

Bindooran Offset Area: Year 1 Monitoring Report

25 September 2026

Powerlink Queensland

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Definitions

Term	Definition
Assessment Unit	A defined area or group of areas within a matter area (Offset Area) that is relatively homogenous in condition. Habitat Quality sites at which site-based attributes are assessed, are established within each assessment unit.
Completion criteria	Final habitat quality scores and criteria required to meet the required conservation gains for each target MNES over the duration of the offset.
Habitat Quality Guide	The Queensland Department of Environment and Science *Guide to Determining Terrestrial Habitat Quality Version 1.3* (2020).
Habitat Quality Score	A method of evaluating habitat quality within a particular community based on key indicators including site-based attributes, landscape-scale attributes and species habitat attributes. The method produces a score out of 10, where the maximum score of 10 represents a fully intact system. Scores of 4, 5 and 6 may indicate good quality regrowth or medium value habitat.
Interim performance targets	Indicative targets to assess the effectiveness of management actions in improving habitat quality over monitoring events to ensure completion criteria are reached for each MNES. While strict compliance to meet these interim performance targets will not be required, they do provide a means to compare monitoring results and track progress.
Matters of National Environmental Significance	Environmental values protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. Significant impacts to these values may require offsets under the legislation.
Monitoring Site Locations	Designated monitoring sites located within the Offset Area for ongoing ecological monitoring events, including Habitat Quality, BioCondition, groundcover and biomass assessments.
Offset Area	The delineated Offset Area (approx. 2,691 ha) within the south-eastern extent of Bindooran Station (formally Lot 4 on Plan SP299868).
Regional Ecosystem	A vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil. Regional Ecosystems are described in the Regional Ecosystem Description Database (REDD), produced by the Queensland Herbarium.
Suitable habitat	Suitable habitat/microhabitat that comprises suitable breeding places, habitat connectivity and/or access to foraging resources. Suitable habitat may include breeding, foraging and shelter resources for fauna or preferred environmental conditions of flora.
The Project	The CopperString 2032 Project is a major linear infrastructure initiative supporting the delivery of critical transmission infrastructure across regional Queensland.
Vegetation community	An identified vegetation community (i.e., structure, composition, condition and/or underlying geology) verified from a field survey. Communities may include Regional Ecosystems, remnant vegetation and/or disturbed/novel ecosystems (e.g., parkland, disturbed roadsides etc.).
Year 1 monitoring	The first formal monitoring event undertaken in 2026 following commencement of offset management. The Year 1 monitoring event established the fixed monitoring locations intended for use during subsequent monitoring events but did not replace the approved OMP habitat quality baseline.

Abbreviations

Abbreviation	Definition
AU	Assessment Unit
Biosecurity Act	Queensland *Biosecurity Act 2014*
BoM	Bureau of Meteorology
DCCEEW	Commonwealth Government Department of Climate Change, Energy, the Environment and Water
DERM	Former Queensland Department of Environment and Resource Management
DES	Former Queensland Department of Environment and Science
DotE	Former Commonwealth Government Department of the Environment (now Department of Climate Change, Energy, the Environment and Water)
e2m	e2m Pty Ltd
EOP	Commonwealth Government *Environmental Offsets Policy*
EPBC Act	Commonwealth Government *Environment Protection and Biodiversity Conservation Act 1999*
ha	hectare
kg	kilogram
km	kilometre
m	metre
MNES	Matters of National Environmental Significance
OMP	Offset Management Plan
PLQ	Powerlink Queensland
RE	Regional Ecosystem
sp.	Singular species. For example, *Eucalyptus* sp. refers to a single species of *Eucalyptus*
VM Act	Queensland Government *Vegetation Management Act 1999*
WoNS	Weed(s) of National Significance

1. Introduction

1.1 Project background

The CopperString 2032 Project (the Project) is a major linear infrastructure initiative delivering critical transmission infrastructure across regional Queensland. The Project has been approved under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), with conditions requiring implementation of environmental offsets to address significant residual impacts to Matters of National Environmental Significance (MNES).

Consistent with the EPBC Act Environmental Offsets Policy (EOP), offsets are required where significant residual impacts to MNES remain following avoidance and mitigation. For Stage 1 of the Project, significant residual impacts were identified for four EPBC-listed threatened species:

- Australian painted snipe (*Rostratula australis*)
- Julia Creek dunnart (*Sminthopsis douglasi*)
- Painted honeyeater (*Grantiella picta*)
- Plains death adder (*Acanthophis hawkei*)

The CopperString Western Offset Property (Lot 4 on Plan SP299868) (the Offset Property) has been identified as supporting suitable habitat for these MNES. In accordance with the EPBC Act approval for Stage 1, Powerlink Queensland is required to implement the approved Offset Management Plan (OMP) for the Offset Area, including specified management, monitoring and reporting requirements.

The 2026 Year 1 monitoring event represents the first formal monitoring assessment undertaken following commencement of offset management. It documents current habitat condition, species habitat values and key threatening processes and establishes fixed monitoring locations for use during subsequent monitoring events. The habitat quality scores (2024) adopted in the approved OMP remain the baseline values for assessing compliance with the applicable habitat quality performance and completion criteria.

This report presents the 2026 Year 1 monitoring results and establishes the fixed-site monitoring dataset against which temporal changes recorded during subsequent monitoring events may be assessed. Compliance with the habitat quality performance and completion criteria will continue to be assessed using the approved OMP baseline and the applicable requirements of the OMP.

1.2 Scope and objectives

This report documents the 2026 Year 1 monitoring events undertaken within the Offset Area and presents:

- Establishment of the Year 1 fixed-site habitat quality monitoring dataset for target MNES, including comparison with the approved 2024 OMP baseline
- Targeted fauna survey outcomes
- Pest flora and pest fauna conditions recorded during the Year 1 monitoring event; and
- Recommendations to support ongoing compliance with the OMP and progression towards performance and completion criteria

1.3 Offset area overview

The Offset Area is located within the CopperString Western Offset Property, approximately 27 km west of Julia Creek township, within the McKinlay Shire Council Local Government Area. The broader Offset Property covers approximately 12,013.85 ha and is intersected by the Project, as shown in Figure 1. The Offset Area, the subject of this Year 1 monitoring report, covers approximately 2,691 ha within the broader CopperString Western Offset Property and has been established to acquit Stage 1 offset requirements for several matters of national environmental significance (MNES), including the Australian painted snipe (*Rostratula australis*), Julia Creek dunnart (*Sminthopsis douglasi*), painted honeyeater (*Grantiella picta*) and plains death adder (*Acanthophis*

hawkei). For clarity, the 'Offset Area' refers to the legally defined area subject to offset obligations, while the broader 'Offset Property' refers to the land parcel within which the Offset Area occurs.

Historically, the Offset Area has been utilised primarily for agricultural purposes, specifically livestock grazing. Vegetation within the Offset Property is predominantly remnant and comprises extensive tussock grasslands dominated by Mitchell grasses (*Astrebla squarrosa* and *Astrebla pectinata*) and flinders grasses (*Iseilema* spp.). Coolibah (*Eucalyptus coolabah*) woodlands occur fringing the drainage lines of the Gilliat River and Gidya Creek, while an area of gidgee (*Acacia cambagei*) woodland occurs on residual red-brown, undulating clay plains in the western extent of the property.

The Offset Area supports two broad vegetation communities, comprising:

- tussock grasslands on recent alluvium and clay plains, comprising regional ecosystem (RE) 2.4.2a (BVG 1M: 30b)
- eucalypt woodland fringing drainage lines, comprising RE 4.3.4f (BVG1M: 16a).

The Offset Area is traversed by a network of ephemeral and perennial streams draining to the Gilliat River and Gidya Creek. These watercourses form braided systems that provide important landscape connectivity, and habitat features for the Julia Creek dunnart, as well as supporting habitat for the Australian painted snipe, painted honeyeater and plains death adder.

Soils within the Offset Area are dominated by cracking clays across both riparian and non-riparian areas. These soils commonly form deep cracks (often >5 cm), which represent important sheltering habitat for the Julia Creek dunnart and plains death adder.

1.3.1 Natural climatic variability

The Offset Area occurs within an inland grassland landscape where flooding is a natural and recurring ecological process. For the Julia Creek dunnart, flooding is not considered a mechanism of permanent habitat loss, as habitat for the species is inherently dynamic and has evolved under regimes of periodic flooding and highly variable rainfall.

Rainfall-driven resource pulses in arid and semi-arid systems can result in short-term changes to vegetation condition, prey availability and small mammal abundance. However, these changes do not necessarily represent long-term loss of habitat extent or ecological function. Short-term declines in habitat condition caused by natural disturbance events, including flooding, drought or wildfire, are therefore not considered indicative of permanent habitat loss for the purposes of baseline monitoring or risk-of-loss assessment.

The Julia Creek dunnart is associated with Mitchell grass (Astrebla spp.) plains, which can expand, contract and structurally reorganise in response to rainfall variability and floodplain processes. Vegetation condition within these habitats may vary substantially between seasons and years without corresponding reductions in habitat availability for the species. Seasonal and inter-annual climatic variability is therefore an important consideration when interpreting baseline monitoring results, particularly where monitoring occurs following above-average rainfall, flooding, drought or other natural disturbance events.

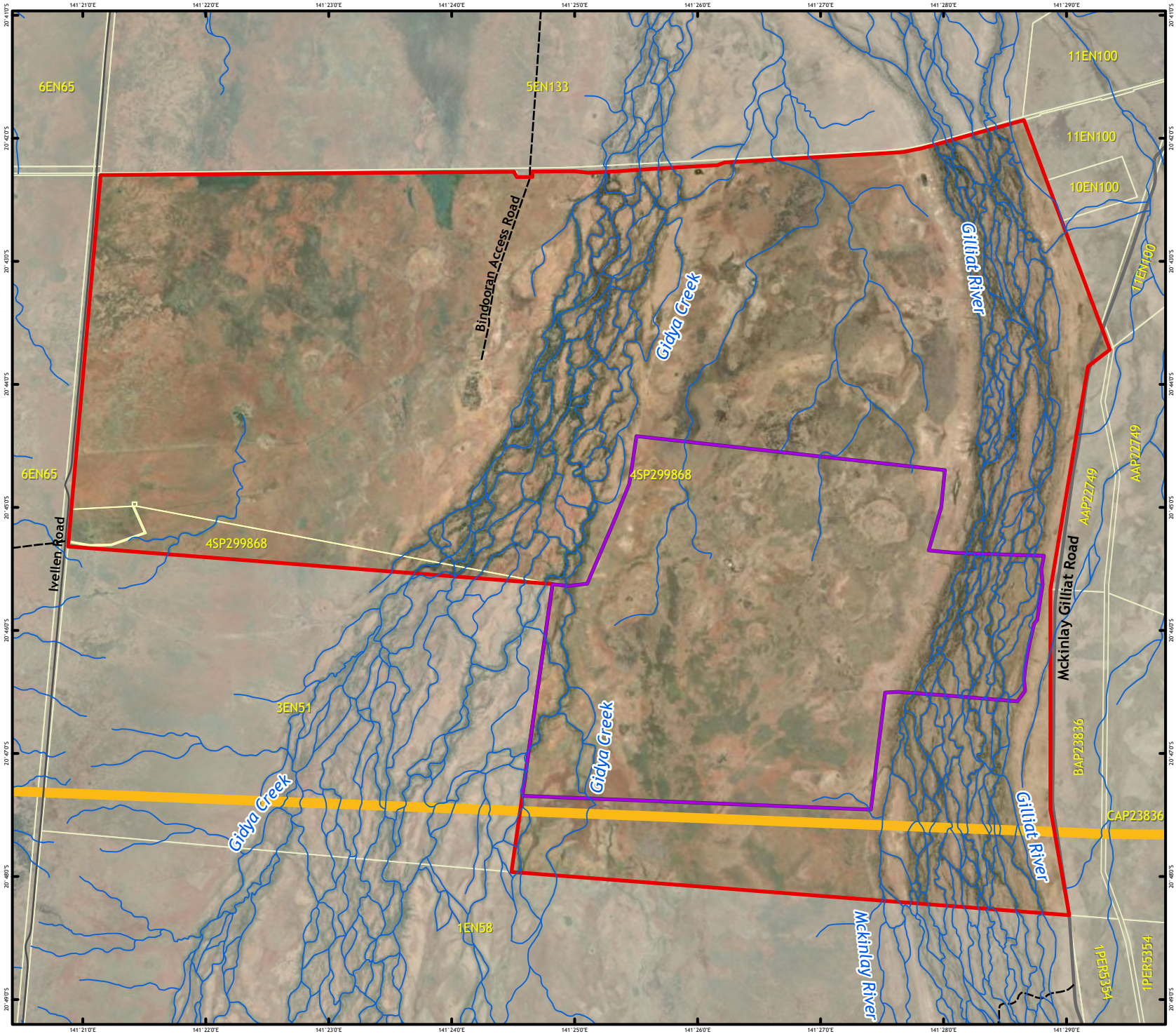
This climatic variability is also relevant to other target MNES occurring within the Offset Area. For Australian painted snipe, habitat availability is closely linked to the occurrence and persistence of shallow, temporary wetlands formed following rainfall or overbank flooding. The species is highly mobile and known to respond opportunistically to ephemeral wetland conditions across the broader landscape. As such, presence or absence at any given time is influenced by the spatial distribution of suitable wetland habitat rather than long-term site condition, and periods of high rainfall may result in increased availability of alternative habitat outside the Offset Area.

For painted honeyeater, habitat use is strongly influenced by seasonal flowering cycles of key food resources, particularly mistletoe and associated woodland species. Flowering intensity and distribution vary spatially and temporally in response to rainfall and temperature conditions, resulting in variable and often unpredictable patterns of resource availability. The species is therefore highly mobile, with local presence reflecting transient foraging opportunities rather than consistent occupancy of a given site.

For plains death adder, activity patterns, detectability and habitat condition are influenced by seasonal weather and ground conditions. Rainfall and temperature affect grass cover, litter accumulation and prey availability,

which in turn influence habitat suitability. Periods of above-average rainfall may result in increased groundcover and structural complexity, while drier conditions may reduce cover but increase surface cracking. These dynamics reflect natural variation within cracking clay grassland systems and do not necessarily correspond to long-term changes in habitat availability.

Accordingly, seasonal and inter-annual climatic variability should be considered when interpreting baseline monitoring results across all MNES. Observed changes in habitat condition, species presence or detectability may reflect natural fluctuations in rainfall, flooding and resource availability, rather than sustained changes in ecological function or offset performance.



Connector road
Local road
Private road
Cadastre
Watercourse
Offset Property

CopperString 2032 Project

Stage 2

N

Scale 1:80,000 (A4)

0 2 4

Kilometres

Coordinate System: GDA2020

FIELD MAP 1
OVERVIEW OF OFFSET PROPERTY

QEJ26008
Copperstring Western Offset Property OAMP
Year 1 (Baseline)
Powerlink

Drawn CP - 16/10/2026

Document Path: X:\JOBS\-2026\QEJ26008\03 GIS\PRO\QEJ26008\QEJ26008.aprx\QEJ26008_01_OverviewOffsetProperty

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2. Monitoring methods

The following section describes the methods used during the 2026 Year 1 monitoring event within the Offset Area, in accordance with the requirements of the CopperString Western Offset Management Plan (OMP). The monitoring program assessed habitat quality for the target MNES, documented pest flora and pest fauna pressures, and collected repeatable site-based data to support future assessment of habitat condition trends and threatening-process management. The approved OMP habitat quality scores remain the baseline values for assessing compliance with the applicable habitat quality performance and completion criteria.

2.1 Year 1 monitoring event and survey timing

The 2026 Year 1 monitoring event was undertaken within the Offset Area in accordance with the monitoring requirements specified in the OMP. The program included habitat quality, pest flora and pest fauna assessments across the two field-verified regional ecosystems (RE 2.4.2a and RE 4.3.4f).

The initial post-wet season survey was completed between 27 April and 6 May 2026. This survey incorporated targeted surveys for plains death adder, painted honeyeater and Australian painted snipe, together with all habitat quality and pest monitoring components able to be undertaken during this period.

A second post-wet season monitoring event was undertaken between 20 to 30 May 2026. This survey included targeted surveys for Julia Creek dunnart and biomass and groundcover monitoring. Results from this event are incorporated into this report.

2.2 Monitoring locations and survey design

Monitoring locations were selected to provide representative coverage of the Offset Area and the two field-verified regional ecosystems present (RE 2.4.2a and RE 4.3.4f). Sites were established within each community to support repeatable assessment of habitat condition, pest flora and pest fauna over the life of the offset.

Habitat quality assessment sites were distributed to capture the range of habitat values relevant to the target MNES. Assessments were undertaken in accordance with the OMP and the *Guide to determining terrestrial habitat quality: A toolkit for assessing land-based offsets under the Queensland Environmental Offsets Policy version 1.2* (Department of Environment and Heritage Protection, 2017).

Targeted surveys were conducted in line with the OMP and relevant species survey guidelines for plains death adder, painted honeyeater and Australian painted snipe. Targeted surveys for Julia Creek dunnart are scheduled for the second post-wet season monitoring event.

Pest flora and pest fauna monitoring was undertaken using an OMP-aligned methodology, with survey effort increased to establish repeatable quantitative datasets for comparison of pest pressures during future monitoring events.

All monitoring sites were recorded using GPS to facilitate relocation during future surveys. Where relevant, photo monitoring points and site observations were also collected to support documentation of baseline condition and enable future comparison against the Year 0 baseline (2024).

2.3 Habitat quality assessment

The Commonwealth EPBC Offset Assessment Guide (OAG) (DCCEEW, 2023) and *How to use the Offsets Assessment Guide* (SEWPaC, 2012b) provide the overarching framework for determining offset requirements and suitability. However, no prescribed Commonwealth method is specified for assessing habitat quality. In practice, habitat quality for MNES was assessed using the DCCEEW Modified Habitat Quality Assessment (MHQA) method, adapted from the Guide to determining terrestrial habitat quality (*version 1.2)* (Department of Environment and Heritage Protection, 2017) (Habitat Quality Guide).

Under the MHQA framework, habitat quality is quantified using three indicators: site context, site condition, and species stocking rate (SSR), typically weighted at 30%, 30% and 40%, respectively. These weightings were adjusted for each species to reflect factors such as detectability, intermittent habitat use, and the relative importance of key habitat attributes (e.g. food availability, threats, patch size and connectivity). The adopted indicator ratios are presented in Table 1, with detailed scoring criteria provided in the OMP. Table 1 outlines the indicator ratios utilised for assessing habitat quality within the Offset Area. An overview of scoring criteria for each species, including weightings for all indicators and factors, is provided in the OMP.

Habitat within the Offset Area was delineated into Assessment Units (AUs) prior to scoring. Each AU represents an area of relatively homogeneous vegetation community (regional ecosystem) and condition state (e.g. remnant, regrowth or non-remnant), and is assumed to have consistent structure, function and habitat quality.

Two AUs were identified:

- AU1 – RE 2.4.2a: Tussock grassland on alluvium and clay plains, providing habitat for Julia Creek dunnart, plains death adder and, under suitable seasonal conditions, Australian painted snipe.
- AU2 – RE 4.3.4f: Eucalypt woodland associated with drainage lines, providing habitat for painted honeyeater, Australian painted snipe and supporting values for the broader MNES assemblage.

Sampling sites were established within each AU to provide representative coverage of habitat types and condition states. Site-based and species-specific habitat attributes were recorded at each location to derive baseline habitat quality scores and establish a repeatable dataset for future monitoring.

Table 1: Habitat quality indicator ratios

Species	Ratios	Justification
Australian painted snipe	50% site condition 30% site context 20% SSR	Given very low detectability (high mobility, episodic wetland use, low abundance) greater emphasis is placed on habitat attributes rather than survey outcomes. Weightings have been adjusted as follows: • Site condition (50%) – prioritised due to the importance of wetland quality for foraging (food availability) and breeding habitat (shelter). • Site context (30%) – includes threats, landscape context and patch size; slightly reduced given the species' capacity for long-distance movement in response to rainfall. • SSR (20%) – reduced due to low detectability and limited confidence in density outcomes.
Julia Creek dunnart	40% site condition 30% site context 30% SSR	Given the species' cryptic nature and associated detectability limitations, habitat attributes are weighted more heavily than survey outcomes: • Site condition (40%) – reflects the importance of prey availability (foraging habitat) and shelter resources (soil cracking substrates). • Site context (30%) – captures threats, patch configuration and broader landscape context. • SSR (30%) – retained at a moderate level, acknowledging uncertainty in detection but some value in survey-derived information.
Painted honeyeater	50% site condition 30% site context 20% SSR	Given high mobility, episodic resource use and low detectability, habitat quality is the primary driver of suitability. • Site condition (50%) – driven by dependence on key resources (mistletoe abundance) and structural habitat complexity for foraging and shelter.

Species	Ratios	Justification
		• Site context (30%) – incorporates threats and landscape configuration; reduced to reflect the species' capacity for long-distance dispersal. • SSR (20%) – reduced due to low detectability and limited reliability of density estimates.
Plains death adder	50% site condition 30% site context 20% SSR	Given the species' highly cryptic behaviour and low detection rates, habitat characteristics are the primary determinant of suitability. • Site condition (50%) – reflects reliance on ground cover, prey availability and shelter features (e.g. soil cracks). • Site context (30%) – has been assigned a 30% weighting as it contains other important attributes including threats, context and patch size. • SSR (20%) – reduced due to inherent difficulty in detecting the species and quantifying abundance.

2.3.1 Site condition

Site condition data were collected within 100 m x 50 m assessment areas (inclusive of relevant subplots) for each assessment units (AU). Scores were derived in accordance with the *Habitat Quality Guide* and benchmarked against BioCondition reference values for the relevant regional ecosystem (Queensland Herbarium, 2025).

Species-specific habitat attributes – including the quality of foraging resources (food and habitat) and shelter, were explicitly incorporated into the site condition assessment and weighted accordingly.

A summary of site condition data collected (i.e. habitat quality assessment sites), associated plot areas and maximum attainable scores is summarised in Table 2. To better align with species ecology and habitat requirements, the relative weightings of individual site condition attributes were adjusted on a species-specific basis. The amended weightings are presented in Table 3.

The resulting site condition scores were then scaled using the species-specific habitat quality indicator ratios outlined in Table 1.

Table 2: Site condition assessment criteria

Attribute	Description	Assessment plot	Maximum score
Large trees	Number of large trees per hectare, benchmarked against BioCondition reference values for the relevant RE	100 m x 50 m	15
Tree canopy height	Median canopy height in metres of the ecologically dominant layer	100 m x 50 m	5
Recruitment (%)	Proportion of overstorey species exhibiting regeneration (<5 cm diameter at breast height [DBH])	100 m x 50 m	5
Tree canopy cover (%)	Vertical projection of native tree foliage cover along a transect	100 m transect	5
Shrub layer cover (%)	Vertical projection of native shrub foliage cover	100 m transect	5[†]

Attribute	Description	Assessment plot	Maximum score
Coarse woody debris	The length of fallen woody logs and other coarse woody debris (>10 cm diameter and >0.5 m in length (and more than 80% in contact with the ground) per hectare	50 m x 20 m	5
Native plant species richness	Native plant species richness across life forms (i.e. trees, shrubs, grasses and forbs/other)	100 m x 50 m (trees) 50 m x 10 m (shrubs, grasses, forbs/other)	5 each (20 total)
Non-native plant cover (%)	Percentage cover of non-native (weed) plant species	50 m x 10 m	10
Native perennial grass cover (%)	Mean percentage cover of native perennial grasses	Five 1 m x 1 m	5
Organic litter cover	Mean percentage cover of organic material such as fallen leaves, twigs, and branches <10 cm diameter.	Five 1 m x 1 m	5
BioCondition values (sub-total)			**80**
Quality and availability of food and foraging habitat	Assessment of habitat suitability for foraging, based on species-specific resource requirements and capacity to support a sustainable population (in accordance with the *Guide to determining terrestrial habitat quality (version 1.2)* (Department of Environment and Heritage Protection, 2017).	100 m x 50 m	10
Quality and availability of shelter habitat	Assessment of availability and condition of shelter/microhabitat features (e.g. hollows, logs, cracking clays, litter) tailored to species-specific requirements (in accordance with the *Guide to determining terrestrial habitat quality (version 1.2)* (Department of Environment and Heritage Protection, 2017).	100 m x 50 m	10
Total (maximum score)			**100**

† Denotes site-based attributes which does not apply for some RE's where no tree or shrub layer was identified by the associated benchmarks (i.e. grassland REs). For grassland REs the maximum score for the BioCondition component is 30.

Table 3: Site condition attribute weightings

Species	Weightings	Justification
Australian painted snipe	• 30% - BioCondition Values • 40% - Quality and availability of food and foraging habitat • 30% - Quality and availability of shelter	As the Offset Area provides foraging habitat only, the quality and availability of foraging resources (e.g. wetland habitat) is the primary determinant of suitability and has been weighted highest (40%). BioCondition values and shelter attributes are weighted at 30% each, reflecting their roles in supporting site condition, resilience and the likelihood of opportunistic utilisation.

Species	Weightings	Justification
Julia Creek dunnart	• 20% - BioCondition Values • 40% - Quality and availability of food and foraging habitat • 40% - Quality and availability of shelter	Site condition is strongly influenced by the availability of foraging and shelter resources (e.g. prey availability and soil cracking substrates), which are critical to the species' persistence, and are therefore weighted highest (40% each). BioCondition values contribute 20%, reflecting the importance of ground layer structure and composition in supporting these key attributes.
Painted honeyeater	• 30% - BioCondition Values • 40% - Quality and availability of food and foraging habitat • 30% - Quality and availability of shelter	Foraging resources, particularly mistletoe availability, are the primary driver of habitat suitability and are weighted highest (40%). BioCondition values and shelter attributes are each weighted at 30%, reflecting their influence on habitat structure, condition and the likelihood of site use.
Plains death adder	• 30% - BioCondition Values • 30% - Quality and availability of food and foraging habitat • 40% - Quality and availability of shelter	Shelter availability (e.g. soil cracks, ground cover) is the primary limiting factor for the species and is therefore weighted highest (40%). Foraging habitat (prey and cover) and broader vegetation condition (BioCondition values) are also important determinants of habitat suitability and are each weighted at 30%.

2.3.2 Site context

In accordance with the MHQA method and the Habitat Quality Guide, site context for the Offset Area was assessed against the criteria summarised in Table 4. As the Offset Area is located within an intact subregion (refer to Section 6 of the *BioCondition Assessment Manual* (Eyre et al., 2015)), the 'connectedness', 'context' and 'size of patch' attributes are replaced by 'distance to water'. In accordance with the MHQA method, other attributes including 'threats', 'ecological corridors', 'role of the site location for the population in the state' and 'species mobility capacity' have also been included (and weighted) for the site context component of the habitat quality scoring.

The site context components of the habitat quality score and associated weightings for each species are provided in Table 4. The site context component of the habitat quality score is then weighted based on the species-specific habitat quality indicator ratios provided in Table 3.

Table 4: Site context criteria and scoring

Criterion	Description	Maximum score
Distance to water	Proximity of the site to a permanent watering point, including dams, earth tanks, raised ring-tanks, troughs on pipelines, and natural permanent water bodies (e.g. rivers and waterholes).	20
Ecological corridors	Proximity of the site to the DETSI mapped ecological corridors at the state, bioregional, regional or sub-regional scale.	6
Role of the site location to species overall population in the state	Importance of the site to the Queensland population of the species, including its function (e.g. feeding, breeding, refuge) and the consequence of its loss or degradation on population persistence.	5

Criterion	Description	Maximum score
Threats to Species	Weighted threat score derived from Conservation Advice or National Recovery Plans for each MNES. Threats are assessed based on likelihood (Almost certain, Likely, Possible, Unlikely, Unknown) and consequence (Not significant, Minor, Moderate, Major, Catastrophic). Resulting risk levels include the following: • Low risk = 0-10% • Moderate risk = >10-15% • High risk = >15-25%; or • Very high risk = >25%. These risks are then converted to a score out of 15 as follows: • <9 = 1 (high threat) • 9 to 16 = 7 (moderate threat); and • >16 = 15 (low threat)	15
Species mobility capacity ^	Degree to which movement is constrained by barriers or landscape condition, assessed in accordance with the Habitat Quality Guide.	10
Total (max. score)		56

^ Due to the highly mobile nature of some species (limited impediments to movement), "Species Mobility Capacity" was not scored for Australian painted snipe. The total site context score for this species was reduced to a maximum score of 46.

2.3.3 Species stocking rate

SSR is derived from survey outcomes obtained using best-practice methods designed to maximise detectability of target species. This requires surveys to be undertaken within appropriate seasonal windows, with sufficient and targeted search effort, and, where possible, across multiple monitoring periods. The attributes used to determine SSR, and their associated scoring criteria, are summarised in Table 5. The overall SSR is subsequently weighted using the species-specific habitat quality indicator ratios presented in Table 3.

For species with adequate population data, indicative density ranges may be informed by targeted survey outcomes, local records or opportunistic observations. However, for cryptic or data-deficient species (e.g. plains death adder), population density cannot be reliably estimated and increases in stocking rate cannot be justified or applied.

Given the baseline nature of the monitoring program and limited temporal replication, SSR values should be interpreted cautiously and used as a relative indicator of habitat utilisation rather than an absolute measure of population status.

Table 5: Species Stocking Rate scoring

Attribute	Description	Maximum score
Presence detected on or adjacent to the site	Scored based on the target species being recorded within or adjacent (neighbouring property) to the site. The associated score is based on the following categories: • Yes – on site= 10 • Yes – adjacent to site = 5; and • No = 0.	10
Species usage on the site	Scored based on the target species habitat utilisation type within the site The associated score is based on the following categories:	15

Attribute	Description	Maximum score
	• Dispersal = 5 • Foraging = 10; and • Breeding = 15.	
Approximate density (per ha)	Estimated density of the target species based on local survey records and available literature. Due to the limited available data for the Impact area and surrounding landscape, the approximate densities for each species were categorised into four broad categories: • Absent = 0 • Low = 10 • Moderate = 20; and • High = 30. The density of each species was then scored based on survey effort, detectability and number of detections.	30
Role/importance of species population on site*	Score is based on the supplementary scoring matrix (refer to Table 6*). Overall score is determined based on the following categories: • 0 = 0 • 5 to 15 = 5 • 20 to 35 = 10; and • 40 to 45 = 15.	15
Total (maximum score)		**70**

* Attribute calculated based on supplementary scoring matrix provided in Table 6.

Table 6: Supplementary scoring matrix for role of importance of species population

Attribute	Categories	Maximum score
Key source population for breeding	Yes/Possibly = 10; and No = 0.	10
Key source population for dispersal	Yes/Possibly = 5; and No = 0.	5
Necessary for maintaining genetic diversity	Yes/Possibly = 15; and No = 0.	15
Near the limit of the species range	Yes = 15; and No = 0.	15

2.4 Pest flora

Pest flora monitoring was undertaken to establish a baseline for weed cover, species occurrence and infestation extent across the Offset Area. The baseline dataset will be used to inform weed management actions and provide a repeatable basis for assessing changes in pest flora abundance and cover over the life of the Offset Area.

2.4.1 Opportunistic pest flora

Opportunistic pest flora species were recorded during the monitoring event, including:

- Weeds of National Significance (WoNS)
- prohibited or restricted matter listed under schedules 1 and 2 of the Queensland *Biosecurity Act 2014*
- other environmental or non-native weed species observed within the Offset Area.

For each occurrence, the location, density, extent, general condition, and reproductive status were recorded using field tablets/GPS-enabled devices. Records were captured as either:

- point features for isolated individuals or small occurrences
- polygon features for larger or continuous infestations.

Where mapped, weed density was categorised as follows:

- **scattered:** 1-2 individuals per 10 m^2
- **low:** 3–4 individuals per 10 m^2
- **moderate:** 5–6 individuals per 10 m^2
- **high:** greater than 7 individuals per 10 m^2.

2.4.2 Targeted pest flora

In addition to opportunistic pest flora records, targeted weed cover assessments were undertaken to establish a quantitative baseline of non-native flora within each Assessment Unit. This approach was adopted to strengthen baseline monitoring and enable robust comparison of weed cover and composition in future monitoring events. While the methodology was adapted from the OMP, survey effort was increased to achieve a more representative dataset across the Offset Area.

Weed cover was assessed along a 50 m transect using five 5 m × 5 m plots positioned at 0–5 m, 10–15 m, 20–25 m, 30–35 m and 40–45 m, alternating on either side of the transect line (refer to Figure 2). Within each plot, all non-native flora species were identified, and their cover, reproductive status and condition were recorded.

Weed cover data were analysed at the monitoring site level and summarised by Assessment Unit to define baseline non-native flora cover across the Offset Area. These data will inform future monitoring by enabling assessment of temporal changes in weed cover, guiding adaptive management responses, and evaluating the effectiveness of weed control measures implemented under the OMP.

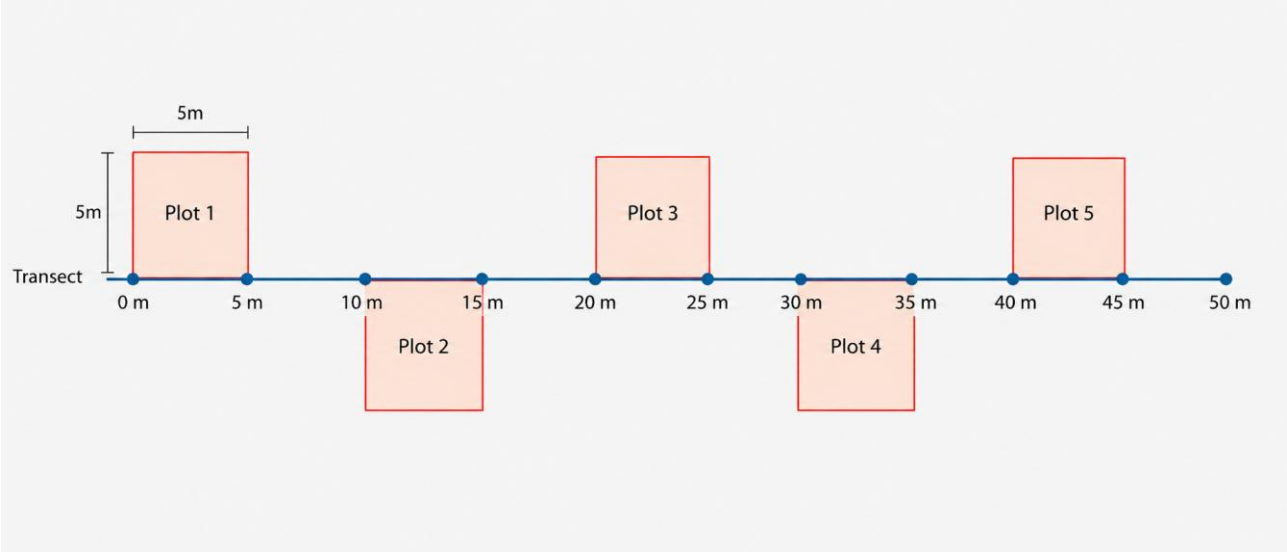


Figure 2: Weed monitoring methodology

2.5 Pest fauna

Pest fauna monitoring was undertaken to establish a baseline of pest fauna presence and relative activity within the Offset Area. This baseline will inform pest management actions and provide a repeatable framework for assessing changes in activity over time.

Monitoring was based on a remote camera trapping activity index, supplemented by incidental observations recorded during field surveys. Ten motion-sensor camera traps were deployed at strategically selected locations, including animal trails, water points, drainage lines and areas showing evidence of pest fauna activity. Sites were selected to maximise detection likelihood and ensure repeatability for future monitoring events.

Cameras were deployed for a minimum of six consecutive nights (refer to Figure 4), programmed to operate continuously over a 24-hour period using consistent sensitivity and trigger settings. Locations were recorded via GPS to support relocation. Image data were manually reviewed using CVAT (Computer Vision Annotation Tool), with all identifiable non-native fauna annotated. To reduce repeat detections, records for the same species at a single site were grouped within a rolling 30-minute interval, with counts based on the maximum number of individuals recorded in a single image. The sum of these grouped detections was used to calculate an activity index for each site.

The activity index provides a standardised, repeatable measure of relative pest fauna activity. While it does not estimate absolute abundance or density, it enables comparison between monitoring periods and supports evaluation of pest management effectiveness under the OMP.

Incidental observations, including sightings, tracks, scats, diggings and other field signs, were also recorded where encountered. These were spatially referenced where practicable and used to supplement the camera trapping dataset.

Collectively, the monitoring results establish a baseline of pest fauna presence and activity within the Offset Area, supporting adaptive management, future performance assessment and compliance reporting under the OMP.

2.6 Targeted MNES surveys

Targeted MNES surveys were undertaken during the initial post-wet season baseline monitoring event to confirm species presence, assess habitat utilisation, and document the condition of species-specific habitat within the Offset Area. Post-wet season surveys focused on Australian painted snipe, plains death adder and painted honeyeater, and were conducted in accordance with the OMP and relevant species-specific survey guidelines, with methods tailored to the ecology and detectability of each species.

A subsequent dry season survey undertaken in May 2026 targeted Julia Creek dunnart, using methods aligned with species-specific guidance and the OMP.

Results from these surveys establish baseline records of species presence and habitat condition, and will support ongoing monitoring, comparative analysis and performance evaluation under the OMP.

2.6.1 Australian painted snipe

Targeted surveys for the Australian painted snipe were undertaken within suitable wetland and ephemeral wetland habitats within the Offset Area, generally in accordance with the Survey guidelines for Australia's threatened birds (Department of the Environment, Water, Heritage and the Arts, 2010) and the OMP.

Survey methods comprised a combination of targeted stationary observations and land-based searches of suitable habitat. Survey effort focused on areas of inundation, wetland margins, damp depressions, drainage features and associated foraging habitat considered suitable for the species. Approximately 10 hours of targeted survey effort was undertaken over five days.

Survey effort was constrained to the Gilliat River tributary network in the eastern section of the Offset Area. Central areas of the Gilliat River tributary in the western portion of the Offset Area could not be accessed during

the first post-wet season survey due to persistent flooding conditions, limiting survey coverage within these areas.

During surveys, observers recorded any direct sightings, flushes, calls or other evidence of Australian painted snipe presence.

2.6.2 Painted honeyeater

Targeted surveys for the painted honeyeater were undertaken within suitable habitat supporting key foraging resources, generally in accordance with the Queensland Government Targeted species survey guidelines (J Rowland, 2012) and the OMP.

Survey effort focused on suitable woodland and riparian habitats within the Offset Area, particularly areas associated with RE 4.3.4f and locations supporting potential foraging resources such as flowering eucalypts and other nectar-producing flora. Surveys incorporated active searches and observational surveys during peak activity periods, including early morning periods when bird activity and detectability are typically highest.

Approximately 20 hours of targeted survey effort was undertaken over five days. Survey effort during the wet season was reduced due to access constraints, with flooded conditions limiting access to central areas of the Gilliat River braided channel network within the Offset Area. Survey effort was also contingent on the availability of mistletoe and other key foraging resources.

These access constraints reduced spatial coverage of suitable habitat and may have influenced detectability of the species during the survey period.

During surveys, observers recorded any direct sightings, calls, foraging behaviour or other evidence of painted honeyeater presence. Habitat condition and suitability were also recorded, including the presence of mistletoe, flowering resources, grazing pressure, weed cover and other threatening processes relevant to the species.

2.6.3 Plains death adder

Targeted surveys for the plains death adder were undertaken within suitable habitat in the Offset Area, focusing on cracking clay grassland habitats associated with RE 2.4.2a and areas supporting suitable ground cover, and soil cracks.

No species-specific survey guideline has been published by the Queensland Government for the plains death adder (*Acanthophis hawkei*). Accordingly, the survey effort and methodology were adapted from the Queensland Government's published survey guidelines for the common death adder (*Acanthophis antarcticus*), which is considered the most appropriate ecological and behavioural surrogate species currently available.

Survey methods comprised a combination of nocturnal spotlighting surveys and slow-drive surveys along access tracks and roads intersecting suitable habitat. Four person hours of nocturnal spotlighting was undertaken per night over a total of five nights, targeting periods when conditions were considered suitable for detecting active individuals. Slow-drive surveys were undertaken along accessible tracks and roads within or adjacent to suitable habitat to identify individuals using track edges or open areas.

During surveys, observers recorded any direct sightings, road encounters, shed skins or other evidence of plains death adder presence. Survey effort was limited to areas of the Offset Area where suitable habitat was identified and where access could be safely achieved.

2.6.4 Julia Creek dunnart

Targeted surveys for the Julia Creek dunnart were undertaken during the post-wet season monitoring event between 20 May and 30 May 2026 to assess species presence and habitat utilisation within suitable cracking clay grassland habitat across the Offset Area.

Survey timing was consistent with the recommended survey period for the species, with activities undertaken during the post-wet season when detection conditions are typically more favourable. Surveys were also timed to avoid the wet season period, when access to cracking clay habitats may be restricted following rainfall.

The survey methodology was implemented in accordance with the requirements and intent of the approved OMP and was informed by the endorsed alternative survey methodology proposed by Powerlink and accepted by DCCEEW. The survey design also aligned with current targeted survey guidance for the species, including the application of Elliott trapping, camera trapping, habitat assessment and searches for predator feeding remains (Venz et al., 2024).

Survey effort and the spatial distribution of survey locations are shown on Figure 4.

2.6.4.1 Elliott trapping

The targeted survey program involved the deployment of 140 Type A Elliott traps across seven discrete trapping arrays within suitable habitat. Traps were operated for seven consecutive nights, resulting in a total survey effort of 980 trap nights.

Each trapping array comprised 20 Type A Elliott traps arranged in two parallel lines of ten traps, spaced approximately 50 m apart (Figure 3). This configuration aligns with targeted species survey guidelines for Julia Creek dunnart, which recommend 20 Elliott-type traps per array, spaced at 50 m intervals and deployed over seven nights.

Traps were baited with a mixture of peanut butter, oats and bacon, at an approximate ratio of four parts peanut butter/oats mixture to one part bacon. Bait was replenished as required every two to three nights, to maintain bait condition and account for bait removal or degradation.

Given the colder overnight conditions during the survey period, insulated padding was placed in the rear of each Elliott trap to minimise the risk of cold stress and mortality in captured fauna. This approach is consistent with survey guidelines, which recommend the provision pf bedding in Elliott- traps under cold conditions to protect trapped animals from temperature extremes.

The seven trapping arrays were distributed across the Offset Area to provide representative coverage of suitable cracking clay grassland habitat.

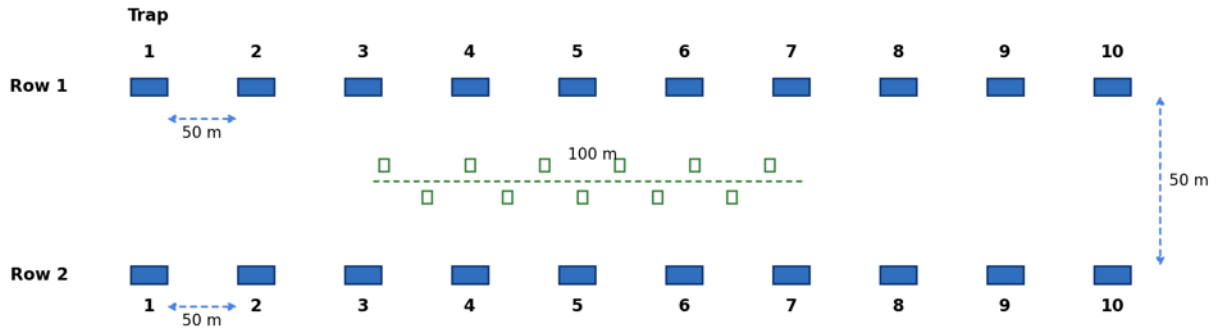


Figure 3: Trapping array and habitat assessment layout

2.6.4.2 Habitat assessments

Habitat assessments were undertaken at each of the seven trapping arrays to characterise site conditions relevant to Julia Creek dunnart (*Sminthopsis douglasi*). At each array, a 100 m transect was established through the centre of the trapping array, spanning from 150 m to 250 m along the array centreline. Ten 1 m × 1 m quadrats were positioned at regular intervals along the transect on alternating sides (Figure 3).

Within each quadrat, data were collected on dominant grass species and percentage cover, leaf litter cover, soil cracking and evidence of disturbance. These data were used to inform assessment of habitat suitability and potential species utilisation across the survey area.

Additional Julia Creek dunnart shelter habitat data, including the abundance and width of soil cracks and the presence of holes, were collected to supplement the targeted trapping survey and provide further context on the availability of potential shelter habitat, represented in Table 7. These data are not part of the Habitat Quality

scoring metrics presented in section 2.3. The Habitat Quality metrics and associated assessment methods are detailed separately in the OMP.

Table 7: Soil crack assessment structure

Score	Maximum Crack Width	Crack Abundance
1	No cracks visible	No cracks visible
2	<5 mm	1 crack per m^2
3	5–10 mm	2 cracks per m^2
4	10–20 mm	3–4 cracks per m^2
5	20–30 mm	5–6 cracks per m^2
6	>30 mm	>6 cracks per m^2, generally forming a visible cracking network

2.6.4.3 Camera trapping

Following completion of the Elliott trapping program, Reconyx HyperFire 4 white-flash motion-sensor camera traps were deployed across the Offset Area to complement the live trapping effort. A total of 35 camera traps were deployed at locations separate from the Elliott trapping arrays, targeting suitable cracking clay grassland habitat (Figure 4). Cameras were operated for a minimum of 28 nights, resulting in a total survey effort of 980 camera trap nights.

Each camera was mounted on a star picket at a height of 1.5 m, and oriented vertically downwards over a bait station. Bait stations comprised a perforated PVC pipe housing containing a mixture of peanut butter, oats and bacon (at a ratio of four parts combined peanut butter and oats to one part bacon), secured to the ground using tent pegs. This configuration provided a consistent field of view over the bait, enabling assessment of relative body size and morphological features to support species identification, consistent with the targeted species survey guidelines.

Cameras were programmed to operate from dusk to dawn, set to high sensitivity with a burst of three images per motion trigger event, no delay between trigger events, and 4K image resolution using white flash. This setup aligns with the targeted species survey guidelines, which recommend high-sensitivity white-flash cameras with no time delay, and a minimum of three photos per event to support reliable identification of *S. douglasi* and differentiation from sympatric dunnart species.

Camera traps were distributed to achieve broad habitat representation across the Offset Area and to complement the spatial coverage provided by the Elliott trapping program.

The methodology utilised to analyse camera trapping data is discussed in Appendix C with results presented in Section 2.6.4.3.

2.6.4.4 Searches for predator feeding remains

Searches for predator feeding remains, including owl pellets, were undertaken as part of the survey program. Barn owl (*Tyto javanica delicatula*) pellet analysis has proven to be an effective method for locating populations of Julia Creek dunnart (Charley et al., 2025; Woolley, 2010) and their use is recommended in the Qld targeted species survey guidelines for the species (Venz et al., 2024). Search effort focused on potential owl roost sites and other suitable locations within and adjacent to the Offset Area, consistent with the targeted species survey guidelines, which recommend searches of hollow-bearing trees and nearby farm structures.

Targeted search locations included an abandoned shearer's quarters near the main homestead and isolated paddock trees. Any owl pellets and other predator feeding remains encountered were collected for subsequent laboratory analysis. Recovered material will be examined for dasyurid jaw bones ≥20 mm in total length, indicative of adult *S. douglasi*.

Results of the owl pellet analysis are presented in Section 3.5.4.3.

2.7 Biomass monitoring

Biomass and groundcover monitoring was undertaken as part of the post-wet season monitoring event between 20 May and 30 May 2026 to establish baseline pasture biomass and groundcover conditions within the Offset Area.

A total of 33 biomass monitoring locations were assessed, distributed to provide broad spatial representation of grassland habitat condition and to capture variability in pasture biomass, groundcover composition and grazing pressure.

At each monitoring location, repeatable photo monitoring was undertaken to document a visual record of pasture biomass and groundcover condition. Photographs were taken from a distance of 5 m from the monitoring point, with a measuring stick positioned centrally to provide scale. The measuring stick included graduated measurements and a 50 cm black tape marker to ensure consistency between monitoring events.

Pasture biomass was estimated by comparing site conditions and field photographs with the Queensland Government / FutureBeef Mitchell grass photo standards for the Gulf Plains. These standards provide reference imagery across a range of biomass values (approximately 370 kg/ha to 3,630 kg/ha), enabling categorisation of biomass as low, moderate or high.

Groundcover condition was assessed concurrently, with observations recorded for pasture cover, bare ground and grass structure. These data provide a repeatable baseline for tracking changes in pasture condition over time.

Monitoring results will inform livestock management, fire risk management and ongoing assessment of grazing pressure within the Offset Area. The data will also support evaluation of habitat suitability for target MNES, particularly Julia Creek dunnart and plains death adder, which are sensitive to changes in groundcover structure, biomass and grazing intensity.

The 2026 monitoring event establishes the baseline dataset for future comparison. Subsequent monitoring events will be used to assess temporal trends and determine whether adaptive management actions are required to maintain or improve habitat condition across the Offset Area.

2.8 Monitoring limitations

Ecological surveys are subject to inherent limitations associated with seasonal timing, climatic variability and species behaviour. As such, the current survey represents a “snapshot” in time and may not provide a comprehensive indication of species presence or absence within the Offset Area, particularly for annual or ephemeral flora species and cryptic or highly mobile fauna.

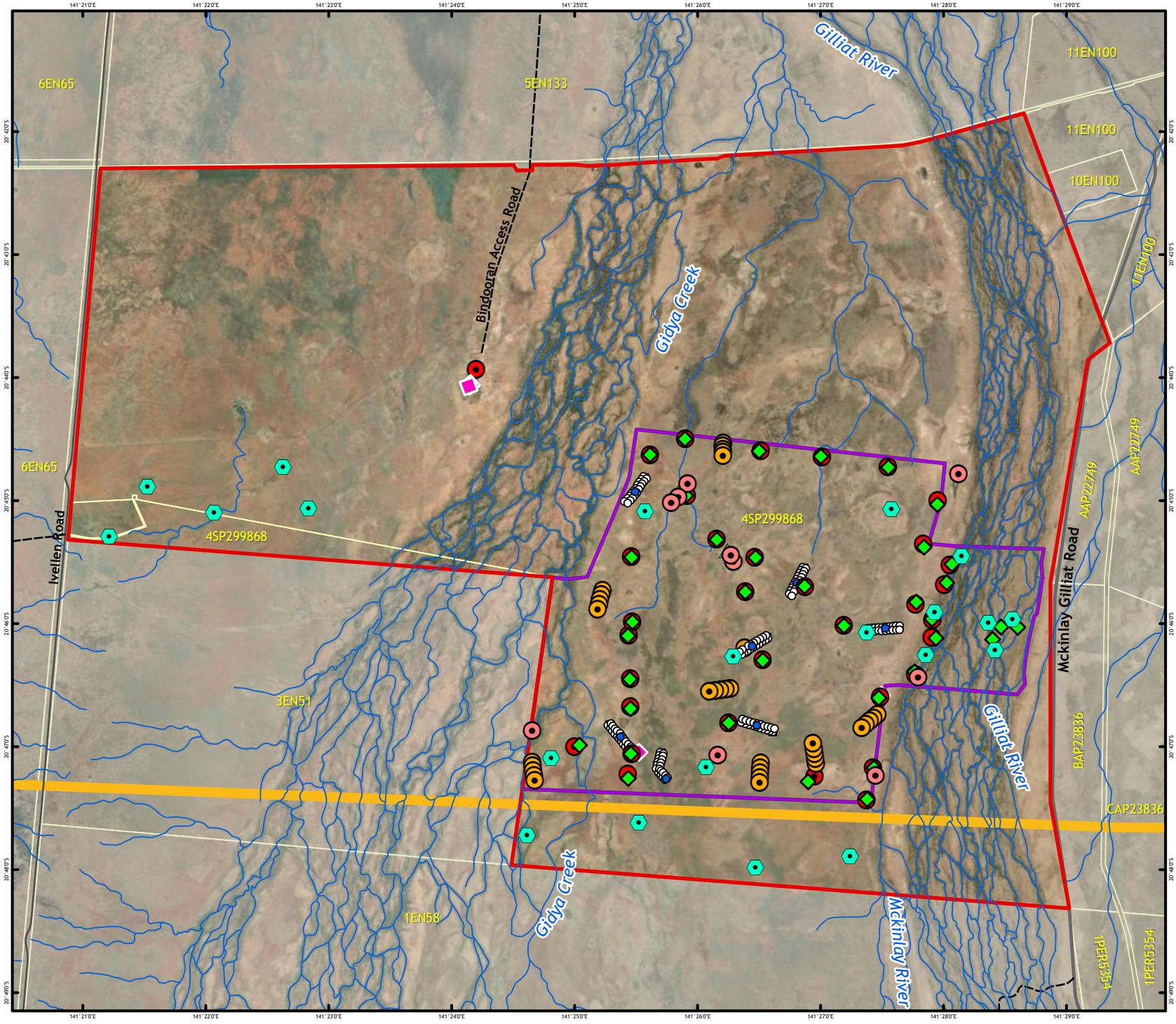
Survey conditions during the baseline monitoring event followed a period of above-average rainfall, which likely influenced vegetation structure, groundcover and the availability of ephemeral wetland habitat. While this may have improved habitat condition and resource availability, it may also have affected detectability of some species and increased the availability of alternative habitat across the broader landscape.

Access constraints due to flooding limited survey coverage in some areas, particularly within central sections of the Gilliat River tributary network. As a result, portions of potentially suitable habitat were not accessible during the monitoring period, reducing survey coverage and potentially influencing the likelihood of detecting species associated with these areas.

Targeted fauna surveys were further influenced by species-specific factors, including low detectability, seasonal activity patterns and resource availability (e.g. flowering events or ephemeral wetland conditions). For mobile or nomadic species (e.g. Australian painted snipe and painted honeyeater), presence at a given site may vary depending on broader landscape conditions, rather than site-specific habitat alone.

Additionally, the detection of cryptic species, such as the Julia Creek dunnart, was potentially limited during the monitoring period due to recent flooding events, elevated predator presence (i.e. feral cats), and cold weather conditions, which may have influenced activity patterns and reduced detectability.

Accordingly, the absence of records during this monitoring event should not be interpreted as confirmed absence. Ongoing monitoring across multiple seasons and years is required to adequately characterise species presence, habitat use and temporal variability within the Offset Area.



Connector road
Local road
Private road
Offset Property
Offset Area (Stage 1)

April 2026 Survey

Habitat Quality Biocondition Point
Remote Camera Deployed
Weed Monitoring Point

May 2026 Survey

Fauna Point

Observation Type

Active Search
Biomass Monitoring Point

Monitoring Site Deployment

Motion Camera Deployed
Array Start
Elliot Trap Deployed
Habitat Assessment

CopperString 2032 Project

Stage 2

N

Scale 1:80,000 (A4)

0 2 4

Kilometres
Coordinate System: GDA2020

e2m

FIGURE 4
MONITORING SURVEY EFFORT

QEJ26008
Copperstring Western Offset Property OAMP
Year 1 (Baseline)
Powerlink

Drawn CP- 16/10/2026

Document Path: X:\JOBS\-2026\QEJ26008\03 GIS\PRO\QEJ26008.aprx\QEJ26008_03_Monitoring_Survey_Effort

Aerial Imagery: © ESRI 2025, Base Data: © The State of Queensland (DNRMMRRD) 2025
e2m Pty Ltd gives no warranty in relation to the data (including accuracy, reliability, completeness or suitability) and accepts no liability for any loss, damage or costs (including consequential damage) relating to any use of the data in this map.

3. Field assessment results

3.1 Monitoring event conditions

Weather conditions during both field survey periods (i.e. initial post-wet season survey between 27 April and 6 May 2026, and second post-wet season survey between 20 and 30 May 2026) were generally fine and warm. Daily maximum temperatures ranged from 29.4°C to 34.4°C and minimum temperatures from 10.9°C to 16.8°C over the period 27 April to 6 May 2026 (Bureau of Meteorology (BoM), 2026).

Rainfall recorded at Julia Creek Airport in the preceding months (December 2025 to April 2026) was well above median levels (Figure 5). These conditions indicates that the Offset Area experienced above-average rainfall leading into the baseline monitoring event, likely influencing groundcover, vegetation growth, weed expression, and the extent of ephemeral wetland habitat.

Field observations in the April and May 2026 field survey periods were consistent with these conditions, with increased groundcover and seasonal vegetation growth recorded across parts of the Offset Area. Ephemeral drainage lines and low-lying areas were assessed to document habitat condition and the presence of seasonally inundated habitat for target MNES.

The elevated rainfall context should be considered when interpreting baseline results, particularly in relation to grassland structure, groundcover, weed cover, and the extent of ephemeral wetland habitat.

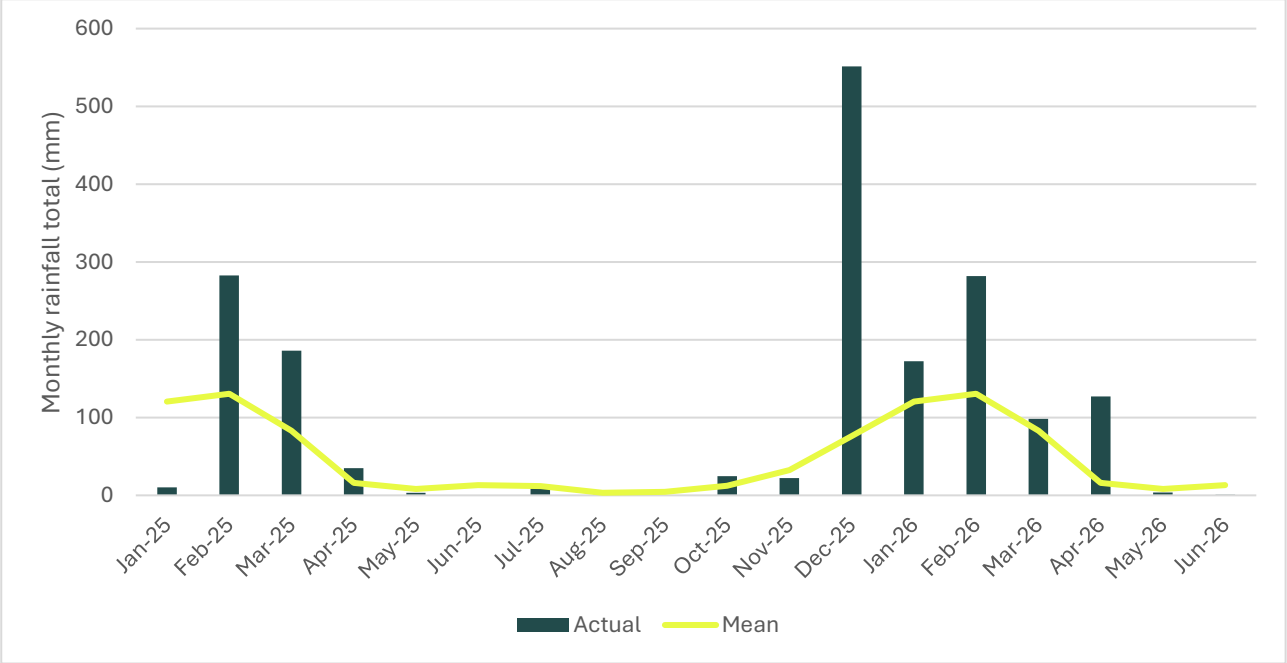


Figure 5: Monthly rainfall totals recorded at Julia Creek Airport compared to median monthly rainfall for Julia Creek Airport.

3.2 Habitat Quality

Habitat quality results are presented for each target MNES in accordance with the scoring framework adopted in the approved OMP. Scores are reported for site-based attributes, landscape attributes and species stocking rate, with an overall Habitat Quality Score calculated for each MNES. Detailed attribute scores are provided in Appendix A, with corresponding photographic records presented in Appendix B.

The habitat quality scores adopted in the approved OMP were derived from assessments undertaken in 2024 during development of the offset. These scores remain the approved baseline values for assessing compliance with the habitat quality performance and completion criteria specified in the OMP.

The 2026 Year 1 monitoring event represents the first formal monitoring assessment undertaken following commencement of offset management. It also establishes the fixed monitoring locations intended to be retained during subsequent monitoring events. The 2026 dataset therefore provides a consistent site-based framework for assessing changes in habitat condition and the effectiveness of management over time.

Direct comparison between the 2024 OMP scores and the 2026 monitoring scores requires caution because the assessments were undertaken for different purposes and were based on different assessment designs. The 2024 assessment used representative assessment locations across the broader Offset Property to inform offset planning and preparation of the OMP. In contrast, the 2026 assessment was undertaken at fixed monitoring locations established within the designated Offset Area. Differences in assessment extent, monitoring-site location, Assessment Unit configuration and the habitat attributes represented by each set of sites may influence the resulting scores.

Seasonal conditions are also relevant to the interpretation of the 2026 results. The 2026 monitoring followed a period of above-average rainfall, which influenced vegetation growth, floristic diversity, groundcover and other seasonally responsive habitat attributes. These conditions may have contributed to the higher scores recorded for some habitat quality components relative to the 2024 assessment.

Accordingly, differences between the 2024 and 2026 habitat quality scores should not be interpreted as demonstrating habitat quality uplift attributable to offset management. The 2024 OMP scores remain the approved compliance baseline, while the 2026 results provide the first fixed-site monitoring dataset for evaluating habitat condition trends during future monitoring rounds.

Future monitoring events undertaken at the fixed 2026 monitoring locations will provide a more robust basis for assessing habitat quality trends over time. As additional monitoring events are completed, greater emphasis should be placed on comparisons between successive fixed-site monitoring events rather than direct comparison between the 2024 OMP assessment and the 2026 monitoring assessment.

Table 8 presents the 2024 OMP baseline scores and the 2026 Year 1 monitoring results. The scores are presented together to transparently document the available habitat quality information, rather than to infer management-related change between the two assessment events.

Note: The 2024 habitat quality scores remain the approved OMP baseline values for assessment against the applicable performance and completion criteria. The 2026 scores represent the first formal monitoring results obtained from the fixed monitoring locations established within the Offset Area. Differences between the two datasets may reflect assessment purpose, assessment extent, monitoring-site location, Assessment Unit configuration and seasonal conditions. The differences should not be interpreted as demonstrated habitat quality uplift attributable to offset management.

Table 8: Summary of Habitat Quality scores for MNES across all monitoring years

MNES	Assessment Unit (and RE)		Habitat Quality Attributes	Habitat Quality Score			
	Year 0 baseline – initial offset suitability assessment for the OMP (2024)	Year 1 monitoringassessment (2026)		Year 0 baseline - initial offset suitability assessment for OMP (2024)	Year 1 monitoring assessment (2026)	5 Year Interim Performance Target	Final Completion Score
Australian painted snipe	8 (RE 4.3.4f)	2 (RE 4.3.4f)	Site-based attributes (/5)	1.78	2.54	-	-
			Landscape attributes (/3)	0.83	0.91	-	-
			Species stocking rate (/2)	1	1	-	-
			Habitat Quality Score (/10)	**3.61 (4)**	**4.46 (4)**		
Painted honeyeater	8 (RE 4.3.4f)	2 (RE 4.3.4f)	Site-based attributes (/5)	1.26	1.95	-	-
			Landscape attributes (/3)	1.19	1.44	-	-
			Species stocking rate (/2)	1	1	-	-
			Habitat Quality Score (/10)	**3.46 (3)**	**4.39 (4)**		
Plains death adder	4 (RE 2.4.2a)	1 (RE 2.4.2a)	Site-based attributes (/5)	1.40	2.88	-	-
			Landscape attributes (/3)	0.96	1.69	-	-
			Species stocking rate (/2)	1	1	-	-

MNES	Assessment Unit (and RE)		Habitat Quality Attributes	Habitat Quality Score			
	Year 0 baseline – initial offset suitability assessment for the OMP (2024)	Year 1 monitoringassessment (2026)		Year 0 baseline - initial offset suitability assessment for OMP (2024)	Year 1 monitoring assessment (2026)	5 Year Interim Performance Target	Final Completion Score
			Habitat Quality Score (/10)	**3.36 (3)**	**5.57 (6)**		
Julia Creek dunnart	4 (RE 2.4.2a)	1 (RE 2.4.2a)	Site-based attributes (/4)	2.27	3.41	-	-
			Landscape attributes (/3)	1.41	1.81	-	-
			Species stocking rate (/3)	1.5	1.5	-	-
			Habitat Quality Score (/10)	**5.19 (5)**	**6.72 (7)**		

3.3 Pest flora

Weed monitoring identified a relatively limited assemblage of non-native flora across the Offset Area, with weeds recorded in 76 of 180 plot-level assessments (42.2%). A total of 88 weed detections were recorded. The assemblage was dominated by prickly acacia (*Vachellia nilotica*), which was the most widespread species, recorded 47 times across 23 monitoring sites, with a maximum cover of 70%.

Three priority/listed pest flora species were recorded: prickly acacia (*Vachellia nilotica**), parkinsonia (*Parkinsonia aculeata**) and noogoora burr (*Xanthium occidentale**). Prickly acacia and parkinsonia are of greatest relevance from a legislative and management perspective, being listed as Weeds of National Significance and category 3 restricted invasive plants under the *Queensland Biosecurity Act 2014*. Noogoora burr was also present and should be considered in ongoing management, particularly in drainage lines, flood-prone areas, and disturbed sites. The listing status of all recorded species is summarised in Table 9.

2026 weed monitoring results are summarised in Table 10. Weed cover was assessed at each monitoring site using five 1 m × 1 m quadrats, with mean site weed cover calculated from plot-level values. The table reports both mean site weed cover and maximum plot-level cover, providing a baseline for tracking changes in weed abundance over time. Listed weed species recorded at each site are also identified to support targeted management and ongoing assessment of priority pest flora across the Offset Area.

Table 9: Priority / listed pest flora species identified within the Offset Area

Scientific name	Common name	WoNS	Biosecurity Act category	North West Queensland Regional Biosecurity Plan 2022 – 2027 priority
*Parkinsonia aculeata**	parkinsonia	✓	Category 3 restricted invasive plant	M – widely established; regional management focused on protecting assets at risk
*Vachellia nilotica**	prickly acacia	✓	Category 3 restricted invasive plant	C – strategic control target; control and containment of core infestations, eradication of outlier populations, prevention elsewhere
Xanthium occidentale	noogoora burr	-	Not listed as restricted matter	M – widely established; regional management focused on protecting assets at risk

Table 10: Summary of weed cover across monitoring sites

Monitoring site	Assessment Unit	Year 1 (2026) mean weed cover (%)	Change from previous monitoring (%)	Year 1 (2026) max cover (%)	Year 1 maximum weed cover (%)	Listed weeds recorded
BWT01	2.4.2a	3.0	-	15	-	-
BWT02	2.4.2a	2.8	-	10	-	prickly acacia
BWT03	4.3.4f	12.6	-	35	-	prickly acacia; noogoora burr
BWT04	4.3.4f	1.8	-	4	-	prickly acacia
BWT05	4.3.4f	2.4	-	3	-	prickly acacia; noogoora burr
BWT06	4.3.4f	1.2	-	3	-	prickly acacia
BWT07	4.3.4f	1.8	-	5	-	prickly acacia
BWT08	4.3.4f	0.2	-	1	-	-
BWT09	2.4.2a	0.8	-	3	-	prickly acacia
BWT10	2.4.2a	0.0	-	0	-	-
BWT11	2.4.2a	2.0	-	10	-	prickly acacia
BWT12	2.4.2a	3.0	-	15	-	prickly acacia
BWT13	2.4.2a	0.0	-	0	-	-
BWT14	2.4.2a	5.4	-	15	-	prickly acacia
BWT15	2.4.2a	0.0	-	0	-	-
BWT16	2.4.2a	0.2	-	1	-	-
BWT17	2.4.2a	17.8	-	45	-	prickly acacia
BWT18	2.4.2a	15.2	-	70	-	prickly acacia

Monitoring site	Assessment Unit	Year 1 (2026) mean weed cover (%)	Change from previous monitoring (%)	Year 1 (2026) max cover (%)	Year 1 maximum weed cover (%)	Listed weeds recorded
BWT19	2.4.2a	0.0	-	0	-	-
BWT20	2.4.2a	0.0	-	0	-	-
BWT21	2.4.2a	10.0	-	30	-	prickly acacia
BWT22	2.4.2a	4.2	-	20	-	prickly acacia
BWT23	2.4.2a	8.4	-	40	-	prickly acacia
BWT24	2.4.2a	3.4	-	6	-	prickly acacia; parkinsonia
BWT25	2.4.2a	2.0	-	4	-	prickly acacia
BWT26	2.4.2a	15.8	-	20	-	prickly acacia; parkinsonia
BWT27	2.4.2a	23.0	-	55	-	prickly acacia; parkinsonia
BWT28	2.4.2a	21.0	-	70	-	prickly acacia
BWT29	2.4.2a	1.2	-	4	-	-
BWT30	2.4.2a	0.8	-	2	-	-
BWT31	2.4.2a	2.2	-	6	-	-
BWT32	2.4.2a	1.0	-	3	-	prickly acacia
BWT33	2.4.2a	1.4	-	5	-	-
BWT34	2.4.2a	0.0	-	0	-	-
BWT35	4.3.4f	1.4	-	4	-	prickly acacia
BWT36	4.3.4f	0.0	-	0	-	-

3.3.1 Pest flora per Assessment Unit

Weed cover varied between assessment units, with higher levels recorded in AU 2.4.2a compared with AU 4.3.4f. AU 2.4.2a had a mean site weed cover of 5.2%, with weeds recorded at 22 of 28 monitoring sites. This unit also contained all sites with higher weed cover (>15%), specifically BWT17, BWT18, BWT26, BWT27, and BWT28.

In contrast, AU 4.3.4f supported lower weed cover overall, with a mean site weed cover of 2.7%. Most sites within this unit recorded low weed cover (<5%), with the highest mean site value being 12.6% at BWT03.

These results indicate that weed abundance is more pronounced within AU 2.4.2a, particularly at a subset of sites with elevated cover. Ongoing monitoring should track changes in mean weed cover within each assessment unit, as well as trends at higher-cover sites.

Interpretation should consider the unequal distribution of monitoring effort, with 28 sites in AU 2.4.2a and eight sites in AU 4.3.4f. Table 11 presents a summary of weed cover per assessment unit. Weed cover categories are based on mean site weed cover, calculated as the average of five 1 m × 1 m plots per site, including plots where no weeds were recorded.

Table 11: Categorical weed cover per assessment unit

Assessment Unit	Mean site weed cover (%)	Number of sites		
		Low >0–5%	Moderate >5–15%	High >15%
2.4.2a	5.2	14	3	5
4.3.4f	2.7	6	1	0

3.3.2 Parkinsonia (*Parkinsonia aculeata*)

Parkinsonia (*Parkinsonia aculeata*) was recorded within the Offset Area during the baseline monitoring event (Plate 1). The species is listed as restricted matter under the Queensland *Biosecurity Act 2014* and is also recognised as a Weed of National Significance (WoNS).

Within the Offset Area, parkinsonia was primarily associated with drainage features and low-lying areas, where seasonal moisture supports establishment and recruitment. In these environments, the species has the potential to reduce habitat quality by increasing woody weed cover, altering ground-layer structure, restricting access to drainage-line habitats, and competing with native vegetation.

Given this distribution, management should prioritise monitoring and control within drainage lines and seasonally wet areas to limit further spread into suitable MNES habitat, particularly within RE 4.3.4f and areas supporting wetland or ephemeral wetland values. Ongoing monitoring should track changes in distribution, density, and recruitment to assess the effectiveness of management actions over time.



Plate 1: Parkinsonia within the Offset Area

3.3.3 Prickly acacia (*Vachellia nilotica*)

Prickly acacia (*Vachellia nilotica*) was recorded within the Offset Area during the baseline monitoring event and represents a key weed threat to cracking clay grassland habitat associated with RE 2.4.2a (Plate 2). The species is listed as restricted matter under the Queensland *Biosecurity Act 2014* and is recognised as a WoNS.

Prickly acacia is a recognised threatening process for Julia Creek dunnart habitat. The National Recovery Plan for the Julia Creek dunnart identifies prickly acacia as a key threat to the species, and habitat suitability modelling for the species has incorporated prickly acacia density as a variable affecting habitat suitability (Department of Environment and Resource Management (DERM), 2009).

The primary risk relates to alteration of open Mitchell grassland structure. Increasing density can elevate woody weed cover, reduce native grass cover, and alter ground-layer composition, including the development of dense thorny thickets. These changes have the potential to reduce habitat suitability by affecting sheltering and foraging resources, including soil cracking patterns and Mitchell grass tussock structure required by the species.

Prickly acacia may also reduce suitability for plains death adder by modifying open grassland characteristics required for basking, movement, sheltering, and ambush foraging. Changes to grass cover, litter structure, and prey habitat may further influence habitat quality within cracking clay landscapes.

Given these risks, management should prioritise targeted control of prickly acacia within the Offset Area, focusing on preventing establishment of dense infestations, treating scattered plants prior to maturation, and prioritising areas where infestations overlap with key MNES habitat, particularly within RE 2.4.2a.



Plate 2: Prickly acacia within the Offset Area

3.3.4 Pest flora management implications

The 2026 weed monitoring results indicate that non-native flora species are present within the Offset Area, including restricted and priority weed species with the potential to affect habitat condition and offset values. Pest flora management priorities should be considered in relation to the species present, infestation extent, habitat overlap and the potential for weeds to alter vegetation structure, groundcover condition and ecological function within target MNES habitat.

Parkinsonia and prickly acacia are of particular management relevance due to their capacity to form dense infestations, alter grassland and riparian vegetation structure, suppress native groundcover and reduce habitat suitability over time. Within cracking clay grassland habitats, increases in woody weed cover may reduce the open tussock grassland structure relevant to Julia Creek dunnart and plains death adder, including by altering groundcover composition, reducing native grass dominance and affecting the availability of suitable shelter and foraging habitat. In riparian and wetland-associated habitats, weed encroachment has the potential to affect Australian painted snipe values by altering wetland margins, foraging areas and habitat accessibility. Weed impacts within woodland and riparian habitats may also affect painted honeyeater values where weed growth contributes to changes in native vegetation condition, regeneration, flowering resources or mistletoe-bearing host vegetation.

Pest flora activity was not evenly distributed across the Offset Area, with weed cover and priority weed occurrences varying between monitoring sites and Assessment Units. Areas supporting higher weed cover, restricted matter or emerging infestations should be considered priority locations for future weed surveillance and targeted control. Ongoing monitoring should continue to assess changes in weed cover, species composition and infestation extent over time, with particular attention to areas where pest flora overlaps with key habitat features for target MNES.

Future monitoring should continue to use the weed monitoring dataset to assess whether weed management actions are reducing weed cover and preventing further spread within key habitat areas. Where priority weed species persist, increase in cover, or expand into sensitive grassland, wetland, riparian or woodland habitats, adaptive management responses should be considered in accordance with the OMP.

3.4 Pest fauna

Pest fauna monitoring was undertaken using 10 remote cameras across the Offset Area, with a total survey effort of approximately 56.5 camera days. Data were processed as grouped independent detection events and summarised by species and monitoring site.

Detected pest and introduced fauna included cane toad (*Rhinella marina*), feral cat (*Felis catus*), dog/wild dog (*Canis familiaris*), and feral pig (Sus scrofa), with 113 detections recorded overall. Legislative and biosecurity status is summarised in Table 12, with site-based results presented in Table 13 and Figure 6.

Cane toad was the most frequently detected species, accounting for 70 detections (62% of all records) and occurring at seven of the 10 camera sites, with highest activity at PL24. Feral cats were also commonly recorded, with 31 detections across seven sites, again with peak activity at PL24. Feral pigs were less frequently detected, with 10 records across three sites, while dog/wild dog was recorded only twice across two sites.

Pest fauna activity was spatially variable. PL24 accounted for nearly half of all detections (56 records), largely driven by cane toad and feral cat activity. Moderate activity was recorded at PL14, PL22, PL23 and PL26, while no detections were recorded at PL12 or PL20 during the monitoring period.

These results indicate that cane toad and feral cat activity currently represent the most prominent introduced fauna pressures across the Offset Area, with feral pig activity present but more localised. The listing status presented in Table 12 provides context for prioritising targeted pest fauna management.

Table 12: Priority / listed pest fauna species identified within the Offset Area

Species	Scientific name	Queensland Biosecurity Act 2014 status	North West Queensland Regional Biosecurity Plan 2022-2027 status
cane toad	*Rhinella marina*	Not prohibited or restricted; subject to general biosecurity obligation	Included in regional biosecurity planning; management generally focused on localised impact reduction rather than eradication
feral cat	*Felis catus*	Category 3, 4 and 6 restricted invasive animal	Priority invasive animal; generally identified for asset protection across the region
dog / wild dog	*Canis familiaris*	Wild dog is a category 3, 4 and 6 restricted invasive animal	Priority invasive animal; generally identified for asset protection across the region
feral pig	*Sus scrofa*	Category 3, 4 and 6 restricted invasive animal	Priority invasive animal; generally identified for asset protection across the region

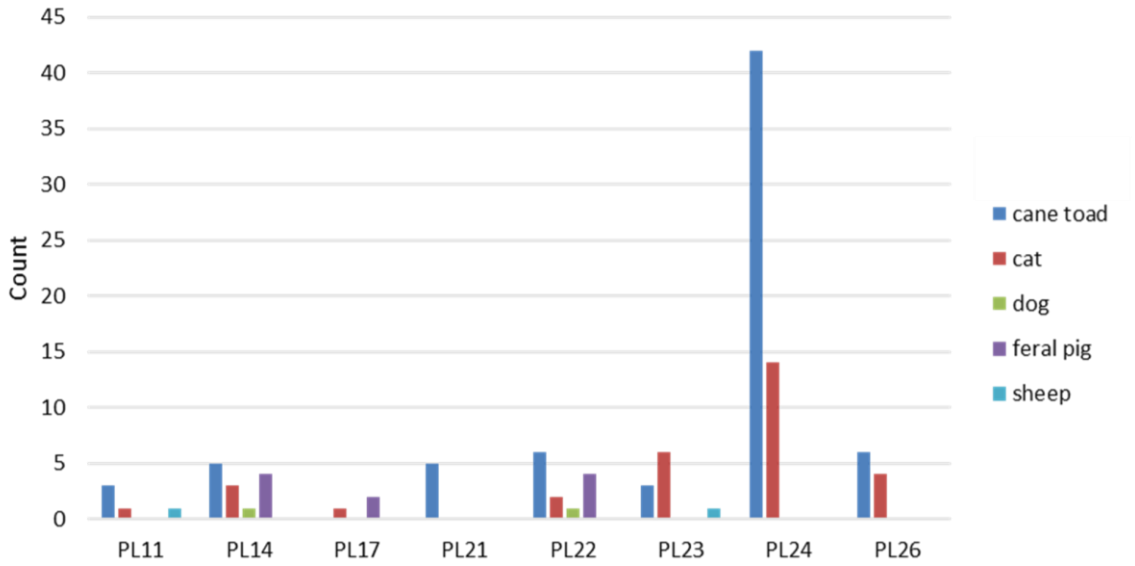


Figure 6: Site-based sum of the maximum count of a pest fauna species in a single image within a rolling 30-minute window.

Table 13: Site-based sum of the maximum count of a pest fauna species in a single image within a rolling 30-minute window.

Site	Deployment Days	Cane Toad	Cat	Dog	Pig
PL11	4.9	3	1	0	0
PL12	1	0	0	0	0
PL14	6.9	5	3	1	4
PL17	4.5	0	1	0	2
PL20	6.9	0	0	0	0
PL21	6.9	5	0	0	0
PL22	5.1	6	2	1	4
PL23	6.8	3	6	0	0
PL24	6.6	42	14	0	0
PL26	6.9	6	4	0	0
Total	**56.5**	**70**	**31**	**2**	**10**

Detections are based on grouped independent camera events. Values represent the sum of the maximum number of individuals of each species recorded in a single image within a rolling 30-minute window.

3.4.1 Pest fauna management implications

The 2026 pest fauna monitoring results indicate that introduced predators and other pest fauna are active within the Offset Area. Pest fauna management priorities should be considered in relation to species-specific risk and the habitat values being managed under the OMP.

Feral cat activity is of particular management concern due to the risk of direct predation on small terrestrial fauna, including Julia Creek dunnart, and broader impacts on ground-dwelling fauna. Cane toad was the most frequently detected pest fauna species and is also management-relevant, particularly for plains death adder, due to the potential for toxic ingestion and associated impacts on predatory reptiles. Pest fauna may also affect Australian painted snipe and painted honeyeater values through disturbance, predation risk, habitat degradation or indirect effects on habitat condition, particularly where activity is concentrated around wetland and riparian habitat.

Pest fauna activity was spatially variable across the Offset Area, with higher activity recorded at some monitoring sites. These areas represent priority locations for ongoing surveillance and, where required, targeted control. Continued use of the remote camera activity index will provide a repeatable basis for assessing changes in pest fauna activity changes over time and the effectiveness of management actions.

Future monitoring should focus on the spatial relationship between pest fauna activity and key habitat areas supporting target MNES values, including cracking clay grasslands (used by Julia Creek dunnart and plains death adder), wetland and riparian habitats (relevant to Australian painted snipe), and woodland habitats (supporting painted honeyeater). Particular attention should be given to areas where pest fauna activity overlaps with key habitat features, including suitable soil cracking, groundcover structure, wetland margins, drainage lines, mistletoe-bearing vegetation and other foraging or shelter resources. Where pest activity remains elevated or increases, adaptive management responses should be implemented in accordance with the OMP.

3.5 Targeted fauna surveys

Targeted surveys for Australian painted snipe, painted honeyeater and plains death adder were undertaken during the initial post-wet season monitoring event (27 April to 6 May 2026) in accordance with the OMP and relevant species survey guidelines. No Australian painted snipe, painted honeyeater or plains death adder were recorded during this survey period.

Targeted surveys for the Julia Creek dunnart were undertaken in the second post-wet season monitoring event (20 to 30 May 2026).

The absence of detections does not confirm absence, particularly for cryptic, mobile or seasonally variable species. Ongoing monitoring should continue in accordance with the OMP to assess species presence over time.

3.5.1 Australian painted snipe

No Australian painted snipe were recorded during targeted surveys. Suitable habitat was assessed within drainage lines, ephemeral wetlands and seasonally inundated areas associated with RE 4.3.4f.

Surveys followed a period of above-average rainfall, which likely increased the availability of ephemeral wetland habitat across the broader landscape. While this may have enhanced habitat suitability, it may also have resulted in greater availability of alternative habitat outside the surveyed areas. Accordingly, the absence of records does not preclude use of the Offset Area under favourable seasonal conditions.

3.5.2 Painted honeyeater

No painted honeyeater were recorded during targeted surveys. Surveys were undertaken within suitable woodland and drainage-line habitats associated with RE 4.3.4f, with a focus on areas supporting foraging resources.

Habitat suitability is likely to vary seasonally in response to the availability of flowering resources and other key habitat attributes. While no individuals were detected, suitable habitat remains present and should continue to be monitored during future survey events.

3.5.3 Plains death adder

No plains death adder were recorded during targeted surveys. Surveys were undertaken within suitable cracking clay grassland habitat associated with RE 2.4.2a, including areas supporting soil cracks, groundcover and other sheltering features.

The species is cryptic and of low detectability, with survey outcomes influenced by weather conditions, seasonal activity and survey timing. The absence of detections should not be interpreted as confirmed absence, and suitable habitat remains present within the Offset Area.

3.5.4 Julia Creek dunnart

3.5.4.1 Elliot trapping

Elliott trapping was conducted across seven arrays over seven consecutive nights, resulting in a total survey effort of 980 trap nights. No Julia Creek dunnart or other fauna were captured during the survey period, and two false trigger events were recorded.

A null result from Elliott trapping does not preclude the presence of Julia Creek dunnart within the Offset Area. Targeted species survey guidelines note that capture rates are typically less than 1% even at known sites of occurrence, and detection cannot be guaranteed under all seasonal and climatic conditions (Venz et al., 2024). Several contextual factors may have contributed to reduced detectability during the current survey period.

A regional irruption of long-haired rat (*Rattus villosissimus*) occurred in the preceding year, with elevated feral cat activity observed across the Offset Area. Increased predation pressure associated with sustained prey availability is a recognised threat to Julia Creek dunnart and may suppress local population densities to levels at which detection thresholds. The targeted species survey guidelines also note that rodent irruptions may reduce capture success of Julia Creek dunnart and recommend consideration of complementary survey methods, including camera trapping, under such conditions (Venz et al., 2024).

Recent flooding within the Offset Area may have further influenced detectability by displacing individuals, altering movement patterns or reducing local densities at the time of survey. Collectively, these factors indicate that Julia Creek dunnart may be present at low densities within the Offset Area but below the detection threshold of Elliott trapping under prevailing conditions. Results from camera trapping and owl pellet analysis provide additional lines of evidence to inform the overall assessment of species presence.

3.5.4.2 Habitat assessment

Habitat assessments were completed across all seven trapping arrays (A–G), with 10 quadrats recorded per array, totalling 70 quadrats across the Offset Area. Variation in grass cover, leaf litter, soil cracking and species composition was observed between arrays (Table 14).

Dominant grass species were consistent with cracking clay grassland communities associated with Julia Creek dunnart habitat, including barley Mitchell grass (*Astrebla pectinata*), bull Mitchell grass (*Astrebla squarrosa*), Flinders grass (*Iseilema vaginiflorum*), wire grass (*Aristida latifolia*) and *Sporobolus mitchellii*. *Astrebla pectinata* was the most widespread species, recorded at all seven arrays.

Grass cover varied between arrays. Sites B and G recorded the highest mean cover (60.7% and 68.0%, respectively), within or slightly above the preferred range of 40 - 65% for Julia Creek dunnart habitat. Sites C and E recorded the lowest mean grass cover (29.5% and 37.5%, respectively), with high variability between quadrats, indicating a more open and patchy grassland structure.

Soil cracking expression varied across the Offset Area. Site D recorded the highest mean crack abundance score (3.6), while Site C recorded the highest mean crack width score (3.2), indicating more pronounced cracking clay structure at these locations. Sites F and G recorded the lowest crack scores overall (mean width and abundance

scores of 1.9 and 1.7 - 3.1, respectively), suggesting less developed cracking at the time of survey, likely reflecting post-wet season soil moisture conditions.

Table 14: Habitat assessments within the trapping arrays

Array	Mean grass cover (%)	Mean leaf litter cover (%)	Mean crack width score	Mean crack abundance score	Dominant species
A	50.0	3.1	2.3	2.5	*Astrebla pectinata*, *Iseilema vaginiflorum*, *Dichanthium sericeum*
B	60.7	3.3	2.7	2.6	*Astrebla pectinata*, *Astrebla squarrosa*, *Iseilema vaginiflorum*
C	29.5	5.4	3.2	2.8	*Astrebla pectinata*, *Iseilema vaginiflorum*
D	44.5	3.0	2.5	3.6	*Astrebla pectinata*, *Iseilema vaginiflorum*, *Astrebla squarrosa*
E	37.5	8.3	2.4	3.1	*Iseilema vaginiflorum*, *Aristida latifolia*, *Astrebla pectinata*
F	43.4	15.1	1.9	1.7	*Astrebla squarrosa*, *Astrebla pectinata*
G	68.0	7.0	1.9	3.1	*Astrebla pectinata*, *Astrebla squarrosa*, *Eragrostis tenellula*

3.5.4.3 Predator feeding remains analysis

Searches for predator feeding remains were undertaken at targeted roost sites within and near the Offset Area. 185 barn owl pellets were collected from five roosts located within two long abandoned buildings (the old shearing shed and the old workers quarters) at the Bindooran property homestead during the monitoring event, with Dr Scott Burnett completing pellet analysis following the field survey.

The pellets were old (i.e., pre-wet season of 2025/2026) accumulations which were protected from weather inside walled buildings and located above the 2025/2026 flood level. Pellets were attributed to the eastern barn owl (*Tyto javanica*) based on their location, size, prey remains and prey taphonomy characteristics consistent with the species, together with its known presence and high abundance during the 2022 – 2024 long-haired rat (*Rattus villossimus*) boom in the area. It is likely that the pellets date back to that period.

Mammal skulls and mandibles were washed and sieved from each pellet individually and were initially identified as either *Rattus* sp. or dasyurid sp. Pellets containing only *Rattus* sp. (or no cranial material) were dried and combined with similar samples before storage prior to donation to the Queensland Museum. Dasyurid sp. remains and their entire pellet of origin were each bagged separately and donated to the Museum.

Among the several dasyurid species which are possible from the site, *S. douglasi* is the largest by a margin (Table 15), with the upper and lower molar rows larger than any other species (> than 6.6mm and 7.5mm in length respectively) (Baker et al., 2025). Dasyurid tooth rows were measured under a dissecting microscope, using digital callipers and the standardised tooth row measurements of Archer (1981).

Table 15: Tooth size and arrangement measurements used to distinguish *S. douglasi* from other small dasyurids from the broader Bindooran site and regionally adjacent areas.

Species	Lower molar row length (M_{1-4}) (mm)	Upper molar row length (M^{1-4}) (mm)	No. of lower premolars
S. douglasi	7.5– 8.37 (n = 83)	6.6 - 7.5 (n = 87)	3
S. macroura	5.6 – 6.4 (n = 84)	4.7 - 5.8 (n=84)	3
S. crassicaudata	5.1 – 6.2 (n= 71)	4.7 - 5.5 (n=71)	3
Antechinomys laniger	5.3 - 6.5 (n=36)	4.6 - 6.1 (n=72)	3
Pseudantechinus mimulus	6.8 - 7 (n = 5)	6.1 - 6.3 (n=3)	2
Planigale ingrami	3.7 – 4.2 (n = 15)	3.2 - 3.8 (n=15)	3

S. douglasi measurements from Archer, 1981, Baker et al., 2025, and Queensland Museum specimens JM18114, JM18122, JM18603, JM18604; *S. macroura* and *S. crassicaudata* measurement data from Archer, 1981; *P. mimulus* data from Kitchener, 1991 & Queensland Museum specimens JM21961, JM21965; *P. ingrami* measurements from Archer, 1976.

Two sets of dasyurid remains were identified in the pellet analysis (Plate 3).



Images taken by Dr Scott Burnett (2026 pellet analysis) – specimen 1 (left) and specimen 2 (right)

Plate 3: Remains (left mandibleand upper left tooth row)of two *S. douglasi* individuals found in owl pellets collected at Bindooran homestead, May 2026.

Tooth measurements fell within the known size-range of *S. douglasi* and exceeded those of all other sympatric small dasyurid species (Table 16) (Baker et al., 2025).

Table 16: Description and measurements of *S. douglasi* material collected at the Bindooran property during the monitoring event.

Specimen	Nature of collected material	No. lower premolars	Length of lower molar row (M_{1-4})	Length of upper molar row (M^{1-4})
1	Complete skull and jaw, skull in pieces (pellet).	3	7.57mm	6.8mm
2	Complete skull and jaw, skull in pieces (pellet).	3	7.78mm	6.84mm

In addition, 183 putative long-haired rat samples were extracted from pellets. Rodent skulls were not examined closely with the possibility of some samples containing black rat (*Rattus rattus*).

The pellets were collected in the geographical centre of Bindooran Station, approximately 5 km from the nearest property boundary and 2.5 km from the Offset Area. The confirmed presence of *S. douglasi* remains at the

homestead are indicative of *S. douglasi* in the general landscape (within the nightly radius of activity of the barn owl) and suggest potential presence in the offset area itself.

3.5.4.4 Camera trapping

Several small mammals were recorded across multiple camera trap locations during the survey period, including the following:

- One capture event of dasyurid sp. at sites PL03, PL18, PL20, PL26 and PL27(*S. macroura* or *Planigale* sp.); and
- Two capture events of dasyurid sp. at sites PL09 (*Planigale* sp.) and PL17.

Image capture events (referring to independent sets of images of individuals) occurred between 2 and 22 June 2026 (Figure 7), predominately during nocturnal hours between 7:00PM and 7:00AM. Images were reviewed by an species expert, who confirmed all detections were either *Sminthopsis macroura* or *Planigale* spp. Species identification was based off the body size (compared to the width of the bait container – 50mm) and diagnostic morphological features visible in the images. Individuals were considered to be too small to be *S. douglasi*, including juveniles. The presence of a long head stripe and triangular head shape and absence of pale fur behind the ears were consistent with *Planigale* sp. rather than *S. douglasi* (Plate 4 and Plate 5). Two *Planigale* species are known to co-occur, *P. ingrami* and *P. tenuirostris;* however, species-level identification was not possible through camera trap imagery alone.



Plate 4: ***S. macroura*** **or** ***Planigale*** **sp – camera trap site PL27 (left) and** ***Planigale*** **sp – camera trap site PL09 (right)**

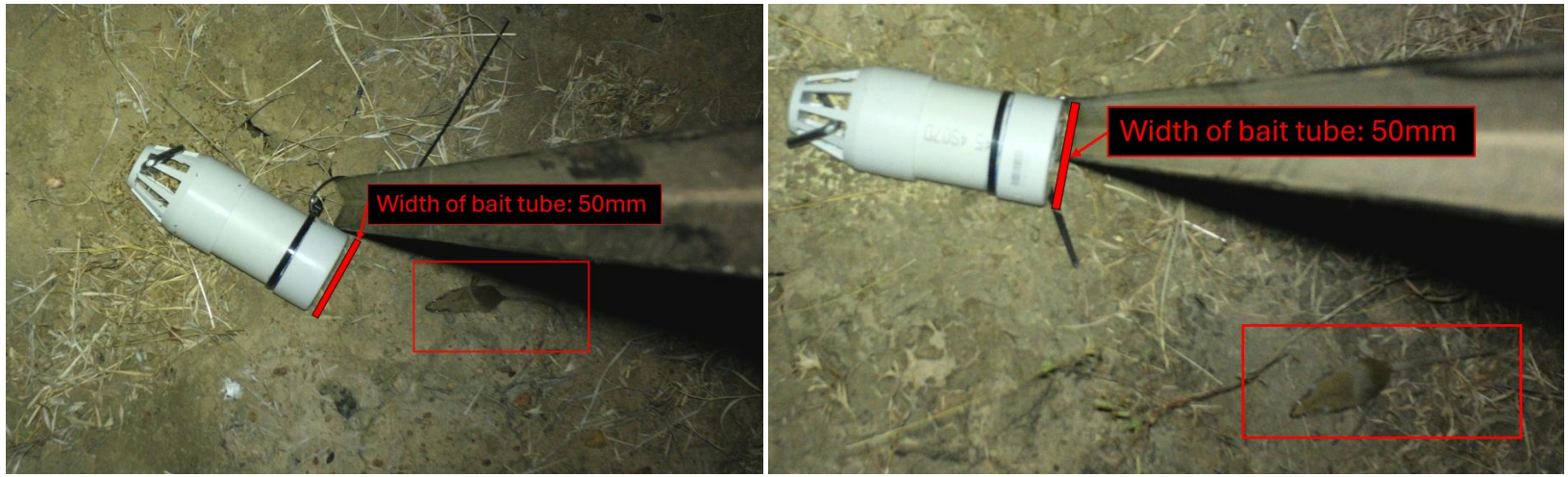


Plate 5: ***Planigale*** **sp. with lack of pale hare behind ears and triangular-shaped head – camera trap site PL31 (left) and PL17 (right)**

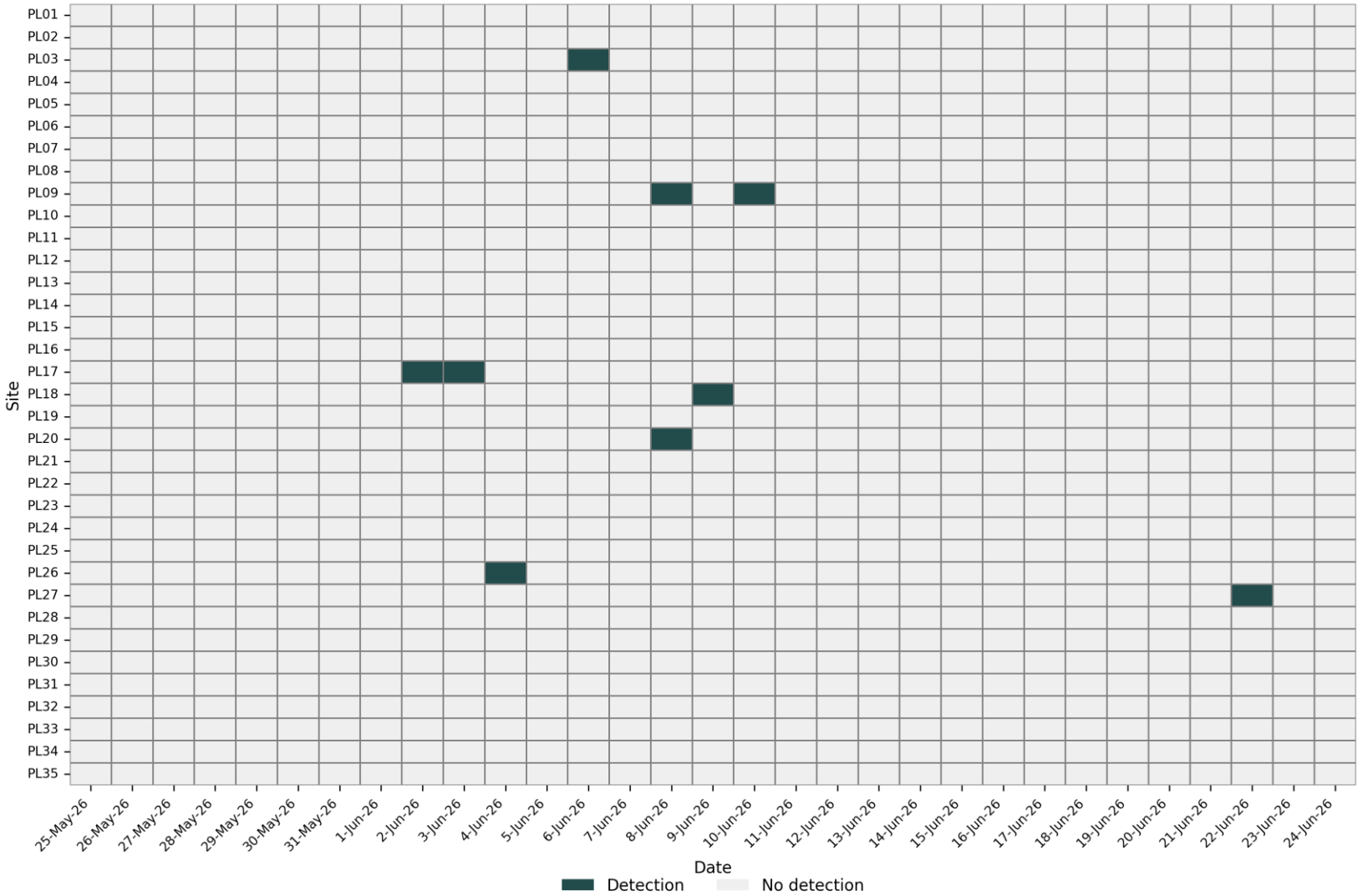


Figure 7: Dasyurid spp. detections across deployment period

Camera trap detection rates for *S. douglasi* are typically very low compared to other small mammal species (Bakker et al., 2024). The widespread occurrence of feral domestic cats (*Felis catus*) within the Offset Area may have contributed to low detection rates of *S. douglasi*, with feral cat capture events recorded at 21 of the 35 camera trap sites (Figure 8 and Plate 6). Bakker et al. hypothesised that individuals may avoid areas of concentrated animal activity associated with baited traps, or areas with increased exposure to aerial predators (e.g. owls), resulting in reduced detectability (Bakker et al., 2024). Capture events of the Australian owlet-nightjar (*Aegotheles cristatus*) and Torresian crow (*Corvus orru*) were also recorded at 10 camera trap sites during the survey period. While not direct predators of *S. douglasi*, their frequent occurrence suggests that areas surrounding bait tubes were readily accessible and exposed to aerial fauna, which may also contribute to the avoidance of these localised areas by *S. douglasi* individuals. Bakker et al.'s study conducted in Bladensburg National Park (approximately 250 km south-east of the Offset Area) using this camera-trapping methodology recorded a higher proportion of *Planigale* spp. than *S. douglasi* ((Bakker et al., 2024)). In this study, individuals of *Planigale* spp. tended to remain under the flash for longer, whereas *S. douglasi* often retreated immediately upon activation, suggesting potential camera shyness in this species relative to other small mammals.

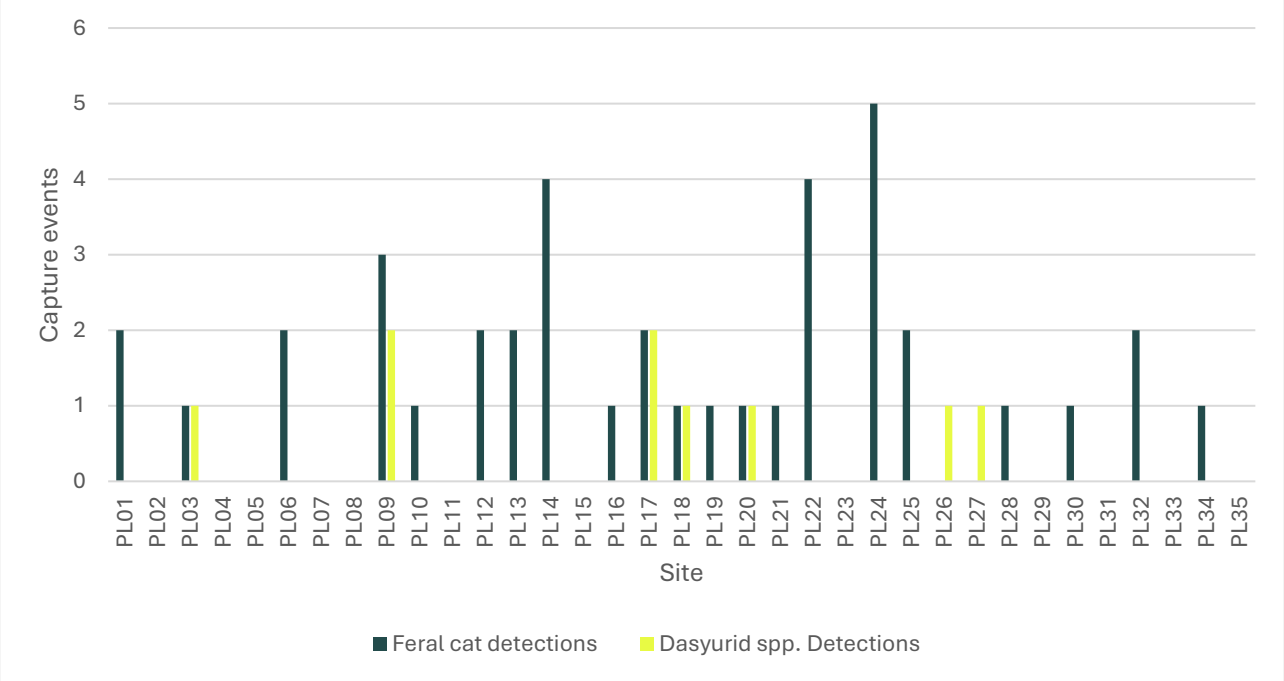


Figure 8: Feral cat detections and Dasyurid spp. detections across sites



Plate 6: Individual capture events of feral cat (*Felis catus*) recorded at camera trap sites throuhout the monitoring event – PL09 (upper left), PL14 (upper right), PL22 (lower left) and PL17 (lower right)

3.6 Biomass monitoring

A total of 33 biomass monitoring locations were assessed across the Offset Area during the post-wet season monitoring event. Monitoring locations were distributed across the Offset Area, including 28 locations within RE 2.4.2a and five locations within RE 4.3.4f.

Recorded pasture biomass across all monitoring locations ranged from 890 kg/ha to 3,630 kg/ha. The mean biomass recorded across the Offset Area was 1,964 kg/ha. Groundcover ranged from 5% to 100%, with a mean groundcover of 65.8%.

Within RE 2.4.2a, recorded biomass ranged from 890 kg/ha to 3,070 kg/ha. The mean biomass recorded within this vegetation community was 1,666 kg/ha. Groundcover within RE 2.4.2a ranged from 5% to 100%, with a mean groundcover of 61.1%. These results indicate variable pasture condition across RE 2.4.2a, with some monitoring locations supporting moderate to high biomass and groundcover, while other locations were more open and supported lower biomass and groundcover.

The five monitoring locations within RE 4.3.4f recorded consistently high biomass and groundcover. All five locations recorded biomass of 3,630 kg/ha, with groundcover estimates ranging from 90% to 100%. This indicates that RE 4.3.4f supported dense groundcover and high pasture biomass at the time of monitoring. Table 15 below shows a summary of the biomass monitoring results.

Table 17: Summary of biomass and groundcover results by Regional Ecosystem

Regional Ecosystem	n	Mean biomass	Median biomass	Mean groundcover	Median groundcover
2.4.2a	28	1,666 kg/ha	1,550 kg/ha	61.1%	70%
4.3.4f	5	3,630 kg/ha	3,630 kg/ha	92.0%	90%
Total	**33**	**1,964 kg/ha**	**1,820 kg/ha**	**65.8%**	**70%**

Overall, the 2026 biomass monitoring results indicate that pasture biomass and groundcover condition across the Offset Area was variable, particularly within RE 2.4.2a. Most monitoring locations supported moderate to high groundcover, with 19 of the 33 monitoring locations recording groundcover of 70% or greater. However, several locations within RE 2.4.2a recorded low biomass and/or low groundcover, indicating localised areas of more open grassland structure. These baseline results will provide a reference point for future monitoring events and will assist in assessing changes in grazing pressure, pasture condition, fire risk and habitat condition for the target MNES.

4. Conclusion

The Year 1 monitoring program was undertaken across the Bindooran Offset Area in accordance with the monitoring requirements of the approved OMP. The initial post-wet season survey, completed between 27 April and 6 May 2026, included habitat quality assessments, pest flora monitoring, pest fauna monitoring and targeted surveys for Australian painted snipe, painted honeyeater and plains death adder. A second monitoring event, undertaken between 20 and 30 May 2026, included targeted Julia Creek dunnart surveys, biomass monitoring and groundcover assessments.

The 2026 Year 1 monitoring event establishes the first formal monitoring dataset collected following commencement of offset management and establishes the fixed monitoring locations that will support consistent assessment of habitat condition, species habitat values and threatening processes during future monitoring events. The habitat quality scores adopted in the approved OMP remain the baseline values for assessing compliance with the relevant performance and completion criteria.

The 2026 habitat quality scores recorded for the target MNES were:

- Julia Creek dunnart: 6.72/10
- plains death adder: 5.57/10
- painted honeyeater: 4.39/10
- Australian painted snipe: 4.46/10.

The 2026 scores were higher than the corresponding scores adopted in the approved OMP. However, the two datasets were derived from different assessment locations, assessment extents and seasonal conditions. The 2024 assessment informed offset planning and preparation of the OMP, whereas the 2026 assessment was undertaken at fixed monitoring locations within the designated Offset Area. Accordingly, differences between the 2024 and 2026 scores should not be interpreted as demonstrated habitat quality uplift attributable to offset management.

Survey conditions followed a period of above-average rainfall, which influenced groundcover, grassland structure, weed expression and the availability of ephemeral wetland habitat. This seasonal context should be considered when interpreting the 2026 results and when comparing future monitoring outcomes.

No Australian painted snipe, painted honeyeater or plains death adder were recorded during the targeted surveys. No Julia Creek dunnart were captured during Elliott trapping or identified from camera trap imagery. However, Julia Creek dunnart remains recovered from owl pellets collected approximately 2.5 km from the Offset Area confirm the species' occurrence in the broader Bindooran landscape and indicate its potential presence within the Offset Area. The absence of records during this monitoring event should not be interpreted as confirmed absence.

The monitoring program also established site-based datasets for pest flora, pest fauna, biomass and groundcover. Priority weed species recorded within the Offset Area included prickly acacia and parkinsonia, while introduced fauna included cane toad, feral cat, dog/wild dog and feral pig. These species represent ongoing threatening processes requiring continued surveillance and management.

Future monitoring should retain the fixed monitoring locations established during the 2026 monitoring program. Repeated assessment of these locations will provide a consistent basis for evaluating habitat condition trends, identifying changes in threatening processes and assessing the effectiveness of management actions over time.

Overall, the 2026 Year 1 monitoring program provides a repeatable monitoring framework for the Bindooran Offset Area. Future reporting should assess compliance against the approved OMP baseline while using the fixed-site monitoring network established in 2026 to evaluate ecological change through time.

4.1 Implications for the Offset Management Plan

The habitat quality scores adopted in the approved OMP remain the baseline values for assessing compliance with the habitat quality performance and completion criteria for the target MNES. The 2026 monitoring results do not replace or re-establish those approved baseline values.

The 2026 monitoring program used fixed monitoring locations established within the designated Offset Area. This differs from the assessment approach used during development of the OMP, which relied on representative assessment locations across the broader Offset Property. Differences between the 2024 and 2026 scores therefore reflect, at least in part, differences in assessment purpose, assessment extent, monitoring-site location, Assessment Unit configuration and seasonal conditions.

Accordingly, the higher 2026 scores should not be interpreted as evidence that management actions have already delivered the habitat quality uplift required under the OMP. The 2024 OMP scores remain the approved compliance baseline, while the 2026 results establish the first formal fixed-site monitoring dataset. Future monitoring should retain the 2026 monitoring locations as the ongoing monitoring network and assess temporal change against this fixed-site dataset.

The current monitoring results do not indicate that offset management can be reduced, discontinued or considered complete. Management actions specified in the OMP should continue to be implemented, monitored and reported in accordance with the approved requirements.

The 2026 results identify several matters that should be addressed when the OMP is next amended or administratively updated. These include:

1. Updating OMP figures, habitat area calculations, Offset Assessment Guide inputs, management area mapping and monitoring figures to reflect the final surveyed Offset Area and any approved amendment to the offset boundary.
2. Confirming the habitat areas and Offset Assessment Guide calculations associated with any adjustment to the Offset Area.

Monitoring of reference locations outside the Offset Area may provide additional context for interpreting seasonal and landscape-scale change. However, external reference-site monitoring has not been adopted as a current OMP commitment and is not required to interpret the results of the 2026 monitoring event. It may be considered separately as a future optional monitoring enhancement, subject to land access, tenure arrangements, scope and approval by Powerlink.

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Appendix A
Habitat quality analysis

Project

Australian painted snipe

Assessment Unit		2			2			2			2			2			2		
Site				BHQ01			BHQ02			BHQ03			BHQ04			BHQ05			BHQ06	
Regional ecosystem				4.3.4f			4.3.4f			4.3.4f			4.3.4f			4.3.4f			4.3.4f	
Broad condition state				Remnant			Remnant			Remnant			Remnant			Remnant			Remnant	
Biocondition attribute	Weighting %	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score
Site condition																			
Recruitment of woody perennial species (%)		100	100	5	100	100	5	100	100	5	100	100	5	100	33	3	100	100	5
Native plant species richness - trees (No.)		2	1	2.5	2	1	2.5	2	1	2.5	2	2	5	2	3	5	2	1	2.5
Native plant species richness - shrubs (No.)		3	3	5	3	3	5	3	1	2.5	3	1	2.5	3	2	2.5	3	2	2.5
Native plant species richness - grasses (No.)		6	4	2.5	6	4	2.5	6	5	2.5	6	3	2.5	6	4	2.5	6	5	2.5
Native plant species richness - forbs (No.)		9	4	2.5	9	6	2.5	9	7	2.5	9	5	2.5	9	5	2.5	9	5	2.5
Tree height - average		9	9.8	2.5	9	9.5	2.5	9	4	1.5	9	9.2	2.5	9	9.2	5	9	8.9	5
Tree cover - average	30	37	14	1	37	14	1	37	4	1	37	25	2.5	37	10	3.5	37	27.2	5
Native shrub canopy cover (%)		8	2.5	3	8	0	0	8	7	5	8	0	0	8	0	0	8	1	3
Native perennial grass cover (%)		29	70	5	29	78.2	5	29	88	5	29	72	5	29	50.4	5	29	80	5
Organic litter (%)		8	4.2	5	8	3.6	3	8	1	3	8	5	5	8	6.6	5	8	3.6	3
Large trees/ha - total		19	8	5	19	12	10	19	0	0	19	12	10	19	8	5	19	10	10
Coarse woody debris (m/ha)		94	30	2	94	0	0	94	0	0	94	0	0	94	0	0	94	0	0
Non-native plant cover (%)		0	20	5	0	10	5	0	15	5	0	2	10	0	4	10	0	2	10
Quality/availability of food/foraging habitat score	40	10	-	6	10	-	6	10	-	0	10	-	6	10	-	6	10	-	6
Quality/availability of shelter score	30	10	-	4.95	10	-	4.95	10	-	1.65	10	-	4.95	10	-	4.95	10	-	4.95
Commonwealth site condition score fauna	-	50	-	28.05	50	-	27.68	50	-	9.13	50	-	29.27	50	-	28.61	50	-	29.93
Site context (Commonwealth)																			
Size of patch score	17.85714286	10	-	0	10	-	0	10	-	0	10	-	0	10	-	0	10	-	0
Connectedness score	8.928571429	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0
Context score	8.928571429	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0
Distance to permanent water score	43.48	20	-	0	20	-	0	20	-	0	20	-	0	20	-	0	20	-	0
Ecological corridors score	13.04	6	-	6	6	-	6	6	-	6	6	-	6	6	-	6	6	-	6
Threats score	32.61	15	-	6	15	-	6	15	-	6	15	-	8	15	-	8	15	-	8
Species mobility capacity score	0	10	-	0	10	-	0	10	-	0	10	-	0	10	-	0	10	-	0
Role of site location to overall population score	10.87	5	-	1	5	-	1	5	-	1	5	-	1	5	-	1	5	-	1
Commonwealth site context score	-	30	-	8.48	30	-	8.48	30	-	8.48	30	-	9.78	30	-	9.78	30	-	9.78

Project

Australian painted snipe

Commonwealth Fauna scores

Current Commonwealth habitat quality score

Assessment Unit (AU)	**2**
Average site condition score (out of 50)	25.44
Average site context score (out of 30)	9.13
Species stocking rate score (out of 20)	10.00
Habitat quality score (out of 10)	4.46
AU area (ha)	110.20
Size weighting	1.00
Weighted habitat quality score	4.46
Average site condition score	**25.44**
Average site context score	**9.13**
Average species stocking rate	**10.00**
MNES weighted habitat quality score (out of 10)	**4.46**

Project

Julia Creek dunnart

Assessment Unit		1			1			1			1			1			1		
Site				BHQ07			BHQ08			BHQ09			BHQ10			BHQ11			BHQ12	
Regional ecosystem				2.4.2a			2.4.2a			2.4.2a			2.4.2a			2.4.2a			2.4.2a	
Broad condition state				Remnant			Remnant			Remnant			Remnant			Remnant			Remnant	
Biocondition attribute	Weighting %	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score
Site condition																					
Recruitment of woody perennial species (%)		na	0	0	na	0	0	na	0	0	na	0	0	na	0	0	na	0	0		
Native plant species richness - trees (No.)		na	0		na	0		na	0		na	0		na	0		na	0			
Native plant species richness - shrubs (No.)		na	0		na	0		na	0		na	0		na	0		na	0			
Native plant species richness - grasses (No.)		7	7	5	7	7	5	7	7	5	7	8	5	7	8	5	7	8	5		
Native plant species richness - forbs (No.)		7	4	2.5	7	5	2.5	7	5	2.5	7	6	2.5	7	5	2.5	7	6	2.5		
Tree height - average		na	0		na	0		na	0		na	0		na	0		na	0			
Tree cover - average	20	na	0		na	0		na	0		na	0		na	0		na	0			
Native shrub canopy cover (%)		na	0		na	0		na	0		na	0		na	0		na	0			
Native perennial grass cover (%)		59	85	5	59	85.4	5	59	82	5	59	49	3	59	73	5	59	79	5		
Organic litter (%)		8	2	3	8	2	3	8	2	3	8	0.2	0	8	2.6	3	8	2.6	3		
Large trees/ha - total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Coarse woody debris (m/ha)		na	0		na	0		na	0		na	0		na	0		na	0			
Non-native plant cover (%)		0	2	10	0	1	10	0	8	5	0	4	10	0	0	10	0	4	10		
Quality/availability of food/foraging habitat score	40	10	-	10	10	-	10	10	-	10	10	-	10	10	-	10	10	-	10		
Quality/availability of shelter score	40	10	-	6	10	-	8	10	-	8	10	-	8	10	-	6	10	-	8		
Commonwealth site condition score fauna	-	40	-	32.40	40	-	35.60	40	-	34.27	40	-	34.27	40	-	32.40	40	-	35.60		
Site context (Commonwealth)																					
Size of patch score	17.85714286	10	-	0	10	-	0	10	-	0	10	-	0	10	-	0	10	-	0		
Connectedness score	8.928571429	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0		
Context score	8.928571429	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0		
Distance to permanent water score	35.71428571	20	-	5	20	-	5	20	-	5	20	-	5	20	-	5	20	-	5		
Ecological corridors score	10.71428571	6	-	6	6	-	6	6	-	6	6	-	6	6	-	6	6	-	6		
Threats score	26.78571429	15	-	9.4	15	-	9.4	15	-	6.2	15	-	9.4	15	-	9.4	15	-	9.4		
Species mobility capacity score	17.85714286	10	-	10	10	-	10	10	-	10	10	-	10	10	-	10	10	-	10		
Role of site location to overall population score	8.928571429	5	-	4	5	-	4	5	-	4	5	-	4	5	-	4	5	-	4		
Commonwealth site context score	-	30	-	18.43	30	-	18.43	30	-	16.71	30	-	18.43	30	-	18.43	30	-	18.43		

Project

Julia Creek dunnart

Commonwealth Fauna scores

Current Commonwealth habitat quality score

Assessment Unit (AU)	**1**
Average site condition score (out of 40)	34.09
Average site context score (out of 30)	18.14
Species stocking rate score (out of 30)	15.00
Habitat quality score (out of 10)	6.72
AU area (ha)	2491.00
Size weighting	1.00
Weighted habitat quality score	6.72
Average site condition score	**34.09**
Average site context score	**18.14**
Average species stocking rate	**15.00**
MNES weighted habitat quality score (out of 10)	**6.72**

Project

Plains death adder

Assessment Unit		1			1			1			1			1			1		
Site				BHQ07			BHQ08			BHQ09			BHQ10			BHQ11			BHQ12	
Regional ecosystem				2.4.2a			2.4.2a			2.4.2a			2.4.2a			2.4.2a			2.4.2a	
Broad condition state				Remnant			Remnant			Remnant			Remnant			Remnant			Remnant	
Biocondition attribute	Weighting %	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score
Site condition																						
Recruitment of woody perennial species (%)		na	0	0	na	0	0	na	0	0	na	0	0	na	0	0	na	0	0			
Native plant species richness - trees (No.)		na	0		na	0		na	0		na	0		na	0		na	0				
Native plant species richness - shrubs (No.)		na	0		na	0		na	0		na	0		na	0		na	0				
Native plant species richness - grasses (No.)		7	7	5	7	7	5	7	7	5	7	8	5	7	8	5	7	8	5			
Native plant species richness - forbs (No.)		7	4	2.5	7	5	2.5	7	5	2.5	7	6	2.5	7	5	2.5	7	6	2.5			
Tree height - average		na	0		na	0		na	0		na	0		na	0		na	0				
Tree cover - average	30	na	0		na	0		na	0		na	0		na	0		na	0				
Native shrub canopy cover (%)		na	0		na	0		na	0		na	0		na	0		na	0				
Native perennial grass cover (%)		59	85	5	59	85.4	5	59	82	5	59	49	3	59	73	5	59	79	5			
Organic litter (%)		8	2	3	8	2	3	8	2	3	8	0.2	0	8	2.6	3	8	2.6	3			
Large trees/ha - total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Coarse woody debris (m/ha)		na	0		na	0		na	0		na	0		na	0		na	0				
Non-native plant cover (%)		0	2	10	0	1	10	0	8	5	0	4	10	0	0	10	0	4	10			
Quality/availability of food/foraging habitat score	30	10	-	5	10	-	5	10	-	5	10	-	5	10	-	5	10	-	5			
Quality/availability of shelter score	40	10	-	2	10	-	6	10	-	6	10	-	6	10	-	2	10	-	6			
Commonwealth site condition score fauna	-	50	-	24.25	50	-	32.25	50	-	29.75	50	-	29.75	50	-	24.25	50	-	32.25			
Site context (Commonwealth)																						
Size of patch score	17.85714286	10	-	0	10	-	0	10	-	0	10	-	0	10	-	0	10	-	0			
Connectedness score	8.928571429	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0			
Context score	8.928571429	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0			
Distance to permanent water score	35.71428571	20	-	5	20	-	5	20	-	5	20	-	5	20	-	5	20	-	5			
Ecological corridors score	10.71428571	6	-	6	6	-	6	6	-	6	6	-	6	6	-	6	6	-	6			
Threats score	26.78571429	15	-	6.6	15	-	6.6	15	-	6.6	15	-	6.6	15	-	6.6	15	-	6.6			
Species mobility capacity score	17.85714286	10	-	10	10	-	10	10	-	10	10	-	10	10	-	10	10	-	10			
Role of site location to overall population score	8.928571429	5	-	4	5	-	4	5	-	4	5	-	4	5	-	4	5	-	4			
Commonwealth site context score	-	30	-	16.93	30	-	16.93	30	-	16.93	30	-	16.93	30	-	16.93	30	-	16.93			

Project

Plains death adder

Commonwealth Fauna scores

Current Commonwealth habitat quality score

Assessment Unit (AU)	1
Average site condition score (out of 50)	28.75
Average site context score (out of 30)	16.93
Species stocking rate score (out of 20)	10.00
Habitat quality score (out of 10)	5.57
AU area (ha)	914.00
Size weighting	1.00
Weighted habitat quality score	5.57
Average site condition score	**28.75**
Average site context score	**16.93**
Average species stocking rate	**10.00**
MNES weighted habitat quality score (out of 10)	**5.57**

Project

Painted honeyeater

Assessment Unit		2			2			2			2			2			2		
Site				BHQ01			BHQ02			BHQ03			BHQ04			BHQ05			BHQ06	
Regional ecosystem				4.3.4f			4.3.4f			4.3.4f			4.3.4f			4.3.4f			4.3.4f	
Broad condition state				Remnant			Remnant			Remnant			Remnant			Remnant			Remnant	
Biocondition attribute	Weighting %	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score	Benchmark	Current value	Current score
Site condition																			
Recruitment of woody perennial species (%)		100	100	5	100	100	5	100	100	5	100	100	5	100	33	3	100	100	5
Native plant species richness - trees (No.)		2	1	2.5	2	1	2.5	2	1	2.5	2	2	5	2	3	5	2	1	2.5
Native plant species richness - shrubs (No.)		3	3	5	3	3	5	3	1	2.5	3	1	2.5	3	2	2.5	3	2	2.5
Native plant species richness - grasses (No.)		6	4	2.5	6	4	2.5	6	5	2.5	6	3	2.5	6	4	2.5	6	5	2.5
Native plant species richness - forbs (No.)		9	4	2.5	9	6	2.5	9	7	2.5	9	5	2.5	9	5	2.5	9	5	2.5
Tree height - average		9	9.8	2.5	9	9.5	2.5	9	4	1.5	9	9.2	2.5	9	9.2	5	9	8.9	5
Tree cover - average	30	37	14	1	37	14	1	37	4	1	37	25	2.5	37	10	3.5	37	27.2	5
Native shrub canopy cover (%)		8	2.5	3	8	0	0	8	7	5	8	0	0	8	0	0	8	1	3
Native perennial grass cover (%)		29	70	5	29	78.2	5	29	88	5	29	72	5	29	50.4	5	29	80	5
Organic litter (%)		8	4.2	5	8	3.6	3	8	1	3	8	5	5	8	6.6	5	8	3.6	3
Large trees/ha - total		19	8	5	19	12	10	19	0	0	19	12	10	19	8	5	19	10	10
Coarse woody debris (m/ha)		94	30	2	94	0	0	94	0	0	94	0	0	94	0	0	94	0	0
Non-native plant cover (%)		0	20	5	0	10	5	0	15	5	0	2	10	0	4	10	0	2	10
Quality/availability of food/foraging habitat score	40	10	-	4	10	-	6	10	-	0	10	-	6	10	-	4	10	-	6
Quality/availability of shelter score	30	10	-	1.2	10	-	1.2	10	-	0.6	10	-	1.8	10	-	1.2	10	-	1.8
Commonwealth site condition score fauna	-	50	-	18.43	50	-	22.05	50	-	7.56	50	-	24.54	50	-	18.99	50	-	25.20
Site context (Commonwealth)																			
Size of patch score	17.85714286	10	-	0	10	-	0	10	-	0	10	-	0	10	-	0	10	-	0
Connectedness score	8.928571429	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0
Context score	8.928571429	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0	5	-	0
Distance to permanent water score	35.71428571	20	-	0	20	-	0	20	-	0	20	-	0	20	-	0	20	-	0
Ecological corridors score	10.71428571	6	-	6	6	-	6	6	-	6	6	-	6	6	-	6	6	-	6
Threats score	26.78571429	15	-	9.4	15	-	9.4	15	-	9.4	15	-	9.4	15	-	9.4	15	-	9.4
Species mobility capacity score	17.85714286	10	-	7.5	10	-	7.5	10	-	7.5	10	-	7.5	10	-	7.5	10	-	7.5
Role of site location to overall population score	8.928571429	5	-	4	5	-	4	5	-	4	5	-	4	5	-	4	5	-	4
Commonwealth site context score	-	30	-	14.41	30	-	14.41	30	-	14.41	30	-	14.41	30	-	14.41	30	-	14.41

Project

Painted honeyeater

Commonwealth Fauna scores

Current Commonwealth habitat quality score

Assessment Unit (AU)	2
Average site condition score (out of 50)	19.46
Average site context score (out of 30)	14.41
Species stocking rate score (out of 20)	10.00
Habitat quality score (out of 10)	4.39
AU area (ha)	199.90
Size weighting	1.00
Weighted habitat quality score	4.39
Average site condition score	**19.46**
Average site context score	**14.41**
Average species stocking rate	**10.00**
MNES weighted habitat quality score (out of 10)	**4.39**

Appendix B
Habitat quality photographic reference

Biocondition: 1

0 m



50 m north



50 m east



50 m south



50 m west



100 m



Biocondition: 2		
0 m	50 m north	50 m east
		
50 m south	50 m west	100 m
		

Biocondition: 3

0 m



50 m north



50 m east



50 m south



50 m west



100 m



Biocondition: 4		
0 m	50 m north	50 m east
		
50 m south	50 m west	100 m
		

Biocondition: 5

0 m



50 m north



50 m east



50 m south



50 m west



100 m



Biocondition: 6

0 m



50 m north



50 m east



50 m south



50 m west



100 m



Biocondition: 7

0 m



50 m north



50 m east



50 m south



50 m west



100 m



Biocondition: 8

0 m



50 m north



50 m east



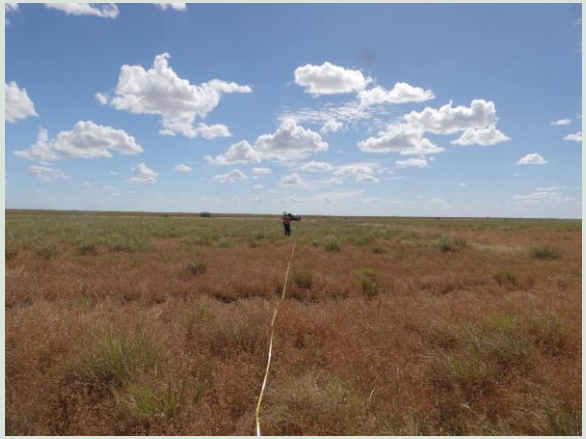
50 m south



50 m west



100 m



Biocondition: 9

0 m



50 m north



50 m east



50 m south



50 m west



100 m



Biocondition: 10

0 m



50 m north



50 m east



50 m south



50 m west



100 m



Biocondition: 11

0 m



50 m north



50 m east



50 m south



50 m west



100 m



Biocondition: 12

0 m



50 m north



50 m east



50 m south



50 m west



100 m



Biocondition: 25

0 m



50 m north



50 m east



50 m south



50 m west



100 m



Appendix C
Motion camera analysis methodology

C-1 Methods

35 baited Reconyx HyperFire 4 white-flash motion sensor camera traps were deployed across the site from 25 May 2026 to 24 June 2026 with the following settings applied:

- high sensitivity settings configured to capture a three-image burst for each motion trigger event
- no delay between trigger events
- 4K image resolution with white flash illumination; and
- programmed to operate from dusk until dawn.

For sites where less than 500 images were taken during the camera deployment period, the Computer Vision Annotation Tool (CVAT) software was utilised to manually review images and locate and identify target species. For sites with over 500 images, advanced computer vision techniques were employed in a semi-automated detection and identification of process (Table C.1).

Table C.1: Camera sites and workflow utilised for analysis

Camera site	Number of images captured	Workflow
PL01	27	Manual
PL02	0	-
PL03	12	Manual
PL04	0	-
PL05	0	-
PL06	17,990	Semi-automated
PL07	62,628	Semi-automated
PL08	48	Manual
PL09	66	Manual
PL10	3	Manual
PL11	0	-
PL12	22,434	Semi-automated
PL13	27	Manual
PL14	96	Manual
PL15	67,443	Semi-automated
PL16	12	Manual
PL17	45	Manual
PL18	12	Manual
PL19	15	Manual
PL20	108	Manual
PL21	15	Manual
PL22	123	Manual
PL23	6	Manual
PL24	105	Manual
PL25	27	Manual
PL26	39	Manual

Camera site	Number of images captured	Workflow
PL27	9	Manual
PL28	15	Manual
PL29	42	Manual
PL30	21	Manual
PL31	69	Manual
PL32	3,285	Semi-automated
PL33	24	Manual
PL34	24	Manual
PL35	30	Manual

The semi-automated workflow utilised Megadetector, a Microsoft-developed computer vision model trained on millions of images from diverse ecosystems, to identify animals, people and vehicles in motion-triggered camera images. Megadetector assigns a score to images in the dataset between 1 and 0 for each category (Beery et al., 2019). e2m's workflow retains animal detections with a Megadetector score greater than 0.01. These detections are then passed to SpeciesNet, a robust deep learning model developed by Google that utilises the Efficient V2M architecture, which has been trained on a global dataset of over 65 million camera trap images (Gadot et al., 2024). SpeciesNet classifies images into one of more than 2000 labels, covering a wide range of fauna species, again, assigning them a score between 0 and 1 for each category.

Classifications are then aggregated to taxonomic groups relevant to the study, including class-level categories (e.g. bird, mammal, and reptile) and species- or genus-level classification for target categories (i.e. *Sminthopsis* sp.) (Table C.2).

Table C.2: SpeciesNet class aggregation

Class	Order	Family	Genus	Species	Name
Mammalia	*Cetartiodactyla*	*Suidae*	*Sus*	-	*Sus* species
Mammalia	*Cetartiodactyla*	*Bovidae*	*Bos*	*taurus*	domestic cattle
Mammalia	*carnivora*	*Felidae*	*Felis*	-	*Felis* species
Mammalia	*carnivora*	*Canidae*	*Canis*	-	*Canis* species
Mammalia	*Lagomorpha*	*Leporidae*	-	-	rabbit and hare family
Mammalia	*Diprotodontia*	*Macropodidae*	-	-	kangaroo family
Mammalia	*Dasyuromorphia*	*Dasyuridae*	-	-	*Dasyuridae* family
Mammalia	*Dasyuromorphia*	*Dasyuridae*	*Sminthopsis*	-	*Sminthopsis* species
Mammalia	*Rodentia*	*Muridae*	*rattus*	-	*Rattus* species
Mammalia	*Rodentia*	*Muridae*	-	-	*Muridae* family
Mammalia	*Rodentia*	-	-	-	rodent
Mammalia	-	-	-	-	mammal
Aves	-	-	-	-	bird
Aves	*Strigiformes*	-	-	-	owl

Class	Order	Family	Genus	Species	Name
Aves	*Caprimulgiformes*	*Aegothelidae*	*Aegotheles*	*cristatus*	Australian owlet-nightjar
Aves	*Caprimulgiformes*	-	-	-	*Caprimulgiformes* order
Reptilia	-	-	-	-	reptile
Amphibia	-	-	-	-	amphibian
amphibia	*Anura*	*Bufonidae*	*Rhinella*	*marina*	cane toad
amphibia	*Anura*	-	-	-	frogs
-	-	-	-	-	animal
-	-	-	-	-	blank
-	-	-	-	-	no cv result

For each site, a random subsample of 150 images that did not contain any Megadetector animal detections scoring above 0.01 (empty images), and a random subsample of at least 150 objects for domestic cattle, blank, and 'no cv result' (irrelevant SpeciesNet classifications) were included for manual review by an experienced ecologist. This subsampling process significantly reduces the number of blank images reviewed and ensures that target species were not misclassified within empty images or irrelevant classifications. All remaining images and subsampled images were manually reviewed to ensure each target species in all images was correctly detected and classified. Finally, manually reviewed detections for target species were compared with the original detections from the automated detection process to calculate the chance of target species being missed due to the subsampling process.

Consecutive images captured within the same second were treated as a single detection event. Images recorded more than 10 minutes after the preceding detection were considered independent detection events.

Appendix D
Flora and fauna species list

Table D.1: Flora species list

Species	Common name	NCA Status	EPBC Status	Biosecurity Act 2014 listing	WoNS listing
Acacia stenophylla	Belalie	Least concern	-	-	-
Alternanthera denticulata	Leser joyweed	Least concern	-	-	-
Alternanthera sp.	-	Least concern	-	-	-
Aristida latifolia	Feathertop wiregrass	Least concern	-	-	-
Asteraceae sp.	-	Least concern	-	-	-
Astrebla pectinata	Barley mitchell grass	Least concern	-	-	-
Astrebla sp.	-	Least concern	-	-	-
Astrebla squarrosa	Bull mitchell grass	Least concern	-	-	-
Basilicum polystachyon	-	Least concern	-	-	-
Bauhinia sp.	-	Least concern	-	-	-
Boerhavia sp.	-	Least concern	-	-	-
Bothriochloa ewartiana	Desert bluegrass	Least concern	-	-	-
Brachyachne convergens	Common native couch	Least concern	-	-	-
Cenchrus sp.	-	Least concern	-	-	-
Chloris pectinata	Comb chloris	Least concern	-	-	-
Chloris truncata	Windmill grass	Least concern	-	-	-
Commelina ensifolia	Scurvy grass	Least concern	-	-	-
Commelina sp.	-	Least concern	-	-	-
Crotalaria brevis	-	Least concern	-	-	-
Dichanthium sericeum	Queensland bluegrass	Least concern	-	-	-
Eragrostis setifolia	-	Least concern	-	-	-
Eragrostis sp.	-	Least concern	-	-	-
Eragrostis tenellula	Delicate lovegrass	Least concern	-	-	-
Eremophila bignoniiflora	-	Least concern	-	-	-
Eucalyptus coolabah	Coolabah	Least concern	-	-	-
Eulalia aurea	Silky browntop	Least concern	-	-	-
Euphorbia sp.	-	Least concern	-	-	-
Fabaceae sp.	-	Least concern	-	-	-

Species	Common name	NCA Status	EPBC Status	Biosecurity Act 2014 listing	WoNS listing
Iseilema vaginiflorum	Red flinders grass	Least concern	-	-	-
Melothria sp.	-	Least concern	-	-	-
Mimosa sp.	-	Least concern	-	-	-
Mimulus gracilis	Slender monkey flower	Least concern	-	-	-
Neptunia sp.	-	Least concern	-	-	-
Panicum decompositum	-	Least concern	-	-	-
Panicum effusum	Hairy panic	Least concern	-	-	-
Phyllanthus maderaspatensis	-	Least concern	-	-	-
Phyllanthus sp.	-	Least concern	-	-	-
Rhynchosia minima	-	Least concern	-	-	-
Sclerolaena bicornis	-	Least concern	-	-	-
Sesbania brachycarpa	Purple sesbania pea	Least concern	-	-	-
Sesbania cannabina	-	Least concern	-	-	-
Sesbania sp.	-	Least concern	-	-	-
Sporobolus actinocladus	Katoora grass	Least concern	-	-	-
Sporobolus mitchellii	Rat's tail couch	Least concern	-	-	-
Streptoglossa sp.	-	Least concern	-	-	-
Vachellia sp.	-	Least concern	-	-	-
*Malvastrum americanum**	-	Not listed	-	-	-
*Parkinsonia aculeata**	Parkinsonia	Not listed	-	Category 3 restricted	Yes
*Vachellia farnesiana**	Mimosa bush	Not listed	-	-	-
*Vachellia nilotica**	Prickly acacia	Not listed	-	Category 3 restricted	Yes
*Xanthium occidentale**	Noogoora burr	Not listed	-	-	-

Table D.2: Fauna species list

Species	Common name	NCA status	EPBC status	Biosecurity Act 2014 listing
Aegotheles cristatus	Owlet nightjar	Least concern	–	–
Antigone rubicunda	Brolga	Least concern	–	–

Species	Common name	NCA status	EPBC status	Biosecurity Act 2014 listing
Anthus novaeseelandiae	Australasian pipit	Least concern	–	–
Aquila audax	Wedge-tailed eagle	Least concern	–	–
Ardeotis australis	Australian bustard	Least concern	–	–
Artamus personatus	Masked woodswallow	Least concern	–	–
Cincloramphus mathewsi	Rufous songlark	Least concern	–	–
Circus assimilis	Spotted harrier	Least concern	–	–
Coracina novaehollandiae	Black-faced cuckoo-shrike	Least concern	–	–
Corvus orru	Torresian crow	Least concern	–	–
Cracticus nigrogularis	Pied butcherbird	Least concern	–	–
Dromaius novaehollandiae	Emu	Least concern	–	–
Elseyornis melanops	Black-fronted dotterel	Least concern	–	–
Eolophus roseicapilla	Galah	Least concern	–	–
Ethmostigmus rubripes	Tiger centipede	–	–	–
Falco berigora	Brown falcon	Least concern	–	–
Falco cenchroides	Nankeen kestrel	Least concern	–	–
Falco subniger	Black falcon	Least concern	–	–
Felis catus	Feral cat	–	–	Category 3, 4 and 6 restricted
Gavicalis virescens	Singing honeyeater	Least concern	–	–
Gymnorhina tibicen	Australian magpie	Least concern	–	–
Lalage tricolor	White-winged triller	Least concern	–	–
Lichmera indistincta	Brown honeyeater	Least concern	–	–
Manorina flavigula	Yellow-throated miner	Least concern	–	–

Species	Common name	NCA status	EPBC status	Biosecurity Act 2014 listing
Merops ornatus	Rainbow bee-eater	Least concern	–	–
Microeca fascinans	Jacky winter	Least concern	–	–
Pachycephala rufiventris	Rufous whistler	Least concern	–	–
Papilio demoleus	Chequered swallowtail butterfly	–	–	–
Pardalotus striatus	Striated pardalote	Least concern	–	–
Philemon citreogularis	Little friarbird	Least concern	–	–
Planigale spp.	Planigale	Least concern	–	–
Platalea flavipes	Yellow-billed spoonbill	Least concern	–	–
Pomatostomus temporalis	Grey-crowned babbler	Least concern	–	–
Ptilotula penicillata	White-plumed honeyeater	Least concern	–	–
Rhinella marina	Cane toad	–	–	–
Rhipidura albiscapa	Grey fantail	Least concern	–	–
Rhipidura leucophrys	Willie wagtail	Least concern	–	–
Smicrornis brevirostris	Weebill	Least concern	–	–
Stiltia isabella	Australian pratincole	Least concern	–	–
Struthidea cinerea	Apostlebird	Least concern	–	–
Sus scrofa	Feral pig	–	–	Category 3, 4 and 6 restricted
Synoicus ypsilophorus	Brown quail	Least concern	–	–
Taeniopygia bichenovii	Double-barred finch	Least concern	–	–
Taeniopygia guttata	Zebra finch	Least concern	–	–



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