5.85	19.83	2	6.95	23.56	2	**3.00**	**5**	**29.5**	0	0.00	0	0	0.00	0	7.35	24.92	2	3.75	12.71	2	**1.00**	**5**	3.12
3	**3.00**	**5**	**22**	47.3	215.00	3	4	18.18	3	**3.00**	**5**	**23**	3.3	14.35	3	11.8	51.30	5	0	0.00	0	**2.67**	**5**	**22**	71.6	325.45	3	0.3	1.36	0	5.4	24.55	3	**2.00**	**5**	**22**	0	0.00	0	9.2	41.82	3	1.1	5.00	0	0	0.00	0	**0.75**	**5**	2.68
2	**3.50**	**5**	**568**	1435	252.64	2	12570	2213.03	2	**2.00**	**5**	**1024**	235	22.95	2	140	13.67	2	0	0.00	0	**1.33**	**5**	**568**	0	0.00	0	455	80.11	5	500	88.03	5	**3.33**	**5**	**568**	375	66.02	5	205	36.09	2	480	84.51	5	500	88.03	5	**4.25**	**5**	3.00
5	**5.00**	**5**	**5**	6	120.00	5	0	0.00	0	**2.50**	**5**	**4**	3	75.00	2.5	1	25.00	2.5	3	75.00	2.5	**2.50**	**5**	**5**	4	80.00	2.5	7	140.00	5	2	40.00	2.5	**3.33**	**5**	**5**	2	40.00	2.5	3	60.00	2.5	3	60.00	2.5	1	20.00	0	**1.88**	**5**	3.40
5	**5.00**	**5**	**6**	5	83.33	2.5	5	83.33	2.5	**2.50**	**5**	**8**	8	100.00	5	5	62.50	2.5	7	87.50	2.5	**3.33**	**5**	**6**	7	116.67	5	12	200.00	5	5	83.33	2.5	**4.17**	**5**	**6**	4	66.67	2.5	11	183.33	5	5	83.33	2.5	3	50.00	2.5	**3.13**	**5**	3.90
5	**3.75**	**5**	**6**	0	0.00	0	16	266.67	5	**2.50**	**5**	**6**	7	116.67	5	2	33.33	2.5	11	183.33	5	**4.17**	**5**	**6**	8	133.33	5	10	166.67	5	8	133.33	5	**5.00**	**5**	**6**	12	200.00	5	16	266.67	5	12	200.00	5	12	200.00	5	**5.00**	**5**	4.60
2.5	**2.50**	**5**	**12**	7	58.33	2.5	12	100.00	5	**3.75**	**5**	**11**	9	81.82	2.5	4	36.36	2.5	13	118.18	5	**3.33**	**5**	**12**	26	216.67	5	23	191.67	5	10	83.33	2.5	**4.17**	**5**	**12**	15	125.00	5	11	91.67	5	11	91.67	5	18	150.00	5	**5.00**	**5**	4.40
10	**10.00**	**10**	**0**	1	99.00	10	1	99.00	10	**10.00**	**10**	**0**	2	98.00	10	1	99.00	10	7	93.00	5	**8.33**	**10**	**0**	40	60.00	3	2	98.00	10	20	80.00	5	**6.00**	**10**	**0**	5	95.00	5	12	88.00	5	2	98.00	10	30	70.00	3	**5.75**	**10**	8.24
5	**5.00**	**5**	**21**	1	4.76	0	58.2	277.14	5	**2.50**	**5**	**11**	56	509.09	5	89	809.09	5	46.4	421.82	5	**5.00**	**5**	**21**	44	209.52	5	65.6	312.38	5	32	152.38	5	**5.00**	**5**	**21**	83.8	399.05	5	52.4	249.52	5	48	228.57	5	36.6	174.29	5	**5.00**	**5**	4.80
3	**3.00**	**5**	**60**	48.6	81.00	5	25	41.67	3	**4.00**	**5**	**55**	3	5.45	0	2	3.64	0	1	1.82	0	**0.00**	**5**	**60**	11	18.33	3	9.4	15.67	3	48.2	80.33	5	**3.67**	**5**	**60**	2.8	4.67	0	1	1.67	0	1	1.67	0	12.6	21.00	3	**0.75**	**5**	2.48
1	**3.00**	**10**				5			1	**3.00**	**10**				1			1			1	**1.00**	**10**				1			1			1	**2.33**	**10**				1			1			1			1	**1.00**	**10**	1.64
5	**5.00**	**10**				10			1	**5.50**	**10**				1			5			1	**2.33**	**10**				1			1			10	**4.00**	**10**				5			1			5			1	**4.00**	**10**	3.84
66.5						*60*			*57.5*						*43*			*50*			*33*						*51.5*			*55*			*60.5*						51			53.5			52			44.5			51.78
	66.25									***58.75***												***42***												***55.67***														***50.25***			5.48
		100									***100***												***100***												***100***													***100***		57.26
	1.99									**1.76**												**1.26**												**1.67**													**1.51**		1.72
10	**5.00**	**10**	**10**			10			5	**7.50**	**10**	**10**			0			0			0	**0.00**	**10**	**10**			5			0			5	**3.33**	**10**	**10**			0			0			0			0	**0.00**	**10**	5.28
4	**2.00**	**5**	**5**			4			5	**4.50**	**5**	**5**			0			0			2	**0.67**	**5**	**5**			0			0			0	**0.00**	**5**	**5**			0			0			2			2	**1.00**	**5**	1.76
2	**2.00**	**5**	**5**			4			4	**4.00**	**5**	**5**			0			4			0	**1.33**	**5**	**5**			2			4			2	**2.67**	**5**	**5**			4			2			4			2	**3.00**	**5**	2.96
0	**0.00**	**6**	**6**			4			0	**2.00**	**6**	**6**			0			0			6	**2.00**	**6**	**6**			0			0			0	**0.00**	**6**	**6**			0			0			4			0	**1.00**	**6**	0.88
5	**5.00**	**5**	**5**			5			1	**3.00**	**5**	**5**			1			5			1	**2.33**	**5**	**5**			1			1			1	**1.00**	**5**	**5**			1			1			1			1	**2.00**	**5**	2.76
7	**4.00**	**15**	**15**			1			1	**1.00**	**15**	**15**			1			1			1	**1.00**	**15**	**15**			7			1			7	**5.00**	**15**	**15**			7			1			7			7	**5.50**	**15**	2.68
10	**8.50**	**10**	**10**			4			7	**5.50**	**10**	**10**			10			10			10	**10.00**	**10**	**10**			1			10			10	**7.00**	**10**	**10**			10			10			10			10	**10.00**	**10**	7.84
38						32			23						12			20			20						16			16			25						22			18			28			22			10.88
	26.50									**27.50**												**17.33**												**19.00**													**22.50**		24.16
		56									***56***												***56***												***56***													***56***		13.28
	1.42									**1.47**												**0.93**												**1.02**													**1.21**		1.29

Koala year 0

Final habitat quality score (weighted)	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8	Average/Final
Site Condition score (out of 3)	1.94	1.86	2.12	1.93	1.82	1.22	1.62	1.45	
Site Context Score (out of 3)	1.94	1.83	1.88	1.58	1.90	1.29	1.20	1.17	
Species Stocking Rate Score (out of 4)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Habitat Quality score (out of 10)	**5.88**	**5.70**	**5.99**	**5.51**	**5.72**	**4.51**	**4.82**	**4.61**	**5.34**
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.12	0.01	0.01	0.03	0.22	0.03	0.25	
Weighted Habitat Quality Score	**1.91**	**0.68**	**0.07**	**0.07**	**0.17**	**0.99**	**0.14**	**1.16**	**5.20**

Koala year 20

Final habitat quality score (weighted)	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8	Average/Final
Site Condition score (out of 3)	2.10	1.98	2.12	1.93	2.19	1.66	2.06	1.88	
Site Context Score (out of 3)	2.89	2.89	2.89	2.89	2.33	2.89	2.63	2.63	
Species Stocking Rate Score (out of 4)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Habitat Quality score (out of 10)	**6.99**	**6.87**	**7.01**	**6.82**	**6.52**	**6.55**	**6.68**	**6.51**	**6.74**
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.12	0.01	0.01	0.03	0.22	0.03	0.25	
Weighted Habitat Quality Score	**2.28**	**0.82**	**0.09**	**0.09**	**0.20**	**1.43**	**0.19**	**1.64**	**6.73**

GG Year 0

Final habitat quality score (weighted)	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8	Average/Final
Site Condition score (out of 3)	1.89	1.74	2.12	1.93	1.69	1.22	1.62	1.42	
Site Context Score (out of 3)	1.38	1.18	1.34	0.96	1.45	0.70	0.80	0.75	
Species Stocking Rate Score (out of 4)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
Habitat Quality score (out of 10)	**4.77**	**4.41**	**4.95**	**4.39**	**4.63**	**3.42**	**3.92**	**3.67**	**4.27**
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.13	0.01	0.02	0.03	0.21	0.02	0.25	
Weighted Habitat Quality Score	**1.55**	**0.59**	**0.07**	**0.07**	**0.14**	**0.71**	**0.09**	**0.92**	**4.14**

GGYr20

Final habitat quality score (weighted)	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8	Average/Final
Site Condition score (out of 3)	2.01	1.89	2.18	2.25	2.18	1.88	1.98	1.95	
Site Context Score (out of 3)	1.96	1.96	2.41	1.93	1.69	1.93	2.57	2.57	
Species Stocking Rate Score (out of 4)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
Habitat Quality score (out of 10)	**5.47**	**5.35**	**6.09**	**5.68**	**5.36**	**5.31**	**6.05**	**6.02**	**5.67**
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.12	0.01	0.01	0.03	0.22	0.03	0.25	
Weighted Habitat Quality Score	**1.78**	**0.64**	**0.08**	**0.08**	**0.16**	**1.16**	**0.17**	**1.52**	**5.58**

Grey-headed Flying-fox year 0

Final habitat quality score (weighted)	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8	Average/Final
Site Condition score (out of 3)	2.06	1.86	2.35	2.04	1.86	1.32	1.77	1.54	
Site Context Score (out of 3)	1.64	1.58	1.66	1.47	1.77	1.02	1.13	1.07	
Species Stocking Rate Score (out of 4)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Habitat Quality score (out of 10)	**4.70**	**4.44**	**5.01**	**4.51**	**4.63**	**3.34**	**3.89**	**3.61**	**4.27**
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.13	0.01	0.02	0.03	0.21	0.02	0.25	
Weighted Habitat Quality Score	**1.53**	**0.59**	**0.07**	**0.07**	**0.14**	**0.70**	**0.09**	**0.91**	**4.09**

Grey-headed Flying-fox year 20

Final habitat quality score (weighted)	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8	Average/Final
Site Condition score (out of 3)	2.18	2.01	2.35	2.04	2.12	1.86	2.05	1.94	
Site Context Score (out of 3)	2.25	2.25	2.41	1.47	1.85	2.25	2.57	2.57	
Species Stocking Rate Score (out of 4)	1.14	1.14	1.14	1.00	1.14	1.14	1.14	1.14	
Habitat Quality score (out of 10)	**5.57**	**5.40**	**5.90**	**4.51**	**5.11**	**5.25**	**5.76**	**5.65**	**5.40**
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.12	0.01	0.02	0.03	0.22	0.03	0.25	
Weighted Habitat Quality Score	**1.81**	**0.65**	**0.07**	**0.07**	**0.16**	**1.15**	**0.16**	**1.42**	**5.49**

Regent Honeyeater year 0

Final habitat quality score (weighted)	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8	Average/Final
Site Condition score (out of 3)	1.84	1.71	n/a	n/a	1.76	1.22	1.58	1.45	
Site Context Score (out of 3)	1.62	1.50	n/a	n/a	1.39	1.07	0.98	1.07	
Species Stocking Rate Score (out of 4)	2.50	2.50	n/a	n/a	2.50	2.50	2.50	2.50	
Habitat Quality score (out of 10)	**5.96**	**5.71**			**5.66**	**4.79**	**5.06**	**5.02**	**5.37**
Assessment Unit area (ha)	108.39	20.05			23.9	23.58	18.71	74.17	
Total offset area (ha) for this MNES	268.8	268.8			268.8	268.8	268.8	268.8	
Size Weighting	0.40	0.07	n/a	n/a	0.09	0.09	0.07	0.28	
Weighted Habitat Quality Score	**2.40**	**0.43**			**0.50**	**0.42**	**0.35**	**1.38**	**5.49**

249.4

RH YR20

Final habitat quality score (weighted)	AU1	AU2	AU3	NA	AU5	AU6	AU7	AU8	Average/Final
Site Condition score (out of 3)	2.20	2.10	n/a	n/a	2.04	1.98	2.01	2.00	
Site Context Score (out of 3)	1.69	1.69	n/a	n/a	1.55	1.66	2.63	2.63	
Species Stocking Rate Score (out of 4)	2.50	2.50	n/a	n/a	2.50	2.50	2.50	2.50	
Habitat Quality score (out of 10)	**6.39**	**6.29**			**6.09**	**6.14**	**7.14**	**7.13**	**6.53**
Assessment Unit area (ha)	108.39	20.05			23.9	23.58	18.71	74.17	
Total offset area (ha) for this MNES	268.8	268.8			268.8	268.8	268.8	268.8	
Size Weighting	0.40	0.07	n/a	n/a	0.09	0.09	0.07	0.28	
Weighted Habitat Quality Score	**2.58**	**0.47**			**0.54**	**0.54**	**0.50**	**1.97**	**6.59**

SP YR0

Final habitat quality score (weighted)	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8	Average/Final
Site Condition score (out of 3)	1.90	1.77	2.15	1.99	1.76	1.26	1.67	1.51	
Site Context Score (out of 3)	1.51	1.33	1.55	1.42	1.47	0.93	1.02	1.21	
Species Stocking Rate Score (out of 4)	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	
Habitat Quality score (out of 10)	**6.91**	**6.59**	**7.20**	**6.91**	**6.74**	**5.69**	**6.19**	**6.21**	**6.55**
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.12	0.01	0.02	0.03	0.22	0.03	0.25	
Weighted Habitat Quality Score	**2.25**	**0.79**	**0.09**	**0.07**	**0.20**	**1.24**	**0.17**	**1.56**	**6.38**

SP YR20

Final habitat quality score (weighted)	AU1	AU2	AU3	AU4	AU5	AU6	AU7	AU8	Average/Final
Site Condition score (out of 3)	1.95	1.89	2.15	1.98	2.06	1.35	1.83	1.86	
Site Context Score (out of 3)	2.19	2.20	2.36	2.12	1.74	2.25	2.63	2.63	
Species Stocking Rate Score (out of 4)	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	
Habitat Quality score (out of 10)	**7.64**	**7.59**	**8.00**	**7.60**	**7.30**	**7.10**	**7.96**	**7.99**	**7.64**
Assessment Unit area (ha)	1083.49	398.71	41.2	44.95	101.12	728.46	93.75	838.46	
Total offset area (ha) for this MNES	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	3330.14	
Size Weighting	0.33	0.12	0.01	0.02	0.03	0.22	0.03	0.25	
Weighted Habitat Quality Score	**2.49**	**0.91**	**0.10**	**0.07**	**0.22**	**1.55**	**0.22**	**2.01**	**7.57**

Appendix C

Offset Assessment Calculator for each MNES Value

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Greater Glider
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	**0.2%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	No		**Area**			
			Quality			
			Total quantum of impact	0.00		
Threatened species habitat						
Area of habitat	Yes	Combination of impacts from the MacIntyre Wind Farm Project and the Overhead Transmission Line Project	**Area**	245.6	Hectares	Impact area and habitat quality scores are outlined in the Offset Strategies developed for these Projects (Attexo, 2021a & Attexo 2021b).
			Quality	**6**	Scale 0-10	
			Total quantum of impact	147.33	Adjusted hectares	
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					
Threatened species						
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 met?	Cost ($ total)	Information source
Ecological Communities																				
Area of community	No				**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**									
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0								
					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)**									
Threatened species habitat																				
Area of habitat	Yes	147.33	Adjusted hectares	The Collin Offset site is located within the MIWF Project area the areas used are outside the proposed Project infrastructure.	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	3330.14	**Risk of loss (%) without offset**	0%	**Risk of loss (%) with offset**	0%	11.66	65%	7.58	7.28	418.87	284.31%	Yes	
									Future area without offset (adjusted hectares)	3318.5	**Future area with offset (adjusted hectares)**	3330.1								
					Time until ecological benefit	20	**Start quality (scale of 0-10)**	**4**	**Future quality without offset (scale of 0-10)**	**4**	**Future quality with offset (scale of 0-10)**	**6**	2.00	65%	1.30	1.25				
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 met?**	**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																			
Threatened species																				
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	147.33	418.87	284.31%	**Yes**	$0.00	N/A	$0.00
Area of community	0				$0.00		$0.00
					$0.00	**$0.00**	**$0.00**

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Grey-headed Flying-fox
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	**0.2%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	No		**Area**			
			Quality			
			Total quantum of impact	0.00		
Threatened species habitat						
Area of habitat	Yes	Combination of impacts from the MacIntyre Wind Farm Project and the Overhead Transmission Line Project	**Area**	734.6	Hectares	Impact area and habitat quality scores are outlined in the Offset Strategies developed for these Projects (Attexo, 2021a & Attexo 2021b).
			Quality	**6**	Scale 0-10	
			Total quantum of impact	440.77	Adjusted hectares	
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					
Threatened species						
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 met?	Cost ($ total)	Information source
Ecological Communities																				
Area of community	No				**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**									
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0								
					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)**									
Threatened species habitat																				
Area of habitat	Yes	440.77	Adjusted hectares	The Collin Offset site is located within the MIWF Project area the areas used are outside the proposed Project infrastructure.	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	3330.14	**Risk of loss (%) without offset**	0%	**Risk of loss (%) with offset**	0%	0.12	70%	0.08	0.08	447.99	101.64%	Yes	
									Future area without offset (adjusted hectares)	3330.0	**Future area with offset (adjusted hectares)**	3330.1								
					Time until ecological benefit	20	**Start quality (scale of 0-10)**	**4**	**Future quality without offset (scale of 0-10)**	**4**	**Future quality with offset (scale of 0-10)**	**6**	2.00	70%	1.40	1.35				
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 met?**	**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																			
Threatened species																				
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	440.766	447.99	101.64%	**Yes**	$0.00	N/A	$0.00
Area of community	0				$0.00		$0.00
					$0.00	**$0.00**	**$0.00**

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Koala
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	**0.2%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	No		**Area**			
			Quality			
			Total quantum of impact	0.00		
Threatened species habitat						
Area of habitat	Yes	Combination of impacts from the MacIntyre Wind Farm Project and the Overhead Transmission Line Project	**Area**	734.6	Hectares	Impact area and habitat quality scores are outlined in the Offset Strategies developed for these Projects (Attexo, 2021a & Attexo 2021b).
			Quality	**6**	Scale 0-10	
			Total quantum of impact	440.77	Adjusted hectares	
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					
Threatened species						
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 met?	Cost ($ total)	Information source
Ecological Communities																				
Area of community	No				**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**									
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0								
					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)**									
Threatened species habitat																				
Area of habitat	Yes	440.77	Adjusted hectares	The Collin Offset site is located within the MIWF Project area the areas used are outside the proposed Project infrastructure.	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	3330	**Risk of loss (%) without offset**	0%	**Risk of loss (%) with offset**	0%	11.65	70%	8.16	7.84	451.86	102.52%	Yes	
									Future area without offset (adjusted hectares)	3318.3	**Future area with offset (adjusted hectares)**	3330.0								
					Time until ecological benefit	20	**Start quality (scale of 0-10)**	**5**	**Future quality without offset (scale of 0-10)**	**5**	**Future quality with offset (scale of 0-10)**	**7**	2.00	70%	1.40	1.35				
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 met?**	**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																			
Threatened species																				
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	440.766	451.86	102.52%	**Yes**	$0.00	N/A	$0.00
Area of community	0				$0.00		$0.00
					$0.00	**$0.00**	**$0.00**

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Regent Honeyeater
EPBC Act status	Critically Endangered
Annual probability of extinction Based on IUCN category definitions	**6.8%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	No		**Area**			
			Quality			
			Total quantum of impact	0.00		
Threatened species habitat						
Area of habitat	Yes	Combination of impacts from the MacIntyre Wind Farm Project and the Overhead Transmission Line Project	**Area**	12.73	Hectares	Impact area and habitat quality scores are outlined in the Offset Strategies developed for these Projects (Attexo, 2021a & Attexo 2021b).
			Quality	**7**	Scale 0-10	
			Total quantum of impact	8.91	Adjusted hectares	
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					
Threatened species						
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 met?	Cost ($ total)	Information source
Ecological Communities																				
Area of community	No				**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**									
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0								
					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)**									
Threatened species habitat																				
Area of habitat	Yes	8.91	Adjusted hectares	The Collin Offset site is located within the MIWF Project area the areas used are outside the proposed Project infrastructure.	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	268.8	**Risk of loss (%) without offset**	0%	**Risk of loss (%) with offset**	0%								
									Future area without offset (adjusted hectares)	268.8	**Future area with offset (adjusted hectares)**	268.8	0.01	65%	0.01	0.00	9.38	105.21%	Yes	
					Time until ecological benefit	20	**Start quality (scale of 0-10)**	**5**	**Future quality without offset (scale of 0-10)**	**5**	**Future quality with offset (scale of 0-10)**	**7**	2.00	65%	1.30	0.35				
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 met?**	**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																			
Threatened species																				
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	8.911	9.38	105.21%	**Yes**	$0.00	N/A	$0.00
Area of community	0				$0.00		$0.00
					$0.00	**$0.00**	**$0.00**

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

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Matter of National Environmental Significance	
Name	Squatter Pigeon
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	**0.2%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	No		**Area**			
			Quality			
			Total quantum of impact	0.00		
Threatened species habitat						
Area of habitat	Yes	Combination of impacts from the MacIntyre Wind Farm Project and the Overhead Transmission Line Project	**Area**	263.3	Hectares	Impact area and habitat quality scores are outlined in the Offset Strategies developed for these Projects (Attexo, 2021a & Attexo 2021b).
			Quality	**7**	Scale 0-10	
			Total quantum of impact	184.34	Adjusted hectares	
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					
Threatened species						
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 met?	Cost ($ total)	Information source
Ecological Communities																				
Area of community	No				**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**									
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0								
					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)**									
Threatened species habitat																				
Area of habitat	Yes	184.34	Adjusted hectares	The Collin Offset site is located within the MIWF Project area the areas used are outside the proposed Project infrastructure.	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	3330.14	**Risk of loss (%) without offset**	0%	**Risk of loss (%) with offset**	0%	0.12	65%	0.08	0.07	416.00	225.67%	Yes	
									Future area without offset (adjusted hectares)	3330.0	**Future area with offset (adjusted hectares)**	3330.1								
					Time until ecological benefit	20	**Start quality (scale of 0-10)**	**6**	**Future quality without offset (scale of 0-10)**	**6**	**Future quality with offset (scale of 0-10)**	**8**	2.00	65%	1.30	1.25				
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 met?**	**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																			
Threatened species																				
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	184.338	416.00	225.67%	**Yes**	$0.00	N/A	$0.00
Area of community	0				$0.00		$0.00
					$0.00	**$0.00**	**$0.00**