



# Annual Compliance Report

16 December 2021 to 15 December 2022 – EPBC 2015/7513  
ECCO Ripley – Residential Development, Ipswich, Queensland  
Ripley Town Holdings Pty Ltd  
1 March 2023

Job No: 6982 E

# Document control

Document: Annual Compliance Report 16 December 2021 to 15 December 2022 EPBC 2015/7513 (Issue A), prepared by Saunders Havill Group for Ripley Town Holdings Pty Ltd.

## Document Issue

Issue	Date	Prepared By	Checked By
A	1/03/2023	JG	LT

Prepared by

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# 1. Introduction

Saunders Havill Group were engaged by Ripley Town Holdings Pty Ltd to prepare an *Annual Compliance Report* for the ECCO Ripley Residential Development, Ipswich, Queensland granted under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (ref. EPBC 2015/7513), as specifically required by Condition 15 of the approval granted on 16 October 2017 (**Appendix A**). The approval was granted by the Australian Government Department of the Environment and Energy and is currently administered by the Australian Government Department of Agriculture, Water and the Environment (the Department).

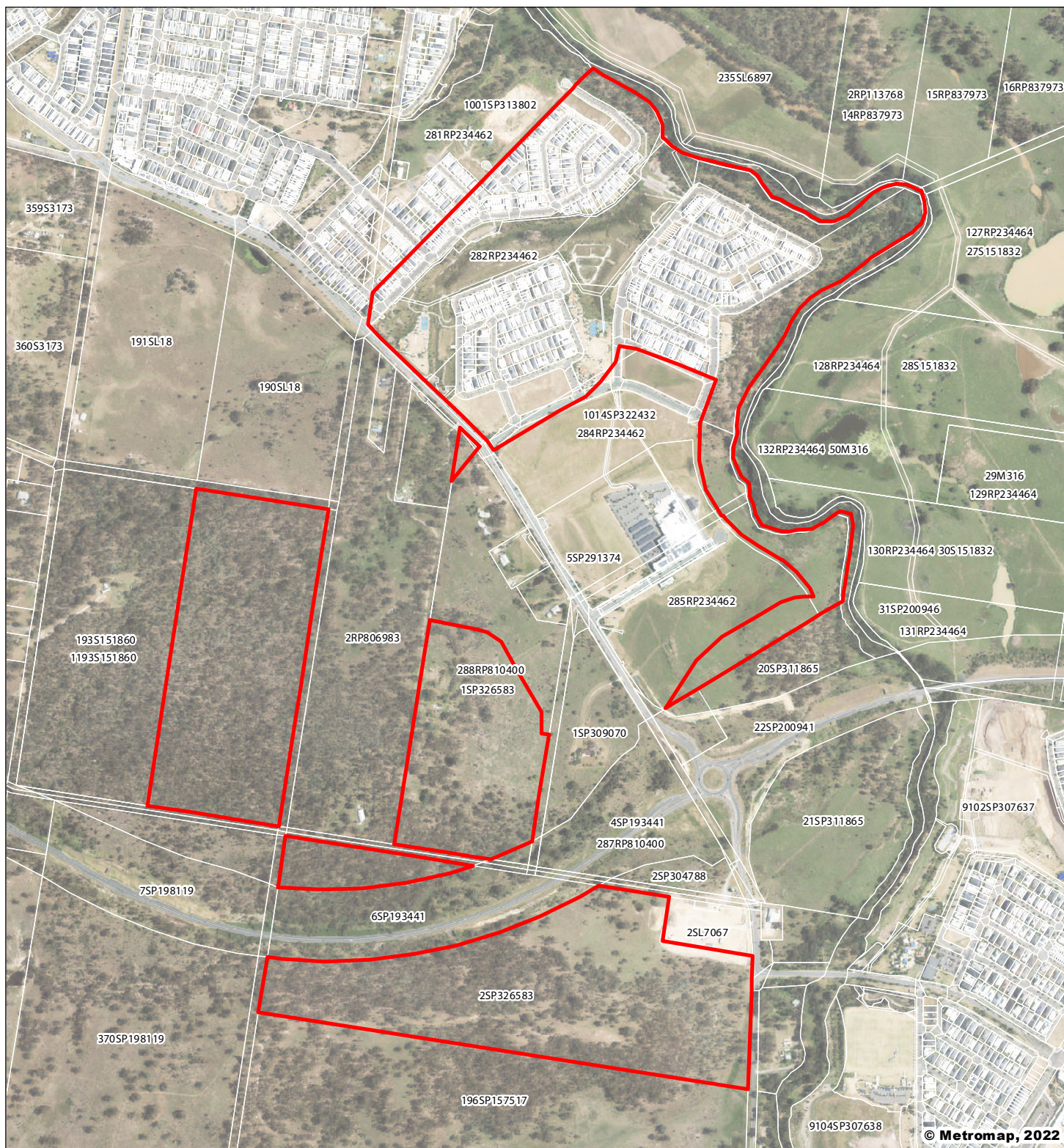
The project is referred to in this report as *ECCO Ripley* which is the residential estate name. The project area covers approximately 128 hectares (ha) and is located approximately 8.5 kilometres (km) south-east of Ipswich City and is located within the Ipswich City Council Local Government Area (refer to **Figure 1**).

This report delivers the third annual overview of the project's progression contributing towards the vision, '*as a Smart Community and a sustainable, liveable and prosperous development is intrinsically linked to the provision of employment and amenities*,' and compliance with the EPBC Act approval conditions. The project's progress and notable events during the reporting period are detailed in **Section 3**. The assessment of compliance with the approval conditions is presented in **Section 6**. This report is the third Annual Compliance Report (ACR) for the approved action.

## 1.1. Approval summary

<b>Department reference</b>	EPBC 2015/7513
<b>Approval holder</b>	BCove 4 Pty Ltd- ACN: 123 079 836 and Ripley Town Holdings Pty Ltd – ACN: 112 588 217
<b>Approval date</b>	16 October 2017
<b>Expiry date of approval</b>	31 July 2047
<b>Approved action</b>	To develop the residential development at Ripley Valley, Ipswich, Queensland.
<b>Controlling provision</b>	Approved - listed threatened species and communities (sections 18 & 18A)
<b>Reporting period</b>	16 December 2021 to 15 December 2022
<b>Address</b>	ECCO Ripley, Ripley Road, Ripley, Queensland
<b>Local government area</b>	Ipswich City Council





## Legend

- Qld DCDB
- Referral area

**Figure 1**  
Project area locality

**File ref.** 6982 E Figure 1 Project Area Locality A  
**Date** 15/02/2023  
**Project** ECCO Ripley

0 100 200 300 400 500 m

Scale (A4): 1:12,500 [GDA 1994 MGA Z56]



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## 2. Declaration of accuracy

In making this declaration, I am aware that sections 490 and 491 of the EPBC Act make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.



Signed	
Full name	Murray Saunders
Position	Director
Organisation	Saunders Havill Group (ABN 24 144 972 949)
Date	1 March 2023

### 3. Description of activities

ECCO Ripley is a residential community located in the suburb of Ripley which seeks to provide residences for approximately 6,250 people in one of the fastest growing industry areas in Australia. Under the South East Queensland Regional Plan (ShapingSEQ), the State Government has identified Ripley as a major regional activity centre which provides a vibrant new town centre that services the Ripley Valley masterplanned community with diverse living opportunities and retail, commercial and recreational facilities, focused on a public transport hub, main street and town centre parklands.

The action commenced on the 16 December 2019, where the clearing of vegetation for the purposes of the action exceeded two or more hectares as stipulated within the approval. As residential development continues, the adjoining Bundamba Creek buffer area is undergoing rehabilitation with a focus on enhancing ecological, connectivity and Koala habitat values through the removal of weed infestations, stabilisation of erosion prone areas, promotion of native plant regeneration and planting of Koala habitat trees (refer **Photo Set 1**). Refuge poles and Koala signage were installed in Year 1 along the creek and drainage features to improve corridor values and were inspected during the annual site visit (refer **Photo Set 2**),.

Minimal works, totally approximately 0.75 ha, were undertaken during the 2021-2022 reporting period. These works did however, originate from outside the approved EPBC boundary and were not carried out by the approval holder, however have been accounted for within the approval. All vegetation removal associated with the residential development was undertaken with the assistance of a qualified and experienced Fauna Spotter Catcher.

Further, Ecco Ripley continues to demonstrate commitment to holistic sustainable design through green initiatives. This has been recognised through the recertification of its 5 Star Green Star Communities rating following its original certification in 2015.





**Photo Set 1: Revegetation works within Bundamba Creek buffer.**



**Photo Set 2: Refuge poles (right) located south-east of Stage 15.**

Despite the disruptions resulting from the pandemic, development activities during this reporting period have included:

- Community Activities:



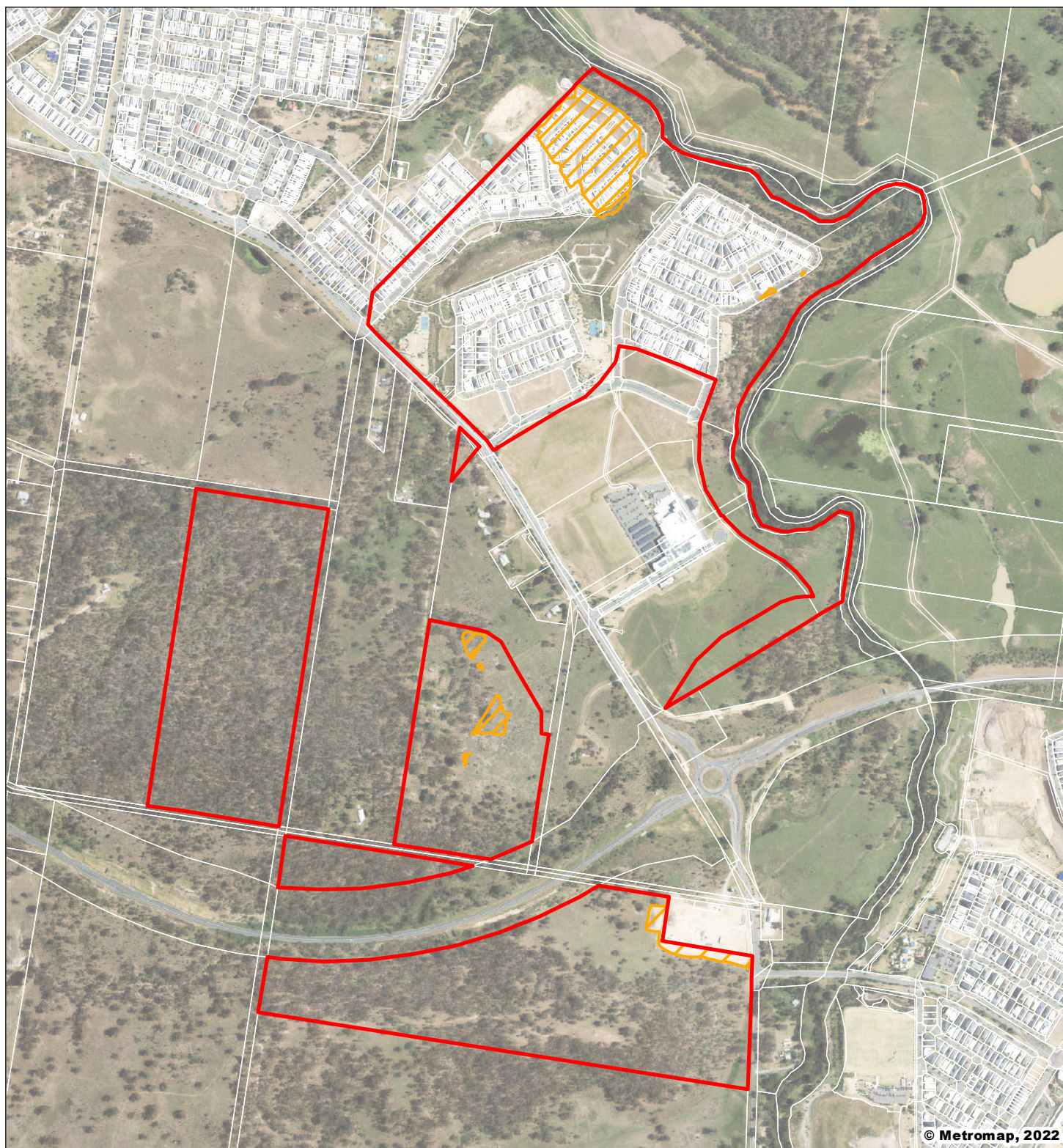
- Free weekly fitness sessions with Anytime Fitness for residents
- Santa on Tour with rural firefighters
- Opening of The Bahnmi House
- MO- TOR Men car meet
- Ripley Town Centre Pet Expo
- Little Day Out Kids Music Festival
- Halloween Homes Competition
- Flavours of Eataly Pop-up
- Mother's Day free family photo sessions
- Ripley Community Expo
- Regular outdoor playgroups
- Ecco Ripley Christmas Cinema
- Weekly Ecco Ripley parkrun
- School Holiday Bike 4 Life program
- London Spuds food truck
- Clean Up Australia Day at Ecco Ripley
- Easter in the Valley community event
- Dippin Dots Pop-Up
- Sign Language Taster
- Mini Dinosaur & Fairy Gardens children's event
- New Year's Eve fireworks
- Estate area works:
  - minor vegetation clearing (0.75 ha);
  - civil construction; and
  - management and monitoring of rehabilitation works within the Bundamba Creek corridor/buffer.
- Offset area works:
  - Monitoring of koala occurrence, health, extent of occupation and koala-predator interactions;
  - Annual weed assessment and weed management; and
  - Monthly firebreak inspections



**Table 1** summarises the current status of the project. **Figure 2** illustrates the impacts to habitat critical to the survival of the Koala as defined in the approval and listed in **Table 1**.

**Table 1: Development details**

<b>Existing cleared area on-site (i.e. open paddocks)</b>	26.7 ha
<b>Total vegetated area on-site</b>	63.5 ha
<b>Total approved clearing of critical koala habitat</b>	46.3 ha
<b>Total cleared critical koala habitat to date</b>	5.5 ha



#### Legend

- Qld DCDB
- Referral area
- Cleared vegetated area (5.50 ha)

## Figure 2

Project area impacts to defined critical habitat

**File ref.** 6982 E Figure 2 ACR Impact Areas A

**Date** 15/02/2023

**Project** ECCO Ripley

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## 4. Management of Impacts

### 4.1. Direct Impacts

Approvals relating to impacts on ecological matters were collated from Commonwealth, State and Local governments for the project and several overarching environmental management plans specific to each clearing site. As discussed, only 0.75 ha was cleared within the reporting period. This clearing originated from outside of the approved EPBC boundary and was not carried out by the approval holder. However, the impacts have been accounted for within the approval. As the works were carried out by someone other than the approval holder and not part of the action the standard management of impacts (described below) was not implemented. Despite this, all vegetation removal within the approved EPBC area was undertaken with the assistance of a qualified and experienced Fauna Spotter Catcher.

Previous stages of clearing have been managed by providing each contractor a copy of the approval documents within the Pre-Start Package prior to any clearing commencing. Stages 13-15 and Area 3 were cleared in a previous reporting period (16 December 2019 – 15 December 2020) and the relevant Pre-Start Packages provided in the preceding ACR.

Pre-start packages generally includes the following documents:

- EPBC Act Koala Management Plan (KMP), prepared by Saunders Havill Group dated November 2018;
- Wildlife Protection and Management Plan (WPMP), prepared by the engaged Fauna Spotter Catcher;
- Wildlife and Habitat Impact Mitigation Plan (WHIMP), prepared by the engaged Fauna Spotter Catcher;
- Site specific Vegetation Clearing and Fauna Management Plan (VCFMP), typically prepared by Saunders Havill Group;
- Site specific arborist reports (if required), prepared by qualified consultants; and
- Site specific Erosion and Sediment control plans (ESCP), prepared by qualified consultants.

The environmental plans provided, stipulate environmental management requirements pertinent to each stage of construction and measures for vegetation management (clearing and protection), protection of MNES fauna (Koala) and other native wildlife, maintenance of safe wildlife movement opportunities, fauna habitat rehabilitation, threatened flora management and pest management.

As part of managing the work areas of the project, a second supporting document was developed: Ecco Ripley — Environmental Pre-Start Checklist that covers the Pre-start Packages (refer **Figure 3**). This checklist is integral to ensuring construction proceeds within the demarcated limits, suitable fencing is installed across the work area and the necessary checks and management procedures for threatened fauna are completed prior to the clearing of any vegetation.

#### 4.1.1 Pre and Post-clearing Reporting

Pre and post-clearing surveys and reporting were undertaken by a qualified and experienced Fauna Spotter Catcher for each location to mitigate the potential for adverse impacts. The Fauna Spotter Catcher duties include an inspection of demarcated works boundaries pre-clearance survey of fauna habitat and presence of fauna, supervision of clearing activities and relocation of habitat features, and ensuring clear paths for fauna to reach safe havens were provided or fauna dispersed as per standard protocols. No koalas have been reported during clearing works.

## ECCO Ripley Project Environmental Pre-Start Checklist



<b>Project Area:</b>		<b>Date:</b>			
<b>Contractor:</b>					
<b>Date work is to start:</b>					
<b>Date work is to cease:</b>		<b>Compliance</b>			
#	Control Measure	Yes	No	N/A	Details
1	Has a Vegetation Clearing Fauna Management Plan (VCFMP) been prepared as per the requirements of the EPBC Act Approval?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1
2	Has a Koala Management Plan (KMP) been prepared as per the requirements of the EPBC Act approval?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 2
3	Has a Wildlife Protection and Management Plan (WPMP) and Wildlife and Habitat Impact Mitigation Plan (WHIMP) been prepared as per the requirements of the KMP?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 3
4	Has a Protected Plants flora survey been undertaken for the clearing impact area and exemption / permit to clear obtained from DES?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 4
5	Have copies of the approved EPBC Act VMP, WPMP, WHIMP and KMP been issued to all site contractors and sub-contractors and made available in the site construction office?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copies of EPBC Act VMP, WPMP, WHIMP and KMP with this Environmental Pre-start Checklist
6	Have clearing extents been marked out and fenced (delineating areas to be cleared vs retained)? (N.B. Demarcation fencing is to be installed before the time of the official pre-start).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 5 for Environmental Coordinator inspection & Sign Off.
7	Have demarcation extents been signed off by the Environmental Coordinator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 5 for Environmental Coordinator inspection & Sign Off.
8	Has a qualified AQF Level 5 Arborist been appointed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 6 for appointed Arborist details and Audit Report
9	Has Tree Protection Fencing been installed along the perimeter of riparian corridors, boundaries of vegetation clearing and any trees to be retained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 5 for Environmental Coordinator inspection & Sign Off.
10	Has a NCA licensed Fauna Spotter Catcher been appointed to be present during all clearing activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 7 for appointed Fauna Spotter Catcher details.
11	Has the appointed Fauna Spotter Catcher completed pre-clearance surveys and reports? (N.B. these must include EPBC Act approval requirements and specifications as per the KMP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 3 for Fauna Spotter Catcher WPMP and WHIMP
12	If the appointed Fauna Spotter Catcher identified any sensitive areas of consideration in clearing methods, please provide a summary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 3 for Fauna Spotter Catcher WPMP and WHIMP

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## ECCO Ripley Project Environmental Pre-Start Checklist



	(N.B. fauna exclusion fencing must be erected around construction areas where necessary)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13	Has an Erosion and Sediment Control Plan (ESCP certified by a RPEQ or accredited CPESC Professional) been prepared and approved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 8 for ESCP.
14	Have all contractors, subcontractors and associated personnel been instructed on environmental procedures and controls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On site pre-start meeting was held with all signatory parties (or their representatives) on 12 December 2019.
15	Has a pre-start been completed with all relevant parties?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On site pre-start meeting was held with all signatory parties (or their representatives) on 12 December 2019.
<b>Additional requirements or works within riparian corridors and / or waterways</b>					
16	Will works involve clearing within a Fisheries mapped waterway for waterway barrier works? If so, are works compliant with applicable accepted development requirements and / or permits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
17	Will works involve clearing within a watercourse defined under the Water Act 2000? If so, are works compliant with applicable exemptions and / or permits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

**NOTE: if the answer to any question above is NO then the clearing activity will not proceed.**

### Compliance Awareness

Signing below demonstrates acknowledgement of the environmental pre-start procedures and requirements listed in the checklist above and associated attachments.

Name	Company	Position	Signature	Date
		Client Representative		
		Site Contractor		
		Clearing Contractor		
		Fauna Spotter Catcher		
		Project Arborist		
		Project Engineer		
		Environmental Coordinator		

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**Figure 3: Environmental Pre-start Checklist template example**

## 4.2. Open Space Enhancement

The open space between developed stages and Stages 13-15 is utilised as a detention basin and is in the process of being rehabilitated in accordance with the 'Preliminary Detention Basin Rehabilitation and Weed Management Plan, Bundamba Creek, Ripley', prepared by Saunders Havill Group and dated November 2016. Management actions included the construction of bio-basins, weed management/treatment and revegetation continue to be monitored (refer **Photo Set 4**). The growth of planted specimens within this area is progressing rapidly with many of the trees within this area are now over 3m in height. Council inspected and has agreed that this open space area achieved the 'off maintenance' criteria within the previous reporting period. Formal certification was received within the current reporting period (22<sup>nd</sup> December 2021).



**Photo Set 3: Detention basin rehabilitation and weed management area south of the pedestrian crossing connecting Stages 13-15 to development stages to the south-east.**

## 4.3. Long-term Impacts

Each new resident is provided with the Ecco Ripley 'Living with Koalas Lifestyle Guidelines' (the Guidelines) and is also accessible on the Ecco Ripley website (refer **Appendix B**). The Guidelines have been designed to help promote a range of ecological sustainable living principles. The Guidelines will be used to directly educate and raise awareness of a large audience towards the management of the Bundamba Creek Corridor and Koala habitat values. Topics included within the Guidelines include:

- Creating a Koala friendly backyard through minimising light pollution between 6pm and 6am, ensuring swimming pools are secured (or an escape is provided for Koalas) and discouraging Koalas from entering yards through careful plant selection.
- Encouraging appropriate management of domestic animals through securing them within yards, walking dogs on-leash through the estate and Bundamba Creek corridor and accessing the off-leash dog park for off-leash enrichment. The location of the off-leash dog park, Pebbles Park, is shown via a map within the Guidelines.
- Driving with care at night, being aware of wildlife and Koala signage and abiding the speed limit.



- Key contacts for reporting sick, injured or orphaned Koalas.

#### 4.4. Annual Reporting Site Audit

An inspection and audit of the approval area and on-site conversation area was conducted by an Ecologist from Saunders Havill Group on 10 January 2023. To confirm the extent of works, the Ecologist traversed the works areas and works boundaries across Stages 13-15, inspected the Bundamba Creek buffer, revegetation area. The audit confirmed work extents remain in accordance with approved plans (refer **Photo Sets 5 – 7**).

The action commenced on the 16 December 2019, at which point clearing of vegetation for the purposes of the action exceeded two or more hectares as stipulated within the approval. In accordance with Condition 1 the approval holder must not clear more than 46.3 ha of Koala habitat within the project site. Only 5.5 ha of critical Koala habitat has been cleared under the approval (ref. EPBC 2015/7513) and is therefore compliant with Condition 1.



**Photo Set 4: Development edge of Stages 13-15 (left) adjacent a revegetation zone (right).**



**Photo Set 5: Revegetation zone east of stage 13-15.**





**Photo Set 6: inspection of Bundamba Creek buffer area.**

## 5. Bundamba Creek Rehabilitation

As part of the EPBC Act approval process and separate to the offset requirements, it was determined that the open space along Bundamba Creek would be created and rehabilitated to improve ecological, connectivity and Koala habitat values. The purpose of the rehabilitation was to increase available Koala habitat and improve connectivity for Koalas along Bundamba Creek. The Bundamba Creek rehabilitation area has been dedicated to Ipswich City Council for conservation purposes now that the rehabilitation works are considered established.

As part of the *Site Based Rehabilitation and Weed Management Plan, Bundamba Creek, Ripley*, dated January 2018 prepared by Saunders Havill Group, works within the corridor have included enhancing ecological, connectivity and Koala habitat values through the removal of weed infestations, stabilisation of erosion prone areas, promotion of native plant regeneration and planting of Koala habitat trees. Fourteen (14) monitoring reports have been issued detailing the progress of rehabilitation works to-date. The purpose of these reports is to provide ongoing monitoring of the rehabilitation works undertaken within the 50 m waterway buffer to Bundamba Creek within the development site (refer Ipswich City Council Approval 5786/2017/PDAEE).

The process for completing the dedication includes the following steps:

1. At the completion of works a thorough onsite inspection is completed by Ipswich City Council and once satisfactory the area is accepted as “on-maintenance”.
2. Once the works are considered completed the created allotment can be registered with the Queensland Government titles office and dedicated to Ipswich City Council.
3. After 24 months, if the completed works continue to satisfy Ipswich City Council during the regular inspections, the works are considered “off-maintenance”.

Regular inspections (quarterly or following 3 month rainfall event) of the rehabilitation areas are required to provide updates and observe rehabilitation outcomes through photo monitoring. This open space is to be protected in perpetuity through dedication to Ipswich City Council.

Rehabilitation works within the 50 m waterway buffer to Bundamba Creek extending from Stage 9 (southern interface with town centre holdings) to Stage 15 (western boundary with adjacent Defence Housing Australia landholdings) proceeded prior to the commencement of the approved action (i.e. 16 December 2019) and have continued throughout the second and third year reporting period. The scope of works for the waterway buffer includes weed management, rehabilitation, revegetation, site stability and erosion management. Combined these actions increase available Koala habitat and improve connectivity for Koalas along Bundamba Creek.

Regular inspections (quarterly or following 3 month rainfall event) of the rehabilitation works have been conducted and two monitoring reports issued within this reporting period. At the end of the third reporting period, the total number of monitoring reports for the Bundamba Creek Rehabilitation works was fourteen.



Photo monitoring sites have been well established as the works proceeded prior to the commencement of the approved action.

Council inspected the eastern portion of rehabilitation works referred to as Bundamba Creek East (Rehabilitation Monitoring Points (RMP) 1-3) and agreed that this area has achieved the 'off maintenance' criteria within the previous reporting period (refer previous ACR for monitoring point images). Formal certification was received within the current reporting period (22<sup>nd</sup> January 2022) (RMP1-RMP3). Rehabilitation Monitoring continues for Bundamba Creek West (Stage 13-15) rehabilitation works (RMP 4).

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**RMP 4 – continuing**

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Inspection 1



Inspection 6







Additionally, revegetation has been undertaken in two locations within the Bundamba Creek buffer area (refer **Table 2** and **Photo Sets 8-9**) and *Melaleuca irbyana* have also been recorded regenerating within the Bundamba Corridor Buffer Area (refer **Photo Set 10**).

**Table 2:        Revegetation zones within Bundamba Corridor buffer area.**

ID	Location	Area (m²)
1	East of Stage 15	~ 6,050
2	East of Stage 9	~ 3,975





**Photo Set 7: Revegetation Area 1, east of Stage 15.**



**Photo Set 8: Revegetation Area 2, east of Stage 9.**



**Photo Set 9: Regenerating *Melaleuca irbyana* located within Bundamba Creek buffer area.**



## 6. Koala Crossing Offset Site

Prior to commencement of the action, an offset site was required to be legally secured, providing a minimum of 65.69 ha of Koala habitat in accordance with Condition 6 of the EPBC Act Approval. The offset site is legally described as Lots 86 and 89 on RP892014 and is referred to as 'Koala Crossing'. The total area of these lots is 184.83 ha, of which 65.69 ha has been secured for offsets associated with the Ecco Ripley residential development.

The offset area was secured through a Voluntary Declaration under the *Vegetation Management Act 1999* (Qld) by Queensland Trust for Nature on 7 June 2018. The Department was notified on 2 August 2018 that an offset for impacts on the Koala had been secured.

The Offset Area Management Plan details the progressive works to occur throughout the offset area was lodged with the confirmation of the legally secured offset. Condition 10 of the approval outlines the need for the approval holder to prepare and implement a monitoring program for the life of the approval.

To achieve the offset requirements, the Offset Area Management Plan proposes to enhance the level of protection afforded to existing Koala habitat through exclusion of land management practices that are incompatible to achieving a net gain in Koala habitat quality.

The offset actions achieved during the third annual compliance reporting period are detailed within the following sections. The offsets had been in progress for 3 years prior to the commencement of the action with the Year 2 report issued in November 2019.

Annual Offset Area Management Reports are prepared for the portion of offset site. The Year 5 Offset Area Management Report was issued prior to the finalising of the third Annual Compliance Report (refer **Appendix B**). The offset milestones have been summarised in the table below.

**Table 3: Offset Milestones**

Milestone	Due Date	Completion
Approval of EPBC 2015/7513	-	16 October 2017
Legally Secured Offset Site	Prior to commencement of action	7 June 2018
Year 1 – Baseline	December 2018	October 2018
Year 2 – Intensive Review	December 2019	November 2019
Commencement of Action	-	16 December 2019
Year 3 – Rehabilitation & Monitoring	December 2020	January 2021
Year 4 – Rehabilitation & Monitoring	December 2021	February 2022

Milestone	Due Date	Completion
Year 5 – Rehabilitation & Monitoring	December 2022	January 2023

The intensive review conducted in Year 2 included monitoring of Koala populations and review of weed management. Scat searches indicated that the proportion of sites occupied and the activity or density of Koalas have both increased. The number of searched sites containing scats exceeding the 85% threshold provide confidence an increase has occurred. Two individuals not part of the already known population were sighted during surveys across the Koala Crossing property.

The Year 5 review monitored Koala scats over the reporting period. These were found in similar locations to past scat occurrences, indicating a stable and active population of Koalas in the site. No Koala-predator interactions were recorded during the reporting period. Should opportunistic surveys suggest a reduction in Koala numbers between 5-year survey events, a supplementary survey will be undertaken to confirm and review the likely cause of reduced occurrence.

Weed assessments are conducted annually to compare results from baseline surveys. Permanently marked transects are surveyed in accordance with Nelder *et al* 2015 in a 50 x 10 m transect and established photo points to monitor progress. The target weed species identified as a threatening process to Koalas is *Lantana camara*. Whilst other weeds were measured for overall ecological health, the focus of the weed management is the control and eradication of *L. camara*, as it has the capacity to prevent koala movement and access to food and shelter trees.

QTFN have prepared a five-year 2020-2025 Weed Strategy. This strategy will focus on continuing to *reduce L. camara* as well as testing and deploying methods for treating the emerging weed problem on-site – *Lantana montividiensis*. Three permanent survey sites are located within the offset area. Although each site remains under the baseline threshold (baseline +10%), all three sites have exhibited a slight increase in lantana coverage as a result of favourable weather conditions for this species in previous and current reporting periods. This area is due for follow up treatment which will address emergence.

During the reporting period, no Koala-predator interactions were recorded. Monitoring was conducted using remote sensing wildlife cameras and offset area wide traverses for opportunistic scat collections. During the monitoring season, foxes and dogs were captured on camera traps within the wider property and have potential foraging areas that overlap the offset area. Pigs were also observed. Given that the movement range of these feral predators extends beyond the specific offset area, RAI are presented including the data from any camera trapping station with projected territories of any feral animal that overlap with the offset area.

Abundance of foxes continue to fall, and the abundance of cats remains low, with no cats observed on the offset site during the current reporting period. Recent surveys have indicated a significant decline in relative dog abundance and occupancy. However, feral pigs have increased in relative abundance and occupancy. Predator scat analysis within the sampling period suggest neither dog or foxes are consuming koalas, while their diets are comprised of predominantly macropods and vegetation.

As in previous years, no evidence of listed threatened species has appeared in the collected predator scats. The majority of scats in this monitoring period were composed of Northern Brown Bandicoot and Eastern Grey Kangaroo.

The Koala Crossing Fire Management Plan divides the property into Fire Management Zones: Land Management Zones, Exclusion Zones and Asset Protection Zones. Within the Land Management Zones the landscape is broken up into subzones (Fire Management Areas) according to practicable containment lines.

There has been no clearing undertaken within the offset area (excluding removal of weeds), nor a change to site connectivity. Ongoing management of weeds and threats discussed in the items above reduce barriers to dispersal. The contiguous landscape has been maintained and improved to allow Koalas to establish new territories, facilitate gene flow and respond to environmental changes. Additionally, no vehicle strike incidents were recorded during this reporting period.

There have been no hydrological changes made to the offset area or wider property, maintaining Koala habitat and potential carrying capacity.

The initial baseline survey for Koala health indicated no incidence of Koala diseases within the population at Koala Crossing, however, subsequent surveys indicated two instances of Koalas infected with chlamydia outside of this reporting period. An ongoing program is in place to continue monitoring Koala Crossing's Koala population to ensure they are healthy and thriving.

Disease records taken throughout the past 5 years suggest that QTFN and KEG intervention is reducing the incidence of Chlamydia in the broader population, and that Koalas from the offset area have lower incidence of disease generally than those from the agricultural matrix to the west of Koala Crossing.

The offset area has been legally secured for conservation purposes removing the risk of habitat degradation associated with clearing, development or other incompatible land uses.

## 7. EPBC approval conditions compliance table

The EPBC approval conditions for the project are replicated in **Table 4** with a designation on compliance or non-compliance if the condition was applicable during the reporting period, and evidence and comments as necessary. A copy of the EPBC approval and conditions is provided in **Appendix A**.

**Table 4: EPBC approval conditions compliance table.**

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence/comments
<b>Project Site</b>			
1	The approval holder must not remove or fragment more than 46.3 hectares of Koala habitat within the project site.	Compliant	A total of only 5.5 ha that is habitat critical to the survival of the koala has been cleared (refer to <b>Figure 2</b> ).
<b>Management measures</b>			
2	The approval holder must ensure a pre-clearance survey is undertaken by a suitably qualified person immediately prior to any clearing of vegetation within the project site, to identify any Koalas present.	Compliant	Pre-clearance surveys were undertaken by qualified and experienced fauna spotter catcher. No Koalas have been recorded within clearing areas.
3	The approval holder must not clear any vegetation supporting any Koalas until such time that any present Koalas vacate the vegetation or are relocated by a suitably qualified person	Compliant	All clearing has been undertaken with the supervision of a qualified and experienced fauna spotter catcher. No koalas have been recorded within clearing areas prior to works commencing. Clearing of vegetation is to be undertaken in accordance with the site specific Vegetation Clearing and Fauna Management Plans (VCFMPs).
4	Prior to the commencement of the action, the approval holder must develop and implement a Koala Management Plan. The Koala Management Plan must describe measures to be implemented for the life of the approval to minimise Koala mortality attributable to dog attack and vehicle strike within the project site.	Compliant	<p>Prior to the commencement of the action, the approval holder developed and implemented a Koala Management Plan (KMP) dated 30 November 2018, prepared by SHG. The KMP lists actions and legislative requirements to be put in place to manage construction impacts and provides a framework for a number of operational management measures including:</p> <ul style="list-style-type: none"> <li>a. Conservation areas set aside for Koala usage;</li> <li>b. Incorporation of education and prohibition signage within open space and road reserves;</li> <li>c. On-lot education campaigns to raise consumer awareness of local Koala populations; and</li> <li>d. Provide ongoing resources and facilities for monitoring the success of this management plan.</li> </ul> <p>Implementation of the KMP is described in section 7 of this report and <b>Table 6</b>.</p>
5	The approval holder must publish the Koala Management Plan on its website prior to commencement of the action and the Koala Management Plan (or any subsequent revised versions) must remain on the approval holder's website for the life of the approval.	Compliant	The KMP was published on the approval holder's website on 18 February 2019 prior to the commencement of the action on 16 December 2019. The KMP remains available on the approval holder's website.
<b>Compensation measures</b>			
6	To compensate for the loss of 46.3 hectares of Koala habitat within the project site, the approval holder must, prior to the commencement of the action, legally secure a minimum of 65.69 hectares of Koala habitat at the offset site. Within 20 business days of legally securing the offset, the approval holder must provide the Department with evidence of when the offset was legally secured, and what mechanism was used to legally secure the offset.	Resolved	The approval holder legally secured 65.69 hectares of Koala habitat at the offset site on 7 June 2018 via a Voluntary Declaration under the <i>Vegetation Management Act 1999</i> (Qld). The Department was notified on 2 August 2018 that an offset for impacts on the Koala had been secured, which was past the 20 business day notification period. The Department were advised of the administrative non-

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence/comments
			compliance. The Department/Minister has not requested any further information from the Approval holder. This matter is therefore considered resolved and no longer applicable.
7	The approval holder must, for the life of the approval, ensure there is no net loss in the extent of Koala habitat that is legally secured at the offset site under Condition 6.	Compliant	The approval holder legally has secured 65.69 ha of Koala habitat through a Voluntary Declaration. The offset area is managed in accordance with the Offset Area Management Plan, ensuring no net loss of Koala habitat at the offset site.
8	The approval holder must ensure that within 10 years after legally securing the offset, the quality of Koala habitat is improved, relative to the baseline quality of 6, across 50 per cent of the offset site.	Compliant	<p>The Offset Area Management Plan (OAMP) dated 1 March 2017, prepared by QTFN, ensures that within 10 years after legally securing the offset, the quality of Koala habitat is improved, relative to the baseline quality of 6, across 50 per cent of the offset site.</p> <p>Should the approval holder become aware the outcomes of Condition 8 are not on track to be achieved, the approval holder will report to the Department in writing within 20 business days in accordance with Condition 11.</p>
9	The approval holder must ensure that prior to the expiry of the approval, the Koala habitat across 100 per cent of the offset site is of no less than quality 8.	Compliant	<p>The OAMP ensures that that prior to the expiry of the approval, the Koala habitat across 100 per cent of the offset site is of no less than quality 8.</p> <p>Should the approval holder become aware the outcomes of Condition 9 are not on track to be achieved, the approval holder will report to the Department in writing within 20 business days in accordance with Condition 11.</p>
10	The approval holder must prepare and implement a monitoring programs for the life of the approval. The results of the monitoring program must be adequate to inform adaptive management and demonstrate whether the outcomes in Condition 7, Condition 8 and Condition 9 are being met.	Compliant	The approval holder has prepared and implemented an OAMP for the life of the approval. The plan provides a land management guidance tool which directs adaptive management actions such that a demonstrable increase in Koala habitat quality is achieved throughout the offset site. Refer to <b>Table 6</b> for assessment against OAMP.
11	If, at any time during the life of the approval, the approval holder identifies that the outcomes specified in Condition 7, Condition 8 and Condition 9 are not on track to be achieved, the approval holder must report to the Department in writing within 20 business days of becoming aware. The report must state the cause, the response measures (including timeframes for reporting the success of those measures to the Department) and the actions to prevent further occurrences.	Not applicable	<p>The approval holder and Saunders Havill Group are not aware of any potential or suspected non-compliance with the conditions during the reporting period.</p> <p>Should the approval holder become aware the outcomes of Conditions 7, 8 and/or 9 are not on track to be achieved, the approval holder will report to the Department in writing within 20 business days.</p>
12	<p>If the Minister is not satisfied that the outcomes required by Condition 7, Condition 8 and Condition 9 are likely to be achieved, or is not satisfied that there is sufficient evidence that the outcomes required by Condition 7, Condition 8 and Condition 9 are likely to be achieved, the Minister may (in writing) request the approval holder to submit a plan for the Minister's approval, to monitor, manage, avoid, mitigate, offset, record or report on, impacts to Koala habitat.</p> <p>a. The Minister may set a timeframe in which the plan must be submitted, and may designate that the plan must be prepared or reviewed by a suitably qualified person (or another specified person).</p> <p>b. If the Minister approves the plan in writing then the approval holder must implement the approved plan (or a version if approved in writing by the Minister or otherwise allowed under the conditions).</p>	Not applicable	The approval holder has prepared and implemented the approved KMP. The Minister has not requested the approval holder to submit a subsequent plan for approval to monitor, manage, avoid, mitigate, offset, records or report on, impacts to Koala habitat.
<b>Administration</b>			
13	Within 20 business days after the commencement of the action, the approval holder must advise the Department of the actual date of commencement of the action.	Compliant	The date of the commencement of the action was 16 December 2019 and the department was notified on the 17 December 2019.

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence/comments
14	The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement any management plans or monitoring programs required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Compliant	The Saunders Havill Group records and holds all relevant information for this EPBC approval on behalf of the approval holder. Electronic records of all material are held collectively by the Saunders Havill Group and approval holder and will be made available upon request in accordance with section 458 of the EPBC Act, or if required to verify compliance with the conditions of approval.
15	Within 60 business days of every 12 month anniversary of the commencement of the action, the approval holder must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans or monitoring programs as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published. The Minister may provide written consent to the approval holder to cease reporting under this condition if satisfied additional reports are not warranted.	Compliant	The anniversary of the commencement of the action is 16 December. The annual deadline for publishing the report addressing compliance with each of the conditions of the approval (i.e. Annual Compliance Report) is 16 March. Documentary evidence providing proof of the date of publication will be provided to the Department when the report is published. Where the annual deadline is not a business day in Brisbane, the following business day is taken to be the due date.
16	The approval holder must report any potential or actual contravention of the conditions of this approval to the Department in writing within 5 business days of the approval holder becoming aware of the potential or actual contravention.	Not Applicable	<p>The approval holder and Saunders Havill Group are not aware of any potential or actual contravention of the conditions of the approval during the reporting period.</p> <p>Should the approval holder become aware of any potential or actual contravention of the conditions of the approval, the approval holder will report to the Department in writing within 5 business days.</p>
17	Upon the direction of the Minister, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor and criteria must be approved by the Minister prior to the commencement of the audit. The audit report must address the criteria to the satisfaction of the Minister.	Not Applicable	The Minister has not directed the approval holder to conduct an independent audit of compliance.
18	If, at any time after 5 years from the date of this approval, the approval holder has not commenced the action, then the approval holder must not commence the action without the written agreement of the Minister.	Not Applicable	The action commenced on 16 December 2019.



# 8. Koala Management Plan

A review of the KMP commitments and implementation is provided in **Table 5**.

**Table 5: Koala Management Plan implementation**

No.	Commitment	Evidence/comments/status
Site Design		
KMP-1	<b>Bundamba Creek Corridor</b>  Areas containing highest ecological values, being Bundamba Creek, identified during surveys by field Ecologists have been designated as conservation within the development layout, ensuring that impacts on these areas were avoided. The site layout has been designed to retain high value areas of habitat which includes the retention and rehabilitation of 17.2 ha of Critical Habitat for the Koala along Bundamba Creek.	The Bundamba Creek Corridor has been preserved and subject to ongoing rehabilitation and management activities. Regular inspections and monitoring commenced prior to the approved action and continued throughout the second reporting period. Bundamba Creek East Rehabilitation Area was signed off to ‘off maintenance’ during the previous reporting period. Works are continuing in Bundamba Creek West (RMP 4).
Construction Management		
KMP-2	<b>Fauna</b>  Engage a registered fauna spotter/catcher to protect wildlife from the impacts of clearing. This includes the preparation of management plans (e.g. Wildlife Protection and Management Plan (WPMP) and Wildlife and Habitat Impact Mitigation Plan (WHIMP)), attendance at key project milestones such as the pre-start meeting, pre-clearance reporting and post-works reporting. The fauna spotter/catcher management plans incorporate methods for relocating fauna during clearing activities.	To date, a total of 5.5 ha of critical Koala habitat has been cleared.  All clearing activities have been undertaken with the supervision of a qualified and experience fauna spotter catcher.
KMP-3	<b>Vegetation clearing</b>  Clearing, rehabilitation and revegetation will occur in a series of small stages, sequentially in accordance with the endorsed Vegetation Clearing and Management Plan and Fauna Management Plan. Pre-starts will be held with stakeholders.  Vegetation clearing activities are supervised by suitably qualified person/s that adhere to current industry practices that protect the welfare of animals. These activities require demarcating the vegetation clearing limit prior to commencing clearing work. Subsequent reporting is made available to stakeholders and the public.	A total of 5.5 ha of critical Koala habitat has been cleared .  Prior to commencing clearing activities, all responsible parties are provided a copy of the approval documents within the Pre-Start Packages. The environmental plans provided stipulate environmental management requirements pertinent to each stage of construction and measures for vegetation management (clearing and protection), protection of MNES fauna (Koala) and other native wildlife, maintenance of safe wildlife movement opportunities, fauna habitat rehabilitation, threatened flora management and pest management. Prior to clearing, the works areas are demarcated and an on-site pre-start held with all responsible parties and Ipswich City Council.  All previous and future clearing have and will be supervised by a qualified and experience fauna spotter catcher. Specific actions include the inspection of the demarcated boundary/works extent and ensuring clear paths for fauna to reach safe havens were provided. The previous clearing reports are provided in the preceding ACR.
KMP-4	<b>Vegetation clearing</b>  Where a Koala is present within a clearing zone, the tree will be marked with distinctive flagging (and other advisory means as required) and machinery operators will be briefed on the location of the area. No clearing works can occur within 20m of the tree retaining a Koala until the animal has moved on via its own volition (where the strategy is to allow the Koala to move of its own accord, overnight). On the following day, the tree and retained area, are to be checked again prior to their removal. If necessary, the procedure is repeated until the Koala has moved.	To date, no koalas have been recorded within the clearing zones. Vegetation clearing has been conducted in accordance with the KMP and site specific VC&MPs.
KMP-5	<b>Vegetation clearing - fencing</b>	Prior to clearing, the works areas are demarcated with the fencing signed-off by the Environmental Coordinator and Ipswich City Council at the pre-start meeting.

	Prior to vegetation clearing, install a temporary fauna exclusion fence around the area of clearing works and maintain the fence until the completion of major civil works.	
<b>KMP-6</b>	<p><b>Adaptive Management</b></p> <p>As a part of this strategy the following minimal protocols are to be applied in the event of koala injury or mortality as a result of clearing or construction:</p> <ol style="list-style-type: none"> <li>1. Clearing and construction is immediately ceased</li> <li>2. The DEE is notified in writing within 48 hours of the koala injury or mortality occurring</li> <li>3. Measures for minimising impacts to koalas as a result of clearing and construction are revised, in consultation with a suitably qualified person to reduce the likelihood of koala injury or mortality before clearing and construction recommences.</li> </ol>	Works that have the potential to impact fauna (e.g. clearing) are completed under the supervision of a fauna spotter catcher. nil known instances of Koala injury or mortality have been recorded associated with the action.
<b>KMP-7</b>	<p><b>Bundamba Creek Rehabilitation – Weed Management</b></p> <p>Weed removal will be undertaken in three stages: primary weed removal stage, secondary or follow-up weeding and maintenance weeding phase.</p>	Rehabilitation works proceeded prior to the commencement of the approved action. The Bundamba Creek East Reporting ceased during the previous reporting period as the area is now on off maintenance. Rehabilitation works have continued throughout the reporting period within Bundamba Creek West. The weed removal has been undertaken in three stages with regular inspections (quarterly or following 3 month rainfall event).
<b>KMP-8</b>	<p><b>Bundamba Creek Rehabilitation – Revegetation</b></p> <p>Post weed-removal, rehabilitation areas will undergo revegetation to varying degrees, depending on the level of disturbance. It involves the cultivation and planting of native species and maintenance in the form of watering, continued weed removal, erosion control and ongoing management. The replanted species used within rehabilitation areas will be species endemic to the local area and will reflect the naturally occurring regional ecosystems. This will include a high proportion of primary and secondary Koala food trees.</p>	The rehabilitation area has undergone revegetation through numerous largescale planting events over the rehabilitation period. Post revegetation monitoring assessed success and initiated replacement plantings where plant stock had failed.
<b>Operational Management</b>		
<b>KMP-9</b>	<p><b>General – Maintenance of Bundamba Creek Corridor</b></p> <p>Bundamba Creek corridor will undergo rehabilitation during the construction phase. Once rehabilitation is complete, the corridors will be transferred to ICC for the long term maintenance of the corridors</p>	<p>Rehabilitation works within the 50 m waterway buffer to Bundamba Creek extending from Stage 9 (southern interface with town centre holdings) to Stage 15 (western boundary with adjacent Defence Housing Australia landholdings) proceeded prior to the commencement of the approved action (i.e. 16 December 2019) and have continued throughout the current reporting period. The scope of works for the waterway buffer includes weed management, rehabilitation, revegetation, site stability and erosion management. Combined these actions increase available Koala habitat and improve connectivity for Koalas along Bundamba Creek.</p> <p>Regular inspections (quarterly or following 3 month rainfall event) of the rehabilitation works have been conducted and two monitoring reports issued within this reporting period. At the end of the third reporting period, the total number of monitoring reports for the Bundamba Creek Rehabilitation works was fourteen (14). Photo monitoring sites have been well established as the works proceeded prior to the commencement of the approved action.</p> <p>The Bundamba Creek East Rehabilitation site received ‘off maintenance’ certification in the current reporting period (22<sup>nd</sup> January 2022). Monitoring will continue within for the western portion of the site.</p>
<b>KMP-10</b>	<p><b>General – Lifestyle Guidelines Package</b></p> <p>The “Lifestyle Guideline” documentation will be issued to each new resident and is designed to help promote a range of ecological sustainable living principles. The Lifestyle Guidelines will be used to directly educate and raise awareness of a large audience towards the management of the Bundamba Creek Corridor and Koala habitat values. Topics included within the education documents include:</p>	The Ecco Ripley ‘Living with Koalas Lifestyle Guidelines’ documentation is issued to each new resident and is accessible on the Ecco Ripley website.

	<ul style="list-style-type: none"> <li>• Appropriate plant selection on allotments</li> <li>• Inappropriate planting species (known local or declared weed species)</li> <li>• Management of household scale run off</li> <li>• Protection of native animals and the types of native animals residents could expect to see within Conservation Corridor</li> <li>• Understanding storm water devices</li> <li>• Appropriate management of domestic animals</li> <li>• Location of dog on-leash and off-leash areas ☒ Key local and state phone numbers to contact if distressed or orphaned fauna are located.</li> </ul>	
<b>KMP-11</b>	<p><b>Traffic</b></p> <p>A number of measures will be imposed to avoid and mitigate the risk of Koalas being hit by vehicles. These measures include:</p> <ul style="list-style-type: none"> <li>• Separation of conservation areas and residential areas. Koala habitat will not form part of the primary landscaping of the development footprint so that Koalas are not enticed to enter residential areas.</li> <li>• Imposition of low vehicle speeds (i.e. 50km/hr) to reduce the risk of collisions where adjoining conservation land. Under Queensland traffic laws, vehicle speed limits are restricted to 50km/h on built up residential roads.</li> <li>• Erection of Koala awareness signage adjoining proposed conservation areas.</li> <li>• Avoiding roads intercepting corridors.</li> <li>• Integration and construction of fauna movement solutions and signage should roads intercept corridors.</li> <li>• New residents will be issued with a “Lifestyle Guideline” to raise awareness about local wildlife and to educate residents about the protection of Koalas in the area.</li> </ul> <p>Wildlife movement solutions have been identified as an effective tool to mitigate the effects of fragmentation caused by roads. In essence, wildlife crossings if ultimately required will include the following elements:</p> <ul style="list-style-type: none"> <li>• Reduced vehicle speed limits (≤50 km/h)</li> <li>• Wildlife crossing signage</li> <li>• Vegetation adjoining the road</li> <li>• Demarcated road treatment surface to raise driver awareness</li> <li>• Where seen supportive of the crossing outcomes the inclusion of specific lighting regimes.</li> <li>• Exclusion fencing funnelling animals towards the safest road crossing point</li> </ul>	<p>Measures have been implemented throughout the various stages of development to avoid and mitigate the risk of Koala-vehicle interactions. The masterplan design ensures that separation is provided between residential areas and conservation areas and roads avoid bisecting corridors. As such, no roads bisect the Bundamba Creek Corridor or detention basin rehabilitation and weed management area and Koala signage has been installed within the basin outlet area and along the Bundamba Creek corridor.</p> <p>Speed limits within the developed stages are a maximum of 50 km/h and the existing traffic volume has not necessitated the installation of fauna exclusion fencing along roads. Construction of roads within following stages are to comply with the KMP.</p> <p>A discussed above, new residents receive the Ecco Ripley ‘Living with Koalas Lifestyle Guidelines’ documentation to raise awareness about local wildlife and protection of Koalas.</p>
<b>KMP-12</b>	<p><b>Dog Management</b></p> <p>The following specific measures will be employed to mitigate potential threats from dogs:</p> <ul style="list-style-type: none"> <li>• Dogs will be restricted from entering conservation areas unless they are controlled on a lead.</li> <li>• Fenced ‘off-leash’ areas / dog facilities will be constructed within recreational parkland in the estate, to counter balance conservation land being strictly ‘dog on leash’ areas.</li> <li>• New residents will be issued with a ‘Lifestyle Guideline’ to raise awareness about local wildlife and to educate residents about the protection of Koalas in the area and appropriate dog management.</li> </ul>	<p>Dogs are not permitted off-leash within the Bundamba Creek corridor. The estate provides opportunities for residents to enrich pet lives through on-leash and off-leash facilities. A connected shared path around the estate and connectivity between developed Stages providing ample on-leash activities external to the conservation area and Pebbles Dog park located within Ecco Ripley accessible from Ripley Road and Joy Chambers Circuit provides a fenced off-leash dog park. New residents receive the Ecco Ripley ‘Living with Koalas Lifestyle Guidelines’ documentation to raise awareness about local wildlife and protection of koalas.</p>



# 9. Offset Area Management Plan

A review of the OAMP commitments and implementation is provided in **Table 6**.

**Table 6: Offset Area Management Plan implementation**

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
Koala Occurrence	<ul style="list-style-type: none"><li>Increase koala density within the offset area</li></ul>	<ul style="list-style-type: none"><li>Baseline koala density survey completed June 2015 using Koala Rapid Assessment Method (Woosnam-Merchez et al. 2012) and SAT and line transect surveys (Phillips and Callaghan, 2011; Dique et al. 2003)</li><li>Replicated koala density surveys undertaken within the offset area at years 5 and 10 from the date when the offset is legally secured.</li><li>Koala density surveys to be undertaken by a suitably qualified environmental scientist</li></ul>	<p>Surveys were completed across the offsite including opportunistic surveys and camera trapping.</p> <p>Evidence of increase Koala density provided as part of relevant period ACR which coincides with year 5 surveys.</p> <p>Scat searches during Year 2 intensive review indicated that the proportion of sites occupied and the activity or density of Koalas have both increased. The number of searched sites containing scat exceeding the 85% threshold provide confidence an increase has occurred. Two individuals not part of the already known population were sighted during surveys across the Koala Crossing property.</p> <p>The Year 5 review monitored Koala scats over the reporting period. These were found in similar locations to past scat occurrences, indicating a stable and active population of Koalas in the site. No koala-predator interactions were recorded during the reporting period.</p> <p>Opportunistic surveys continue annually and the next intensive surveys are scheduled for 2024. Should opportunistic surveys suggest a reduction in Koala numbers between 5-year survey events a supplementary survey will be undertaken to confirm and review the likely cause of reduced occurrence.</p>
	<p><b>Vegetation Composition</b></p> <ul style="list-style-type: none"><li>Vegetation composition maintains a ‘high’ score value in relation to habitat that is critical to the survival of the koala.</li><li>No significant increase in weed cover for species that could adversely affect the structural composition of vegetation within the offset</li><li>area in relation to koala habitat value (i.e. weed species that are shrubs, trees or vines).</li><li>Retain and enhance the structure and floristic diversity of canopy vegetation.</li><li>Retain and enhance the structure and floristic diversity of middle and understorey vegetation.</li><li>Ongoing retention and recruitment of koala food trees.</li><li>Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses.</li><li>Domestic livestock excluded from offset area (unless controlled grazing required for fire risk management)</li></ul>	<ul style="list-style-type: none"><li>Monitoring of canopy composition with respect to koala food tree species; adaptive management if required. Monitoring to include</li><li>representative surveys of all applicable (koala habitat) vegetation communities within the offset area. For example, tertiary-level</li><li>vegetation surveys in accordance with Neldner et al (2012).</li><li>Monitoring of weed infestations; adaptive management of shrub, tree and vine weed species if required.</li><li>Flora surveys to be undertaken by a suitably qualified environmental scientist.</li><li>To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire 65.69 ha area will be managed for conservation purposes.</li><li>Given that the subject property boundary is currently fenced in koala-permeable fencing, livestock will be excluded from the offset area through at least one of the following mechanisms:<ul style="list-style-type: none"><li>Livestock will not be kept on the property</li></ul></li></ul>	<p>Weed assessments are conducted annually to compare results from baseline surveys. Permanently marked transects are surveyed in accordance with Nelder <i>et al</i> 2015 in a 50 x 10m transect and established photo points to monitor progress.</p> <p>The target weed species identified as a threatening proves to Koalas is <i>Lantana camara</i>, and as such the focus of weed management. QTFN have prepared a five-year 2020-2025 Weed Strategy and works completed in 2020, during this reporting period, have contributed to the reduction in Lantana across the wider property, outside of the offset area.</p> <p>Three survey sites occur within the EPBC 2015/7513 offset area. The three transects have demonstrated a small increase in Lantana, due to favourable weather conditions in previous and the current reporting period, however, all remain below baseline surveys. Follow up weed control will be conducted in the offset area to address the re-emergence of Lantana in the next reporting period.</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<ul style="list-style-type: none"> <li>- Koala-friendly fencing will be erected along the northern boundary of the offset area to exclude livestock grazing outside of the offset area yet within the subject property in accordance with a relevant guideline such as Note G4 – Wildlife Friendly Fencing and Netting (Land for Wildlife, nd).</li> <li>• Domestic livestock will be only be introduced in the event that a fire risk professional (e.g. representative of Queensland Rural Fire Service) and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk. In this event, a maximum of 12 head of domestic livestock may be introduced for no more than a three (3) consecutive week period. Level of risk (and any need to repeat this grazing cycle) is to be re-assessed by the aforementioned professionals following the grazing event.</li> <li>• Vegetation clearing will not be undertaken within the offset area under any circumstances, except the following: <ul style="list-style-type: none"> <li>- Where necessary for the removal of weeds;</li> <li>- To establish and maintain fencing around the boundary of the offset area;</li> <li>- To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional (minimum two years professional experience in bushfire risk management planning); and</li> <li>- To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation, and only to the extent necessary to mitigate the risk. This action to be undertaken in accordance with the relevant legislative requirements in place at the time of clearing, including the use of registered fauna spotters.</li> </ul> </li> </ul>	
<b>Habitat Connectivity</b>	<ul style="list-style-type: none"> <li>• Maintain contiguous landscapes to allow koalas to establish new territories, facilitate gene flow and respond to environmental changes.</li> <li>• Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses.</li> <li>• Contribute to koala movement and dispersal through the Flinders Karawatha corridor through the establishment of a protected habitat corridor (minimum 700 m width).</li> </ul>	<ul style="list-style-type: none"> <li>• To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire 65.69 offset area will be managed for conservation purposes.</li> <li>• Vegetation clearing will not be undertaken within the offset area under any circumstances, except the following: <ul style="list-style-type: none"> <li>- Where necessary for the removal of weeds;</li> <li>- To establish and maintain fencing around the boundary of the offset area in accordance with relevant legislation;</li> <li>- To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional and relevant legislation; and</li> <li>- To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation, and only to the extent necessary to mitigate the risk. This action to be undertaken in</li> </ul> </li> </ul>	Firebreak inspections were completed monthly during 2021-2022 monitoring period. There has been no clearing undertaken within the offset area with the exception of weed removal and as such no change to site connectivity.

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<p>accordance with the relevant legislative requirements in place at the time of clearing including the use of registered fauna spotters.</p> <ul style="list-style-type: none"> <li>The subject property boundary is currently fenced in koala-permeable fencing. Any new or replacement fencing is to be 'fauna-friendly' in accordance with a relevant guideline such as Note G4 – Wildlife Friendly Fencing and Netting (Land for Wildlife, nd).</li> </ul>	
<b>Dogs</b>	<ul style="list-style-type: none"> <li>Reduction of risk of koala mortality or injury by dog attack within the offset area through reduction in wild dog abundance.</li> </ul>	<ul style="list-style-type: none"> <li>An initial survey to establish a baseline of wild dog abundance within the offset area was conducted for the entire property in June 2015 with subsequent monitoring occurring every six months. The survey method used for the initial abundance survey is informed using best practice methodology and applicable guidelines available at the time of survey (e.g. DoE, 2007 and Mitchell and Balogh, 2007).</li> <li>Baseline predator abundance survey was undertaken by a suitably qualified person (e.g. pest animal control professional or ecologist with at least two years relevant professional experience).</li> <li>Offset area wide wild dog control program was undertaken following the monitoring period in June 2015. Where practicable and to increase the effectiveness of a control program the landholder will seek to coordinate control programs with comparable activities being undertaken by neighbouring landholders. Post the initial control event, presence/absence surveys for wild dogs are to be undertaken each two months by the landholder.</li> <li>Post initial control event, abundance surveys for wild dogs to be undertaken bi-annually by a suitably qualified person (e.g. pest animal control professional or ecologist with at least two years relevant professional experience).</li> <li>Where post control surveys indicate there has been a recurrence of wild dogs within the offset area, control measures will be actioned using methods (controlled shooting or baiting) determined by a pest control professional in consideration of monitoring results.</li> <li>Any injured koala found on site will be sent to a veterinary clinic/wildlife rescue facility for rehabilitation.</li> <li>Installation of appropriate hazard warning signage indicating the offset area is subject to dog control for the purpose of managing the offset site for the benefit of koala.</li> </ul>	<p>Monitoring was conducted using remote sensing wildlife cameras and offset area wide traverses for opportunistic scat collections.</p> <p>Methodologies remain unchanged, with relative abundance indices calculated using a standardised set of trapping days (40), with an independence threshold of 10 mins (i.e. each observation of an animal ten minutes after the first observation is considered a new observation) analysed using the software 'Camelot'.</p> <p>Given that the movement range of these feral predators extends beyond the specific offset area, RAI are presented including the data from any camera trapping station with projected territories of any feral animal that overlap with the offset area. Observations specific to cameras within the offset area are presented in maps.</p> <p>Across the offset site, <i>Canis lupus</i> and <i>Vulpes vulpes</i> were recorded across the subject site, with no <i>Felis catus</i> observed. Recent surveys have indicated a significant decline in relative dog abundance and occupancy. Relative abundance of foxes has also continued to decline.</p> <p>As in previous years, no evidence of listed threatened species has appeared in the collected predator scats. Majority of scat in this monitoring period was composed of Northern Brown Bandicoot and Eastern Grey Kangaroo.</p>
<b>Cats and Foxes</b>	<ul style="list-style-type: none"> <li>Reduction of risk of koala mortality or injury by feral cat and/or fox attack within the offset area through reduction in feral cat and fox abundance</li> </ul>	<ul style="list-style-type: none"> <li>Initial survey to establish a baseline of feral cats and fox abundance within the offset area was conducted for the entire property in June 2015, with subsequent monitoring occurring every six months. The survey method used for the initial abundance survey is informed using best practice methodology and applicable guidelines available at the time of survey (e.g. DoE, 2007 and Mitchell and Balogh, 2007).</li> </ul>	



Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<ul style="list-style-type: none"> <li>Offset areas feral cat and fox control program to be undertaken with the aim of removing all feral cats and foxes from the offset area. The specific control method will be informed by the results of the initial fox abundance survey. Where practicable and to increase the effectiveness</li> <li>of a control program the landholder will seek to coordinate control programs with comparable activities being undertaken by neighbouring landholders.</li> <li>Post initial control, presence/absence surveys for fox and feral cat are to be undertaken by the landholder every two months.</li> <li>Post initial control, bi-annual abundance surveys for fox and feral cat to be undertaken by a suitably qualified person (pest animal professional or environmental scientist with at least two years professional experience).</li> <li>Where post control surveys indicate there has been a recurrence of feral cats and/or foxes within the offset area a control measure will be actioned using an appropriate control method (shooting, trapping or toxic baits).</li> <li>Any injured koala found on site will be sent to a veterinary clinic/wildlife rescue facility for rehabilitation.</li> <li>Installation of appropriate public warning signage indicating the offset area is subject to feral cat and fox control for the purpose of managing the offset site for the benefit of koala.</li> </ul>	
<b>Vehicle Strike</b>	<ul style="list-style-type: none"> <li>Contribute to the reduction of risk of injury or death to koala in relation to vehicle strike both within the offset area and on adjacent roads.</li> </ul>	<ul style="list-style-type: none"> <li>Signs were installed on the property boundary adjacent to unnamed public road that bisects offset area to alert traffic of the koala offset area and the presence of koalas in the local area.</li> <li>Signs were installed on the property boundary adjacent to the unnamed public road along the frontage to Lot 89 RP892014 to alert east bound traffic of the presence of koalas in the local area.</li> <li>Signs were installed on the property boundary adjacent to Mount Flinders Road along the frontage to Lot 86 RP892014 to alert west-bound traffic of the presence of koalas in the local area.</li> <li>Implementation of a slow speed requirement (40km/h) for vehicles traversing the offset area.</li> <li>Signs were installed indicating a slow speed area at the main entry points to the offset area.</li> </ul>	There were no vehicle strike incidents recorded within the property during the reporting period.
<b>Barriers to Dispersal</b>	<ul style="list-style-type: none"> <li>Maintain and improve contiguous landscapes to allow koalas to establish new territories, facilitate gene flow and respond to environmental changes.</li> <li>Retain and enhance the structure and floristic diversity of canopy vegetation.</li> </ul>	To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire 65.69 ha offset area will be legally secured as an area of High Conservation Value under section 19F of the Vegetation Management Act 1999	No vegetation clearing (excluding weeds) was undertaken in the offset area. Ongoing management of weeds and threats discussed in the items above reduce barriers to dispersal. The contiguous landscape has been maintained and improved to allow Koalas to establish new territories, facilitate gene flow and respond to environmental changes.

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
	<ul style="list-style-type: none"> <li>Retain and enhance the structure and floristic diversity of middle and understorey vegetation.</li> <li>Ongoing retention and recruitment of koala food trees.</li> <li>Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses.</li> <li>Contribute to koala movement and dispersal through the Flinders Karawatha through the establishment of a protected habitat corridor (minimum 700 m width).</li> </ul>	<ul style="list-style-type: none"> <li>Given that the subject property boundary is currently fenced in koala-permeable fencing, livestock will be excluded from the offset area through at least one of the following mechanisms: <ul style="list-style-type: none"> <li>Livestock will not be kept within balance areas of Lots 89 RP892014; or</li> <li>Koala-friendly fencing will be erected along the southern boundary of the offset area to exclude livestock grazing outside of the offset area yet within the subject property in accordance with a relevant guideline such as Note G4 – Wildlife Friendly Fencing and Netting (Land for Wildlife, nd).</li> </ul> </li> <li>Domestic livestock will be only be introduced in the event that a fire risk professional (e.g. representative of Queensland Rural Fire Service) and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk. In this event, a maximum of 12 head of domestic livestock may be introduced for no more than a three (3) consecutive week period. Level of risk (and any need to repeat this grazing cycle) is to be re-assessed by the aforementioned professionals following the grazing event.</li> <li>Any fencing installed or replaced within the offset area is to be fauna-friendly in design as per a relevant guideline such as Wildlife Friendly Fencing Project (2014) or Land for Wildlife (nd).</li> <li>Vegetation clearing will not be undertaken within the offset area under any circumstances, except the following: <ul style="list-style-type: none"> <li>Where necessary for the removal of weeds;</li> <li>To establish and maintain fencing around the boundary of the offset area; or</li> <li>To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional.</li> <li>To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation, and only to the extent necessary to mitigate the risk.</li> <li>Any clearing will include the use of registered fauna spotters</li> </ul> </li> </ul>	
Hydrological Change	<ul style="list-style-type: none"> <li>To ensure the koala habitat within the offset area is maintained and the potential carrying capacity of the area is not reduced due to anthropogenic hydrological change.</li> </ul>	<ul style="list-style-type: none"> <li>if any actions are proposed that may significantly impact the current (at time of offset area being legally secured) hydrological regime and therefore potentially impact koala habitat within the offset area then the following actions will be required: <ul style="list-style-type: none"> <li>Presentation of proposed hydrological change to DoE, detailing the potential impact to koala habitat within the offset area. This will include specialist reports detailing the nature of the hydrological</li> </ul> </li> </ul>	There have been no hydrological changes made to the offset area or wider property, maintaining Koala habitat and potential carrying capacity.

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<p>change and the expected impact to the offset areas vegetation communities.</p> <ul style="list-style-type: none"> <li>- Only DoE approved hydrological change will be permitted within the offset area.</li> </ul>	
Fire	<ul style="list-style-type: none"> <li>• Minimise the risk of high-intensity fire within the offset area.</li> <li>• Minimise the risk of koala mortality within the offset area due to prescribed burning.</li> </ul>	<ul style="list-style-type: none"> <li>• A suitably qualified professional has prepared an Offset Area Bushfire Management Plan, detailing: current vegetation condition and fire risk, locations of current and required firebreaks and fire control lines, current fuel loads, recommended actions and timeframes for maintenance of bushfire risk within the context of the adapted Regional Ecosystem Description Database guidelines (refer below) and biodiversity outcomes sought for the offset area.</li> <li>• With the exception of prescribed burning, which will only be undertaken for the purposes of biodiversity enhancement, the offset area is to be managed to avoid the occurrence of fire by: <ul style="list-style-type: none"> <li>- Maintaining fire control lines relative to the offset area; and</li> <li>- Co-locating fire control lines with existing tracks and fence lines on the property where possible.</li> </ul> </li> <li>• Existing fencing, firebreaks and fire control lines are to be kept clear of encroaching vegetation to a width as defined by the Offset Area Bushfire management Plan and in accordance with relevant legislation (e.g. Sustainable Planning Act 2009).</li> <li>• Vegetation within the offset area will be managed in accordance with the following specifications, which are adapted from the Regional Ecosystem Description Database fire management guidelines for the three vegetation types that occur within the offset area (RE 12.9-10.2, RE 12.9-10.7 and RE 12.8.24) (Queensland Herbarium, 2014): <ul style="list-style-type: none"> <li>- SEASON: Summer to winter</li> <li>- INTENSITY: Low to moderate</li> <li>- INTERVAL: 4-25 years</li> <li>- STRATEGY: 40-60% mosaic burn. Burn with soil moisture and with a spot ignition strategy so that a patchwork of burnt/unburnt country is achieved</li> <li>- ISSUES: The fire regime will maintain a mosaic of grassy and shrubby understoreys. Ground litter and fallen timber habitats will be maintained by burning only with sufficient soil moisture. Burning will produce fine scale mosaics of unburnt areas. Variability in season and fire intensity will occur, as well as spot ignition in cooler or moister periods to encourage mosaics.</li> </ul> </li> <li>• The following parameters will be adhered to throughout the planning and implementation of any prescribed burning:</li> </ul>	<p>The Koala Crossing Fire Management Plan divides the property into Fire Management Zones: Land Management Zones, Exclusion Zones and Asset Protection Zones. Within the Land Management Zones the landscape is broken up into subzones (Fire Management Areas) according to practicable containment lines. The Fire Management plan details burning intervals recommended for these FMAs (KCFMP 2015 p.16). The EPBC 2015/7513 offset area is located in FMA 2.</p> <p>No burns were completed in the reporting period. The small burn that was completed during a previous reporting period has demonstrated a positive response, with <i>Heteropogon contortus</i> present in high levels.</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<ul style="list-style-type: none"> <li>- Undertake pre-burn survey to identify areas of high koala activity;</li> <li>- No prescribed burning will be undertaken when female koalas are likely to be carrying dependent young (Note: this management action will take precedence over the fire management guidelines outlined above);</li> <li>- Prescribed burning will be only carried out during appropriate weather conditions (e.g. low temperature, low wind) and good soil moisture conditions;</li> <li>- Post-fire practices will be implemented to mitigate the risk of uncontrolled fire damage (e.g. extinguishing burning of large trees); and</li> <li>- Minimise the extent of burning so that the risk of injury or mortality to koalas is reduced, the risk of canopy scorch is lowered, whilst other biodiversity benefits to other species are achieved.</li> <li>• Prescribed burning will be undertaken in consultation with, and under the guidance of the Queensland Rural Fire Brigade.</li> <li>• Domestic livestock will be only be introduced in the event that a fire risk professional (e.g. representative of Queensland Rural Fire Service) and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk. In this event, a maximum of 12 head of domestic livestock may be introduced for no more than a three (3) consecutive week period. Level of risk (and any need to repeat this grazing cycle) is to be re-assessed by the aforementioned professionals following the grazing event.</li> </ul>	
<b>Disease and/or pathogens</b>	<ul style="list-style-type: none"> <li>• Reduce risk of the spread of koala and vegetation diseases within the offset area and adjacent areas of koala habitat.</li> <li>• Third party contractors do not enter site carrying pathogens.</li> </ul>	<ul style="list-style-type: none"> <li>• Baseline offset area condition survey is to include assessment for signs of Phytophthora cinnamomi and Myrtle Rust were undertaken in March 2015 with no evidence of either disease.</li> <li>• To reduce the risk of introducing Chlamydia and Koala retrovirus into the resident population; uncontrolled translocation of koala is not permitted within the offset area.</li> <li>• Vegetation management activities which include tree lopping/felling, weed removal, tree planting (including nursery suppliers) are deemed to be high risk in the context of introducing pathogens that may potentially impact koala habitat. As such, any person engaged to undertake these</li> <li>• activities must satisfy the landholder that they have undertaken all reasonable steps to prevent the introduction of a pathogen/disease to the site (e.g. vehicle and equipment washdown prior to site entry).</li> </ul>	<p>The initial baseline survey for Koala health indicated no incidence of Koala diseases within the population at Koala Crossing, however, subsequent surveys indicated two instances of Koalas infected with Chlamydia outside of this reporting period. An ongoing program is in place to continue monitoring Koala Crossing's Koala population to ensure they are healthy and thriving.</p> <p>Disease records taken throughout the past years suggest that QTFN and KEG intervention is reducing the incidence of Chlamydia in the broader population, and that Koalas from the offset area have lower incidence of disease generally than those from the agricultural matrix to the west of Koala Crossing. To confirm disease status in 2019, and begin a more standardised mode of monitoring disease status and its changes through the years, OWAD environmental were contracted to collect fresh Koala scat for genetic disease. No signs of plant disease have been observed on-site.</p>
<b>Recovery value</b>	<ul style="list-style-type: none"> <li>• Maintain contiguous landscapes to allow koalas to establish new territories, facilitate gene flow and respond to environmental changes.</li> </ul>	<ul style="list-style-type: none"> <li>• To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire offset area will be managed for conservation purposes.</li> </ul>	<p>The offset area has been legally secured for conservation purposes removing the risk of habitat degradation associated with clearing, development or other incompatible land uses.</p>



Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
	<ul style="list-style-type: none"><li>• Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses.</li><li>• Contribute to koala movement and dispersal through the Flinders Karawatha through the establishment of a habitat corridor (minimum 700 m width).</li><li>• Protect and conserve large, connected areas of koala habitat, particularly large, connected areas that support koalas that are:<ul style="list-style-type: none"><li>- genetically diverse/distinct; or</li><li>- free of disease or have a very low incidence of disease; or</li><li>- breeding (i.e. presence of back young or juveniles).</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Vegetation clearing will not be undertaken within the offset area under any circumstances, except the following:<ul style="list-style-type: none"><li>- Where necessary for the removal of weeds;</li><li>- To establish and maintain fencing around the boundary of the offset area; and</li><li>- To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional.</li><li>- Will include the use of registered fauna spotters</li></ul></li><li>• Any fencing installed within the offset area is to be fauna-friendly in design (Wildlife Friendly Fencing Project, 2014).</li><li>• To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation, and only to the extent</li></ul>	<p>Vegetation clearing, excluding the removal of weeds, has not been undertaken within the offset area. The contiguous landscape has been maintained and improved to allow koalas to establish new territories, facilitate gene flow and respond to environmental changes.</p>

## 10. Summary

Saunders Havill Group were engaged by Ripley Town Holdings Pty Ltd to prepare an *Annual Compliance Report* for the Ecco Ripley, Ipswich, Queensland granted under the EPBC Act (ref EPBC 2015/7513), as specifically required by Condition 13 of the approval granted on 16 October 2017 (**Appendix A**).

The action commenced on the 16 December 2019, at which point clearing of vegetation for the purposes of the action exceeded two or more hectares as stipulated within the approval. An inspection and audit of the approval area and Bundamba Creek corridor confirmed the extent of works, clearing and rehabilitation. The audit confirmed no clearing had occurred during this reporting period and the previous extents had been carried out under the approval (ref. EPBC 2015/7513). In accordance with Condition 1, the approval holder must not clear more than 46.3 ha of Koala habitat within the project site. Only 5.5 ha of critical Koala habitat has been cleared thus far and therefore the action is compliant with Condition 1.

Rehabilitation works within the 50 m waterway buffer to Bundamba Creek, extending from Stage 9 (southern interface with town centre holdings) to Stage 15 (western boundary with adjacent Defence Housing Australia landholdings), proceeded prior to the commencement of the approved action (i.e. 16 December 2019). The Bundamba Creek East rehabilitation area became off maintenance. Monitoring and reporting is expected to continue for Bundamba Creek West (Stage 13-15).

The offset area, 'Koala Crossing', was secured through a Voluntary Declaration under the *Vegetation Management Act 1999* (Qld) by Queensland Trust for Nature on 7 June 2018, securing 65.69 ha for offsets associated with the approval granted under the EPBC Act (ref. EPBC 2015/7513). To achieve the offset requirements, the Offset Area Management Plan proposes to enhance the level of protection afforded to existing Koala habitat through exclusion of land management practices that are incompatible to achieving a net gain in Koala habitat quality.

Annual Offset Area Management Reports are prepared for the offset site. The offsets had been in progress for two years prior to the commencement of the action. The Year 5 Offset Area Management Report was issued prior to the finalising this ACR. The annual report concluded that overall Koala values were increasing, and threats were either stable or declining, however, ongoing management is required to ensure these trends continue.

Reviewing the above, the works carried out by the approval holder as part of the Ecco Ripley Residential Development, Ipswich, Queensland are considered to be compliant with the approval granted under the EPBC Act (ref. EPBC 2015/7513).

## 11. Appendices

### Appendix A

EPBC approval and conditions granted 16 October 2017

### Appendix B

QTFN Annual Offset Area Management Report - Year 5



# Appendix A

EPBC approval and conditions granted  
16 October 2017



## Approval

### ECCO Ripley residential development, Ipswich, Queensland (EPBC 2015/7513)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

#### Proposed action

**person to whom the approval is granted** Bcove 4 Pty Ltd - ACN: 123 079 836  
and  
Ripley Town Holdings Pty Ltd - ACN: 112 588 217

**proposed action** To develop the residential development at Ripley Valley, Ipswich, Queensland. [See EPBC Act Referral 2015/7513 and approved variation to the action dated 29 March 2016].

#### Approval decision

Controlling Provision	Decision
Listed threatened species and communities (sections 18 & 18A)	Approved

#### conditions of approval

This approval is subject to the conditions specified below.

#### expiry date of approval

This approval has effect until 31 July 2047.

#### Decision-maker

**name and position** James Barker  
Assistant Secretary  
Assessments and Governance Branch

#### signature

**date of decision** 16 / 10 2017

## Conditions attached to the approval

### Project site

1. The **approval holder** must not clear more than 46.3 hectares of **Koala habitat** within the **project site**.

### Management measures

2. The **approval holder** must ensure a pre-clearance survey is undertaken by a **suitably qualified person** immediately prior to any clearing of vegetation within the **project site**, to identify any **Koalas** present.
3. The **approval holder** must not clear any vegetation supporting any **Koalas** until such time that any present **Koalas** vacate the vegetation or are relocated by a **suitably qualified person**.
4. Prior to the **commencement of the action**, the **approval holder** must develop and implement a Koala Management Plan. The Koala Management Plan must describe measures to be implemented for the life of the approval to minimise **Koala** mortality attributable to dog attack and vehicle strike within the **project site**.
5. The **approval holder** must publish the Koala Management Plan on its website prior to **commencement of the action** and the Koala Management Plan (or any subsequent revised versions) must remain on the **approval holder's** website for the life of the approval.

### Compensation measures

6. To compensate for the loss of 46.3 hectares of **Koala habitat** within the **project site**, the **approval holder** must, prior to the **commencement of the action**, **legally secure** a minimum of 65.69 hectares of **Koala habitat** at the **offset site**. Within 20 **business days** of **legally securing** the offset, the **approval holder** must provide the **Department** with evidence of when the offset was **legally secured**, and what mechanism was used to **legally secure** the offset.
7. The **approval holder** must, for the life of the approval, ensure there is no net loss in the extent of **Koala habitat** that is **legally secured** at the **offset site** under Condition 6.
8. The **approval holder** must ensure that within 10 years after **legally securing** the offset, the **quality** of **Koala habitat** is improved, relative to the baseline **quality** of 6, across 50 per cent of the **offset site**.
9. The **approval holder** must ensure that prior to the expiry of the approval, the **Koala habitat** across 100 per cent of the **offset site** is of no less than **quality 8**.
10. The **approval holder** must prepare and implement a monitoring program for the life of the approval. The results of the monitoring program must be adequate to inform adaptive management and demonstrate whether the outcomes in Condition 7, Condition 8 and Condition 9 are being met.
11. If, at any time during the life of the approval, the **approval holder** identifies that the outcomes specified in Condition 7, Condition 8 and Condition 9 are not on track to be achieved, the **approval holder** must report to the **Department** in writing within 20 **business days** of becoming aware. The report must state the cause, the response measures (including timeframes for reporting the success of those measures to the **Department**) and the actions to prevent further occurrences.



12. If the **Minister** is not satisfied that the outcomes required by Condition 7, Condition 8 and Condition 9 are likely to be achieved, or is not satisfied that there is sufficient evidence that the outcomes required by Condition 7, Condition 8 and Condition 9 are likely to be achieved, the **Minister** may (in writing) request the **approval holder** to submit a plan for the **Minister's** approval, to monitor, manage, avoid, mitigate, offset, record or report on, impacts to **Koala habitat**.
- a. The **Minister** may set a timeframe in which the plan must be submitted, and may designate that the plan must be prepared or reviewed by a **suitably qualified person** (or another specified person).
  - b. If the **Minister** approves the plan in writing then the **approval holder** must implement the approved plan (or a revised version if approved in writing by the **Minister** or otherwise allowed under these conditions).

#### Administration

13. Within 20 **business days** after the **commencement of the action**, the **approval holder** must advise the **Department** of the actual date of **commencement of the action**.
14. The **approval holder** must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement any management plans or monitoring programs required by this approval, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.
15. Within 60 **business days** of every 12 month anniversary of the **commencement of the action**, the **approval holder** must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans or monitoring programs as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the **Department** at the same time as the compliance report is published. The **Minister** may provide written consent to the **approval holder** to cease reporting under this condition if satisfied additional reports are not warranted.
16. The **approval holder** must report any potential or actual contravention of the conditions of this approval to the **Department** in writing within 5 **business days** of the **approval holder** becoming aware of the potential or actual contravention.
17. Upon the direction of the **Minister**, the **approval holder** must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor and criteria must be approved by the **Minister** prior to the commencement of the audit. The audit report must address the criteria to the satisfaction of the **Minister**.
18. If, at any time after 5 years from the date of this approval, the **approval holder** has not **commenced the action**, then the **approval holder** must not **commence the action** without the written agreement of the **Minister**.

## Definitions

**Approval holder:** the person to whom the approval is granted, or any person acting on their behalf, or to whom the approval is transferred under section 145B of the **EPBC Act**.

**Business days:** a day other than a Saturday or Sunday or a day which is a public holiday for the whole of Queensland.

**Commence / commenced / commencement of the action:** the point at which clearing of vegetation for the purposes of the action either in a single event or cumulatively first exceeds 2 or more hectares.

**Department:** the Australian Government Department responsible for administering the **EPBC Act**.

**EPBC Act:** the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

**Koala/s:** the Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) (*Phascolarctos cinereus* (combined populations of Qld, NSW and the ACT)) listed as a threatened species under the **EPBC Act**.

**Koala habitat:** any habitat, including forest or woodland, which contains species that are known **Koala** food trees (species of tree whose leaves are consumed by **Koalas**), including *Eucalyptus tereticornis*, *Eucalyptus crebra*, *Eucalyptus moluccana* and *Corymbia citriodora*.

**Legally secure / secured / securing:** means long-term protection under a legal mechanism that is either establishing a covenant on the title or a voluntary declaration under the *Vegetation Management Act 1999* (Qld), or establishing a Nature Refuge under the *Nature Conservation Act 1992* (Qld).

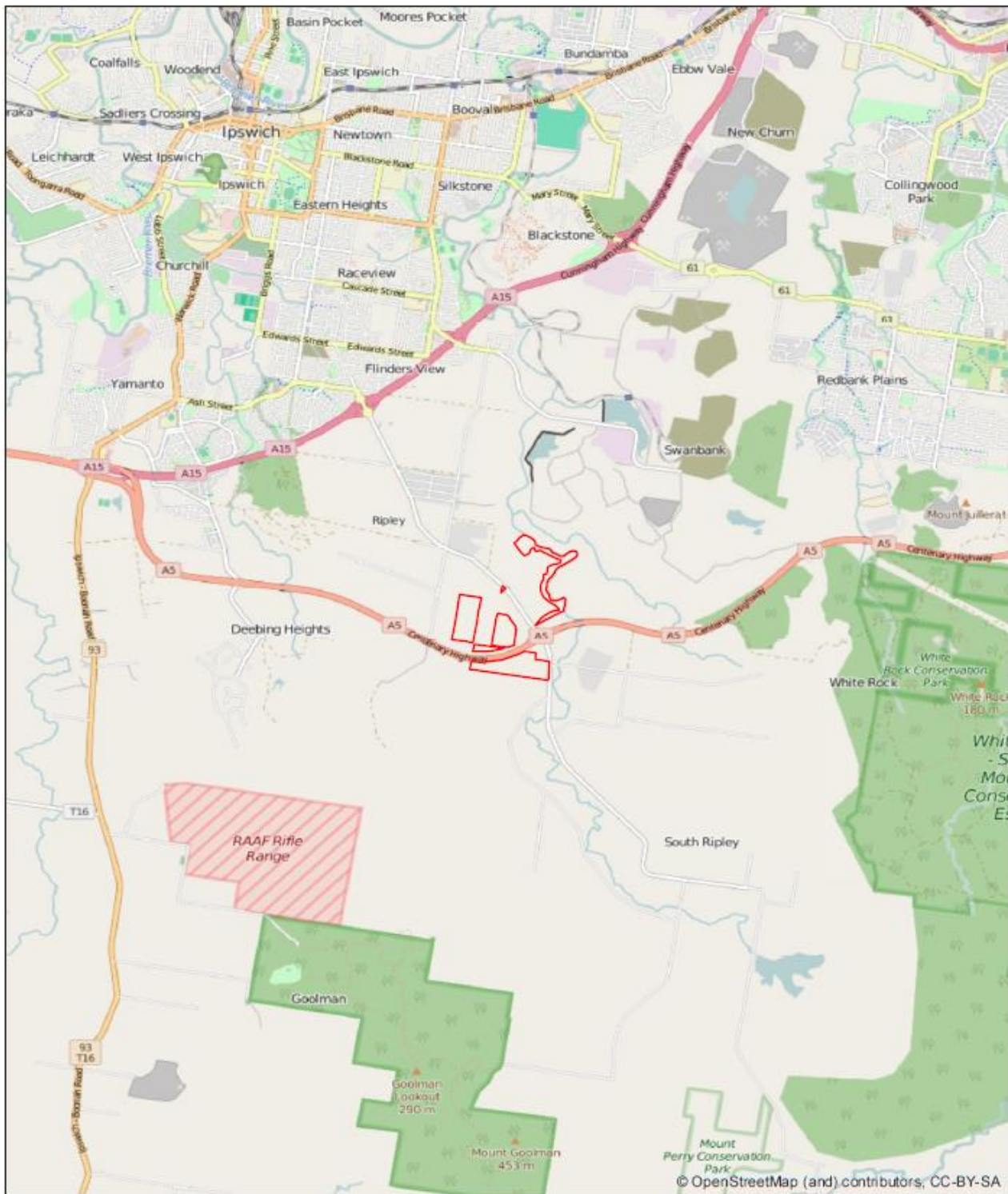
**Minister:** the Australian Government Minister responsible for administering the **EPBC Act** and includes a delegate of the **Minister**.

**Offset site:** the areas designated as 'Sekisui Rural E' and 'Sekisui Rural B' on the map at Attachment 2.

**Project site:** the area defined as 'project referral area' on the map at Attachment 1.

**Quality:** means the habitat quality score as calculated by biocondition surveys in accordance with Queensland's *Biocondition: A condition Assessment Framework for Terrestrial Biodiversity in Queensland. Assessment Manual (Version 2.2)* (Eyre et al. 2015), or any subsequent revised version.

**Suitably qualified person:** a person who has professional qualifications, training, skills and/or experience relevant to **Koalas** who can give authoritative assessment, advice and analysis in relation to the identification, safe capture and release and management of **Koalas** using the relevant protocols, standards, codes of conduct, methods or literature.



## Legend

Project referral area

**Figure A1 Project Site Context**

Bove 4 Pty Ltd & Ripley  
Town Holdings Pty Ltd

File ref. 6982E Figure A1 Site Context A

Date

14/07/2016

Project ECCO Ripley

**SH** saunders  
havill  
group

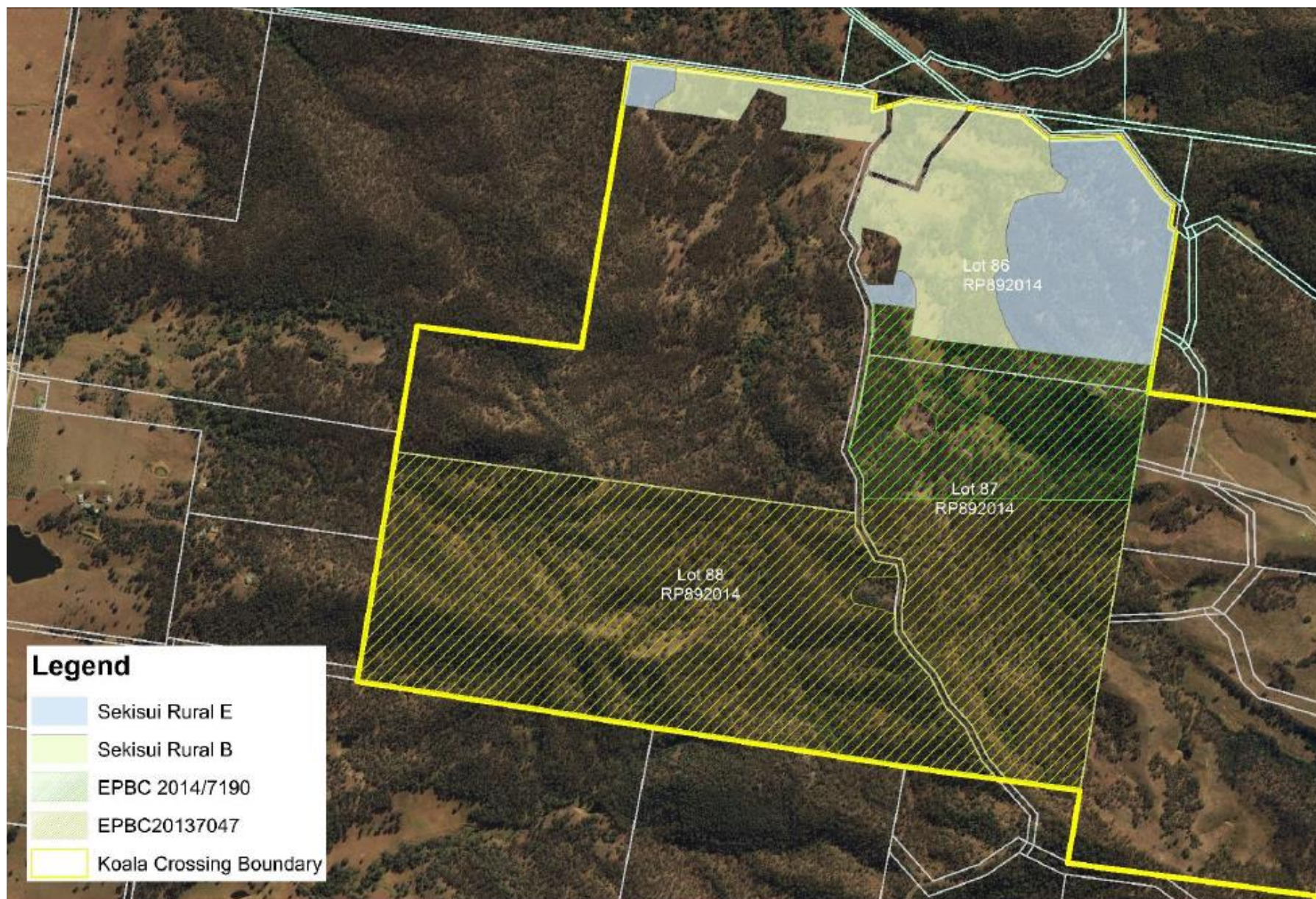
0 500 1,000 2,000 3,000 m

Scale (A4): 1:85,000 [GDA 1994 MGA Z56]



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**Koala Crossing Offset Area**

0 155 310 620 930 1,240 Meters



Author: TPI/level: QTFN  
Date: 26/1/19  
Source: Cadastral Boundaries  
Data provided by: QTFN  
Map: 100% accuracy (see [www.qtfn.gov.au/our-business/our-services](http://www.qtfn.gov.au/our-business/our-services) page)  
ACCURACY STATEMENT  
Data from various sources of data. Spatial boundaries may not be exact.  
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# Appendix B

## QTFN Annual Offset Area Management Report - Year 5



# Koala Crossing Offset Area Management Report

EPBC2015/7513 Year 5

V1 | 11 January 2023



## Document Control

### Current document

Title	Koala Crossing Offset Area Management Report Year 5 EPBC 2015/7513
Date	January 2023
Prepared by	Georgina Braun

### Document Issue

<i>Issue</i>	<i>Date</i>	<i>Prepared by</i>	<i>Checked by</i>
Draft	10/11/2022	GB	CS
Final	11/01/2023	GB	

## Disclaimer

This report has been prepared for Bcove 4 Pty and Ripley Town Holdings Pty Ltd by the Queensland Trust for Nature. QTFN cannot accept any responsibility for any use of or reliance upon the contents of this report by any third party.

## Reports and/or Plans by Others

Reports and/or plans by others may be included within this Offset Area Management Report to support the document.

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# CHAPTER 1: INTRODUCTION

The purpose of this document is to report on the management actions and outcomes required for the provision of koala (*Phascolarctos cinereus*) habitat offset, by Approval EPBC 2015/7513 issued pursuant to sections 130 and 133 of the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC 1999). The focus of the plan is on the protection and enhancement of the koala habitat associated with the secured offset for the Bcove 4 Pty Ltd and Ripley Town Holdings Pty Ltd (EPBC2015/7513). This document will report in accordance with stipulations and requirements laid out in the Offset Area Management Plan.

The structure of the document reflects the requirements of the Department of Agriculture, Water and Environment (DAWE), and details the key threatening processes which could impact on the existing koala population. The chapters that comprise the document report on the overall health of the koala population, vegetation composition, and actions to minimise threats to Koala. The management regime put in place by the Queensland Trust for Nature (QTFN) will enhance existing koala habitat through the exclusion of land practices detrimental to the site and will track improvements and progress in the annual offset report over the active management period.

This report is the fourth submitted to date since the approval date for the offset (EPBC 2015/7513) on the 16<sup>th</sup> October 2017, and commencement of the action on the 16<sup>th</sup> December 2019. The past and future reporting requirements are listed below.

Milestone	Due Date	Status
Approval of EPBC 2015/7513	-	Approved 16 <sup>th</sup> October 2017
Commencement of the action	-	16 <sup>th</sup> December 2019
Year 1 – Baseline	December 2018	Submitted October 2018
Year 2 – intensive year review	December 2019	Submitted November 2019
Year 3	December 2020	Submitted January 2021
Year 4	December 2021	Submitted February 2022
Year 5	December 2022	Submitted January 2023
Year 6		
Year 7		
Year 8		
Year 9		
Year 10		

## Summary of compliance

This document stands as a compliance report for the agreed upon approval conditions (Table 1) outlined in the EPBC 2015/7513 Offset Area Management Plan and final approval conditions.

It is acknowledged that any non-compliance with the conditions must be reported by no later than 5 business days after becoming aware.

**Table 1.** Compliance summary of approval conditions, relevant for this reporting period.

Approval Condition	Compliant
7. For the life of the approval, ensure there is no net loss in the extent of Koala habitat that is legally secured at the offset site	Y
8. Within 10 years after legally securing the offset, the quality of koala habitat is improved, relative to the baseline quality of 6, across 50 percent of the offset site.	Ongoing
9. Prior to the expiry of the approval, the koala habitat across 100 percent of the offset site is of no less than quality 8.	Ongoing
10. Prepare and implement a monitoring plan for the life of the approval.	Y

**Table 2.** Compliance summary and checklist for all conditions relevant to this reporting interval under the OAMP.

Key Actions and Monitoring Requirements	Reporting Requirements	Compliance
<b>Koala Occurrence</b>		
<ul style="list-style-type: none"> <li>Baseline koala density survey completed in 2015. Repeat at years 5 (2019) and 10 (2024)</li> </ul>	Incorporate the koala density survey results within the relevant Annual Offset Area Assessment Report (only for years 0, 5 and 10).	Y
<ul style="list-style-type: none"> <li>Record opportunistic koala sightings and scat findings (location and date).</li> </ul>	Incorporate opportunistic koala sightings into the Annual Offset Area Assessment Report.	Data provided in Y2 report
<b>Vegetation Composition, Habitat Connectivity and Dispersal Barriers</b>		
<ul style="list-style-type: none"> <li>Undertake baseline Tertiary Vegetation Assessments and repeat at years 5 and 10.</li> <li>Conduct baseline weed density survey in 2015. Undertake annual weed surveys.</li> </ul>	Declared weed cover does not exceed baseline levels by more than 10%.	Y
<ul style="list-style-type: none"> <li>Retain all vegetation in remnant and mature regrowth areas except where necessary for the removal of weeds, fencing or fire break trails. Monitor for illegal clearing in the area of any natural events that may impact habitat connectivity.</li> <li>Firebreaks and fire control lines to be inspected at a minimum quarterly or after major storm events.</li> </ul>	Monitoring results to be recorded in annual Offset Area Assessment Report.	Data provided in Y2 report

**Predators**

<ul style="list-style-type: none"> <li>Conduct a baseline survey to establish feral animal abundance and location on the property in 2015. Monitoring of the presence of feral pest animals using remote motion-activated cameras; repeat bi-annually.</li> <li>Implement a property wide feral animal control program. The control program and techniques (trapping, baiting, shooting) will be informed based on the results of the abundance survey.</li> <li>Offset area-wide traverse by the landholder each two months to record the presence/absence of signs of wild dogs (including scats), along a set route utilising the existing network of tracks within the offsets area (e.g. fire control lines) to allow for replication of the monitoring events.</li> <li>Establish and maintain a koala-predator interaction register</li> </ul>	<p>Annual report to include all feral animal survey data.</p> <p>Annual report to include all records of koala injury or death related to feral animal attacks.</p>	<p>Ongoing</p> <p>Y</p>
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**Vehicle Strike**

<ul style="list-style-type: none"> <li>Install koala awareness signage on Mount Flinders Road and along the frontage of Lot 86 RP892014</li> <li>Implement a slow speed requirement (40km/h) in offset area and install signs</li> <li>Record any koala injury/mortality on roads within offset area of Flinders Road. Report injuries/deaths to LGA.</li> </ul>	<p>Report any koala injuries/deaths to Local Government authority and relevant State Government department</p> <p>Incidents to be recorded in annual Offset Area Assessment Report.</p>	<p>Y</p>
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**Fire**

<ul style="list-style-type: none"> <li>Develop an Offset Area Bushfire Management Plan within 6 months of the offset being legally secured.</li> <li>Install firebreaks and fire trails. Inspect and undertake maintenance in compliance with OABMP.</li> <li>Prescribed burning will be undertaken in consultation with, and under the guidance of the Queensland Rural Fire Brigade.</li> </ul>	<p>Monitoring results and maintenance log will be detailed within the annual Offset Area Assessment Report.</p>	<p>Y</p>
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**Disease and pathogens**

<ul style="list-style-type: none"> <li>Baseline offset area condition survey to include assessment for signs or Phytophthora cinnamomic and Myrtle Rust in March 2015.</li> <li>To reduce the risk of introducing Chlamydia and Koala retrovirus into the resident population, uncontrolled translocation of koala is not permitted within the offset area.</li> <li>Enforce biosecurity procedures for all persons and vehicles that may carry vegetation pathogens known to affect koala food and shelter trees.</li> </ul>	<p>Baseline data concerning observations around koala and koala habitat diseases and pathogens is to be documented within initial annual Offset Area Assessment Report.</p> <p>Confirmation of koala translocation activity within the offset area (if approved) is to be included within annual Offset Area Assessment Reports.</p> <p>Incidence of koalas exhibiting symptoms of disease to be reported within annual Offset Area Assessment Report.</p>	<p>Y</p>
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**Hydrological Change**

<ul style="list-style-type: none"> <li>If any actions are proposed that may significantly impact the current hydrological regime and therefore potentially impact koala habitat within the offset area, then actions are required.</li> </ul>	<p>Monitoring of the impact to the site's vegetation communities will be a component of an annual site assessment.</p>	<p>Y</p>
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## CHAPTER 2: SETTING AND LOCALITY

By way of Deed, Bcove 4 Pty Ltd and Ripley Town Holdings Pty Ltd secured delivery of an Offset Area Management Plan and registration of a Voluntary Declaration (under the *Vegetation Management Act 1999* (QLD) of 65.69ha imposed by EPBC Approval 2015/7513 as part of the offset for the ECCO Ripley development.

The voluntary declaration was secured on the 6<sup>th</sup> of June 2018 and reporting for EPBC 2015/7513 will include information from 2018 onwards.

### Koala Crossing Locality

The offset area pertaining to EPBC 2015/7513 is managed as part of a larger conservation property located on Mount Flinders Road, Peak Crossing, Queensland, comprised of eight lots; 86, 87, 88, 89 on RP892014, Lot 119 on CH311527, Lot 107 on CH311135, Lot 137 on CH311786 and Lot 138 on CC127 totalling approximately 654 ha (Map 1). The entire site, henceforth referred to as 'Koala Crossing', was purchased by the QTFN in 2014 to protect regrowth vegetation from future development, with the aim of utilising the property for offsets.

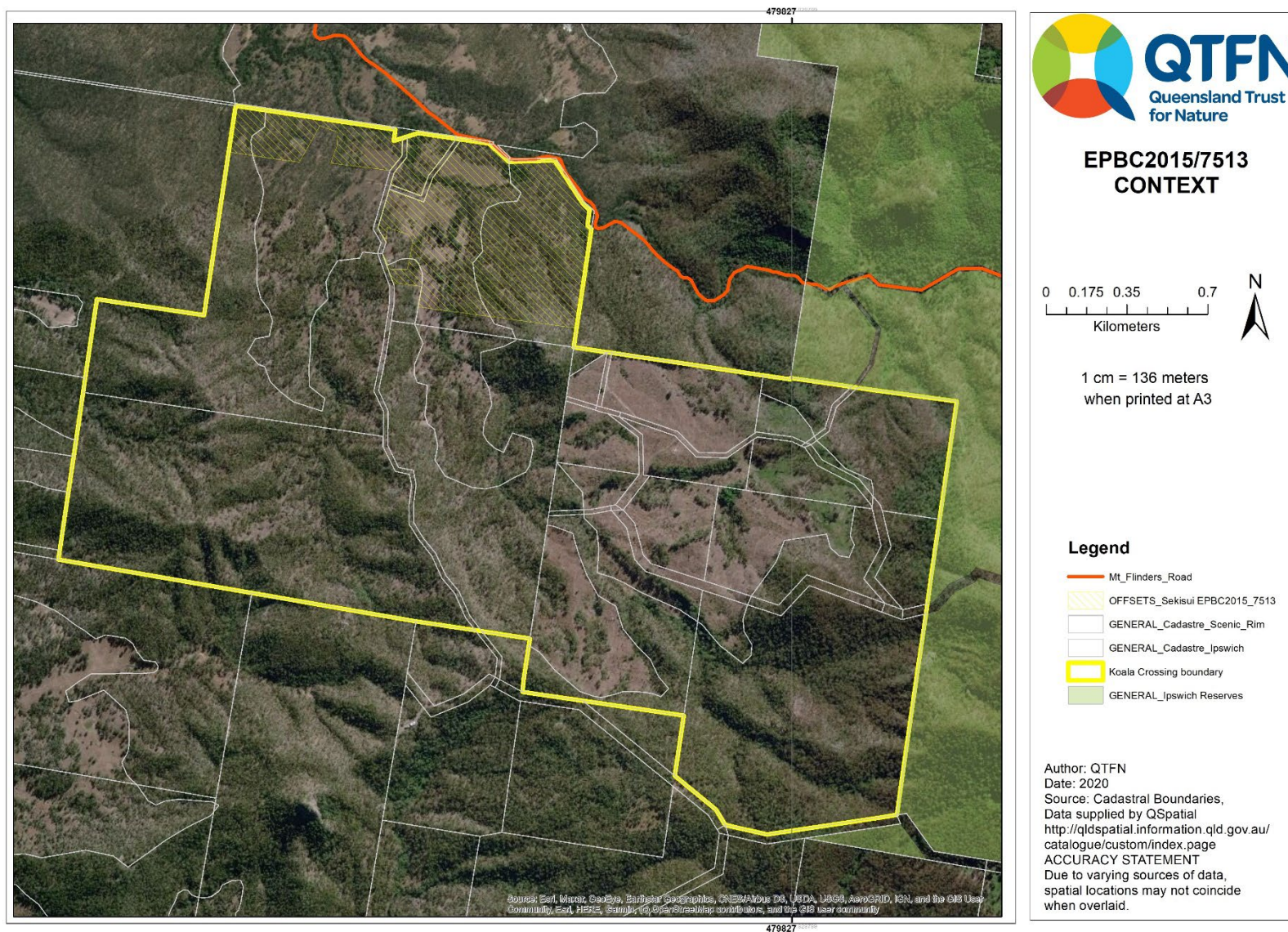
The tenure of the site is freehold, wholly owned by QTFN. It is included within the Scenic Rim Regional Council Local Government Area. On a regional scale, the site is part of the Flinders Karawatha Corridor, the largest remaining contiguous stretch of open eucalypt forest in South East Queensland (SEQ) (EHP 2014). The corridor stretches for 60 km from the Karawatha forest in Brisbane, through Flinders Peak to Wyaralong Dam near Boonah, and encompasses 56,350 ha of land. It is an important wildlife corridor, providing habitat for a number of vulnerable species including the tusked frog (*Adelotus brevis*), glossy black-cockatoo (*Calyptorhynchus lathami*), powerful owl (*Ninox strenua*), black-breasted button-quail (*Turnix melanogaster*), spotted-tailed quoll (*Dasyurus maculatus maculatus*), brush-tailed rock-wallaby (*Petrogale penicillata*) and koala (*Phascolarctos cinereus*).

Climate data for the area gives a mean maximum and minimum temperature of 26.9°C and 13.1°C respectively for 2022. The average annual rainfall for 1991-2022 is 857mm. The year 2022 recorded above average rainfall of 1560mm up to October 2022 (BoM 2022), with the wettest month in February and the driest month in August. The site contains four Regional Ecosystems (REs):

- 12.8.24 Endangered: *Corymbia citriodora* subsp. *variegata* open forest on Cainozoic igneous rocks especially trachyte
- 12.9-10.7 Of concern: *Eucalyptus crebra* +/- *E. tereticornis*, *Corymbia tessellaris*, *Angophora* spp, *E. melanophloia* woodland on sedimentary rocks
- 12.9-10.2 Of least concern: *Corymbia citriodora* subsp. *variegata* +/- *Eucalyptus crebra* open forest on sedimentary rocks
- 12.9-10.17 Of least concern: *Eucalyptus acmenoides*, *E. major*, *E. siderophloia* +/- *Corymbia citriodora* subsp. *variegata* woodland on sedimentary rocks

The highest point of the site is 210m above sea level on the eastern side, close to the border of lots 86 and 87 RP892014. The Geological Survey of Queensland 1:100,000 Ipswich Geological Map (DME 2008) lists the geology as:

- Qa SEQ: Quaternary; clay, silt, sand, gravel, flood plain alluvium
- Tit SEQ: Tertiary: trachyte (anorthoclase and riebeckite trachyte)
- Jbmk: Jurassic; lithofeldspathic labile and sublabile to quartzose sandstone, siltstone, shale, minor coal, ferruginous oolite marker
- Jbmg: Jurassic; lithic labile and feldspathic labile sandstone

**Map 1. Offset area in the context of Koala Crossing and the Karawatha Corridor.**

## CHAPTER 3: OFFSET AREA REPORT

This chapter outlines the agreed requirements outlined in the Offset Area Management Plan (OAMP) and the final Approved Conditions set by the relevant parties. For each asset, monitoring and results are discussed in line with the reporting requirements, and notes on conservation management actions stated.

### Reporting period

This document reports on monitoring and works completed up until the submission date (December 2021 to December 2022).

### 3.1 KOALA OCCURRENCE

Relevant actions	Reporting requirement	Compliant
Outside of the formal koala density survey event, opportunistic koala sightings to be recorded (location and date) within the Annual Offset Area Assessment Report	Opportunistic koala sightings to be incorporated into the Annual Offset Area Assessment Report	Y
For full OAMP see Appendix 1.		

Koalas are under significant threat in SEQ due to habitat encroachment by urbanisation, predation by feral and domestic animals and traffic accidents caused by increased road networks and motor vehicles. Koala Crossing was purchased by QTFN with the intention of finding sustainable funding models to preserve koala habitat and provide linking territories to the Flinders-Goolman Conservation Estate and the Flinders-Karawatha Corridor. The delivery of third-party project impact offsets has provided a means of funding ongoing restoration and revegetation of large parts of the property.

The five-year review conducted and presented in 2019, demonstrated an increase in koala occupancy and activity compared to the 2015 baseline survey. Since the five-year review, no rehabilitated koalas have been released on the site.

The next intensive site-wide scat surveys, spotlighting surveys and tracking activities are planned for the year 8 reporting period (2024).

#### i. Monitoring in this period

This report will document the continued koala observations and monitoring within the offset area, in line with the requirement of the OAMP between December 2021 and December 2022. In this reporting period, ongoing opportunistic observations regarding koalas have been made in the form of scat searches and camera trapping. Eleven camera trapping stations were deployed across the site (see Section 3.4 for locations), and scat searches were conducted opportunistically across the offset area and the whole property. The transient nature of koalas mean they are not limited to sole use of the offset area. To capture more accurate trends in population health or decline, results from the full property survey have also been presented.

Methodologies remain unchanged from previous reports. Trees were selected at random throughout the property and searched for koala scratch marks and scats within 1m of the base. As recommended by the Koala Ecology Group (KEG) in the original baseline survey, a maximum search effort of 11 trees was conducted in any one site before a site was considered to have no evidence of recent koala activity. Where very fresh scats were found, a brief visual search of the immediate area was conducted to determine if a koala was still present. Relative Activity Indices (RAI) are calculated for koala in the same manner as for feral predators, the methods for which are detailed in Section 3.4.

#### ii. Results and Management Outcomes

##### Scat searches

Scat searches from the 2021/2022 monitoring period show koala scats around the offset area (Map 2) in similar locations to previous scat occurrences.



### **Camera trap observation**

No koalas were observed during the camera trapping season within this monitoring period.

One male was heard bellowing during September 2022.

### **Koala-predator interactions**

No koala predator interactions were recorded during the period relevant to this report.

### **Management outcomes**

Koala scat observations indicate a stable and active population of koalas on the site. Opportunistic surveys will continue annually. The next intensive site-wide scat surveys, spotlighting surveys and tracking activities are planned for the year 8 reporting period (2024).

Should koala density be found to significantly reduce (as defined by the applied survey method or expert) between survey events, a supplementary assessment will be implemented to review the likely cause of the reduced occurrence of koala within the offset area in accordance with the OAMP requirements (Appendix 1 action #2.1.5.1). In addition to the existing population, the property will continue to act as a release site for rehabilitated koalas that were found close to the property.





### 3.2 VEGETATION COMPOSITION

Relevant actions	Reporting requirement	Compliant
Monitoring of weed infestations; adaptive management of shrub, tree and vine weed species if required. For full OAMP see Appendix 2.	Weed cover (shrub, tree, and vine species) does not exceed baseline levels by more than 10%. Monitoring results to be recorded in annual Offset Area Assessment Report.	

The maintenance of the koala population is dependent on the health, age, and distribution of koala food trees within the offset area. Monitoring and management of the vegetation is an essential part of the management plan.

In this period, activities focus on annual weed monitoring and corrective actions, ensuring there is no increase in weeds above the baseline.

#### i. Monitoring in this period

Weed assessments continue to be conducted annually and compared to results from the baseline survey of 2015. Permanently marked transects were surveyed according to Nelder *et al* 2015 in a 50 x 10 m transect (Map 3). Photo points were recorded at each transect, so that the progress of the site could be monitored (Appendix 3). The target weed species identified as a threatening process to koalas is Lantana *Lantana camara*. Whilst other weeds were measured for overall ecological health, the focus of the weed management is the control and eradication of *L. camara*, as it has the capacity to prevent koala movement and access to food and shelter trees.

#### ii. Results and Management Outcomes

##### Property-wide trends

Lantana *Lantana camara* has increased to 78% occupancy, meaning it is present in 19 of 28 transects (Figure 1). This is up from 67% in 2021, reflective of a high rainfall season and multiple La Nina events promoting woody weed growth. Visual observations confirm that this increase is representative of emergent growth, not necessarily dense thickets of growth. However, in response to this prolonged growth period, extensive follow up weed control will be required across the property.

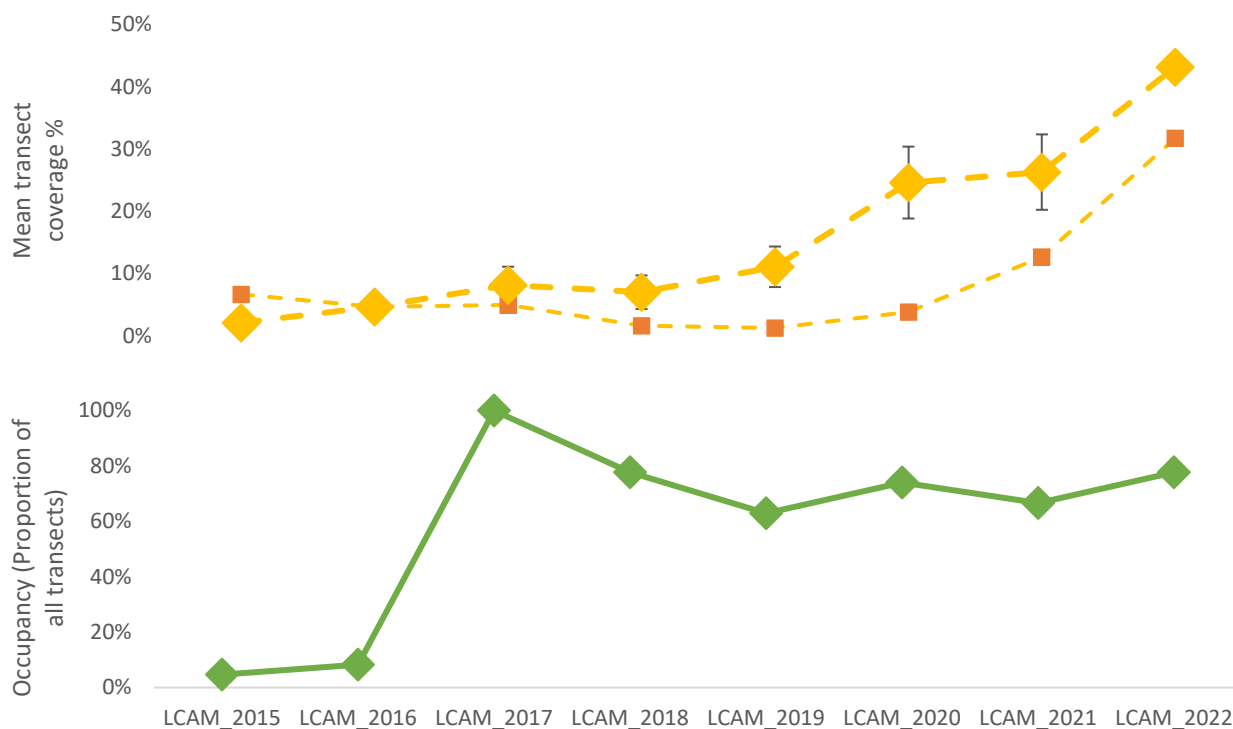
Over 165ha of woody weeds on Koala Crossing was treated throughout 2022 (Map 3).

Lantana *L. montevidensis* remains present in 100% of transects monitored at an average coverage of 60%.

##### Offset-specific trends

There are three (3) survey sites within the EPBC 2015/7513 offset area. There has been a slight increase in lantana coverage within these survey sites up to an average of 32%, although they remain under the property average of 42%. This remains consistent with the wet weather season through 2022, promoting growth and re-emergence across the property.

During the baseline report, *L. montevidensis* was not recorded within the survey sites. While it is not the target species, it is of concern to koala food tree recruitment and will be monitored closely.



**Figure 1.** Weed transect results, baseline 2015 to present.

TOP: average % coverage for offset specific transects (orange square) compared to property wide averages (yellow diamond) BOTTOM: Proportion of transects containing *L. camara*, property wide (green diamond).

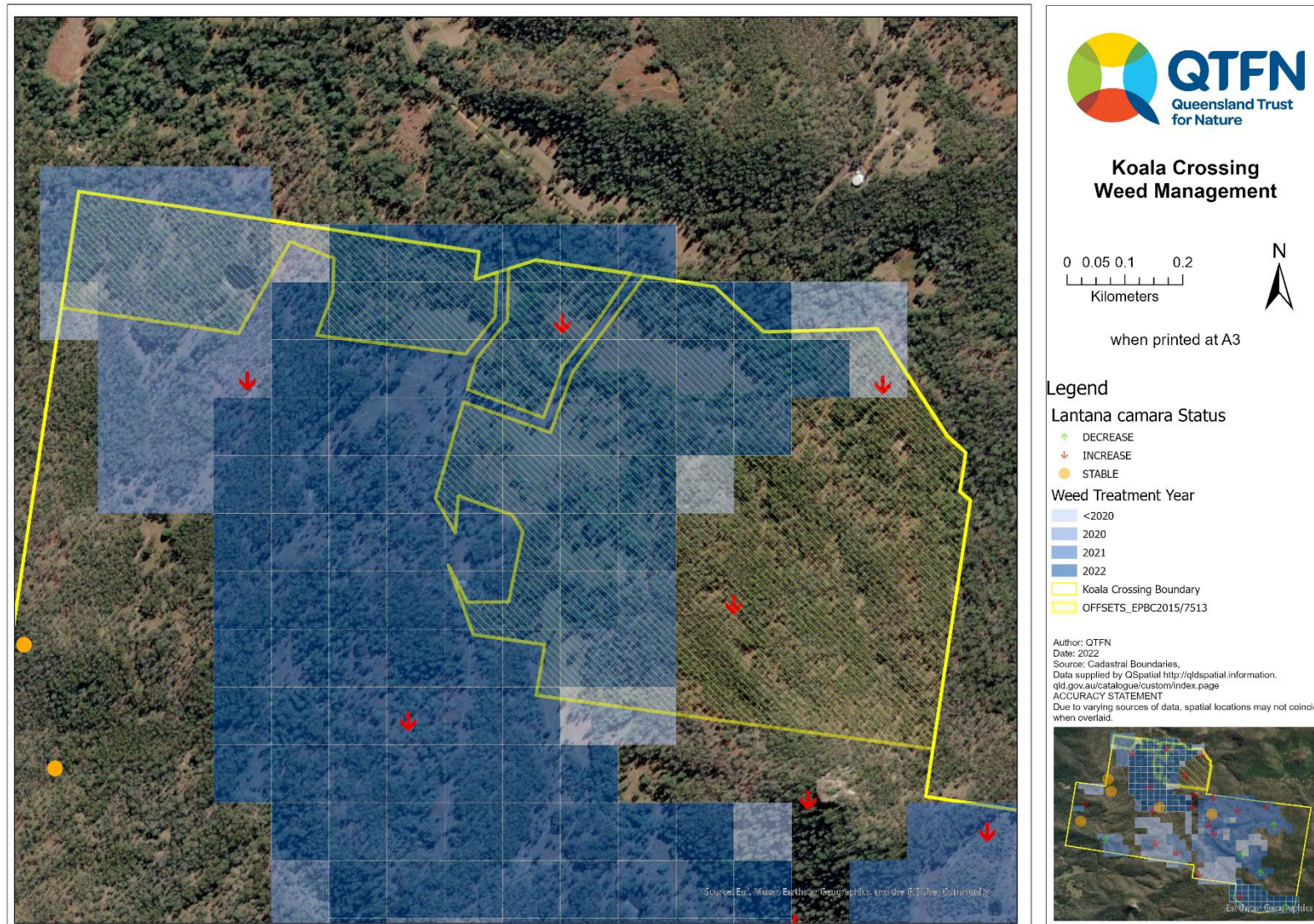
### Management actions

The Weed Strategy 2018-2020 was pivotal in creating reductions in *L. camara*. QTFN has since revised this strategy and compiled the new Weed Strategy 2020-2025, which follows the same principles, and actions of weed control works targeting areas of re-emerging and highly infested *L. camara*.

Treatment of Lantana has been conducted throughout 2022 (Map 3) and is expected to demonstrate positive results in the next survey season. Densities of lantana are highest along the creek lines as is expected.



**Map 3. Weed Management within the offset area.**





### 3.3 HABITAT CONNECTIVITY

Relevant actions	Reporting requirement	Compliant
Vegetation clearing will not be undertaken within the offset area under any circumstances.	The location, extent and associated purpose for any vegetation clearing undertaken within the offset area will be detailed within the annual Offset Area Assessment Report.	Y
Firebreaks and fire control lines to be inspected at a minimum quarterly frequency or after major storm events.	Any change to site connectivity is to be detailed within the annual Offset Area Assessment Report.	
For full OAMP see Appendix 4.		

#### i. Monitoring and Management Outcomes

Firebreak inspection has been undertaken monthly during the 2021-2022 monitoring period. There has been no clearing undertaken within the offset area, nor a change to site connectivity.

#### Management actions

Continue to follow the offset area management plan.

### 3.4 THREAT TO KOALA FROM WILD DOG, FOX AND FERAL CAT

Relevant actions	Reporting requirement	Compliant
Post initial control event, abundance surveys for wild dog, fox and feral cat to be undertaken bi-annually by a suitably qualified person.		
Offset area-wide traverse by the landholder each two months to record the presence/absence of signs of wild dog, fox and feral cat (including scats).	Results of all presence/absence surveys will be reported upon on an annual basis as a component on the Annual Offset Areas Assessment Report.	
Where post control surveys indicate there has been a recurrence of wild dogs within the offset area, control measures will be actioned using methods (controlled shooting or baiting) determined by a pest control professional in consideration of monitoring results.	All records of koala injury or death resulting from a dog attack are to be reported within the annual Offset Areas Assessment Report.	Y
Any injured koala found on site will be sent to a veterinary clinic/wildlife rescue facility for rehabilitation.		
For full OAMP see Appendix 5 & Appendix 6.		

#### i. Monitoring in this period

Monitoring was conducted using remote sensing wildlife cameras (see Appendix 7 for examples of images) and offset area wide traverses for opportunistic scat collections. The report includes data from Summer 2021 through to Winter 2022.

This survey effort includes 13 camera stations (with Reconyx® hyperfire HC600 remote-sensing cameras) capturing a comprehensive view of the landscape of Koala Crossing as a whole, with two stations located in their fixed locations within the EPBC 2015/7513 offset area.

Methodologies remain unchanged, but in contrast to previous reporting years, RAI's are now calculated using a standardised set of trapping days (40), with an independence threshold of 10 mins (i.e. each observation of an animal ten minutes after the first observation is considered a new observation) analysed using the software 'Camelot'.

Given that the movement range of these feral predators extends beyond the specific offset area, RAI are presented including the data from any camera trapping station with projected territories of any feral animal that overlap with the offset area. Observations specific to cameras within the offset area are presented in maps.

## ii. Results and Management Outcomes

### Offset specific trends

Wild dogs were captured on one camera traps that have potential foraging areas that overlap with EPBC2015/7513 offset area in this monitoring season (Map 4).

**Table 3.** The number of camera traps with a 1km radius that overlaps with the EPBC2015/7513 offset area.

	Dog	Fox	Cat
00_WIN_2015	0	2	0
01_SUM_2015	1	1	0
03_SUM_2016	2	1	0
04_WIN_2017	0	0	0
05_SUM_2017	0	0	0
06_WIN_2018	1	2	0
07_SUM_2018	1	1	0
08_WIN_2019	3	3	0
09_SUM_2019	2	1	0
10_WIN_2020	2	2	0
11_SUM_2020	2	0	0
12_WIN_2021	2	1	0
13_SUM_2021	0	0	0
14_WIN_2022	1	0	0

### Property wide trends

Wild dog (*Canis lupus*) and fox (*Vulpes vulpes*) have been recorded within the offset area. No feral cats were observed during this reporting period. Pigs were also observed.

Across the site, relative dog abundance and occupancy has significantly declined (Figure 2). All individuals are adults. Relative abundance and occupancy of foxes has also declined in both winter and summer sampling seasons. Feral pigs have increased in relative abundance and occupancy.



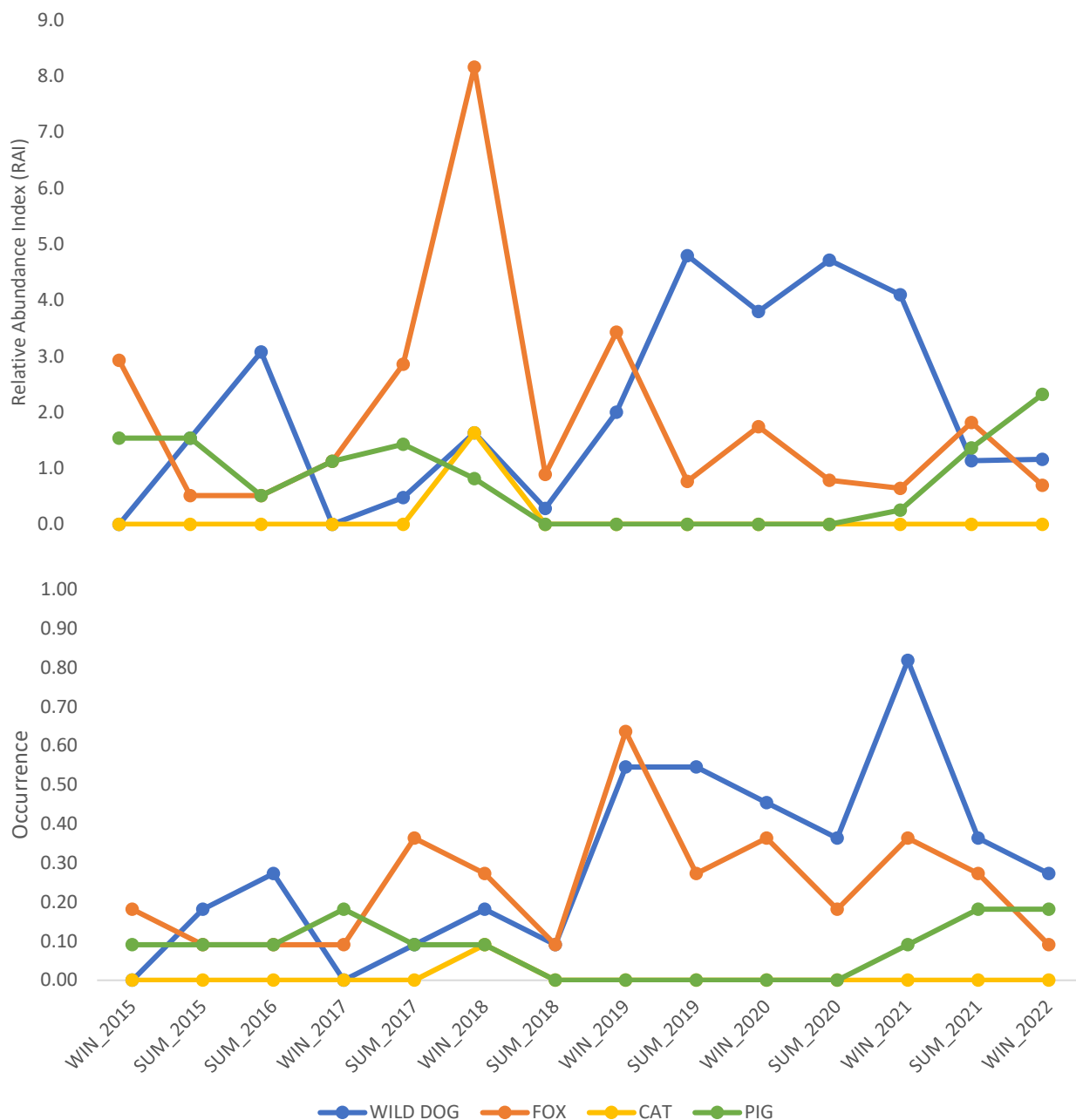


Figure 2. Relative abundance (top) and occupancy (bottom) of wild dogs/dingo (blue), foxes (orange), cats (yellow) and pigs (green). All data collected to date is included to demonstrate declines due to management actions taken and the natural fluctuations observed either side of management.

### Analysis of predator scat

Predator scats continue to be found across the Koala Crossing site and within the EPBC 2015/7513 offset area (Map 4). Although both foxes and wild dogs remain on the site, predatory scats collected within this sampling period suggest that neither predator is consuming koala, and the diets of most individuals is composed of macropods and vegetation (Table 4).

**Table 4. The types of prey item identified from fox and dog scat collected within the site from June 2021 to July 2022, sorted by the frequency of individual predators whose scat contained each prey type (e.g. northern brown bandicoot were found in 42% of the 16 scats collected).**

Species name	Common name	Frequency
<i>Isodon macrourus</i>	Northern Brown Bandicoot	0.42
<i>Macropus giganteus</i>	Eastern Grey Kangaroo	0.35
<i>Wallabia bicolor</i>	Swamp wallaby	0.07
<i>Pseudomys gracilicaudatus</i>	Eastern chestnut mouse	0.07
<i>Sus scrofa</i>	Pig	0.14
<i>Bos taurus</i>	Cow	0.07
<i>Ave spp.</i>	Bird	0.14
	Vegetation	0.14

### Other observations

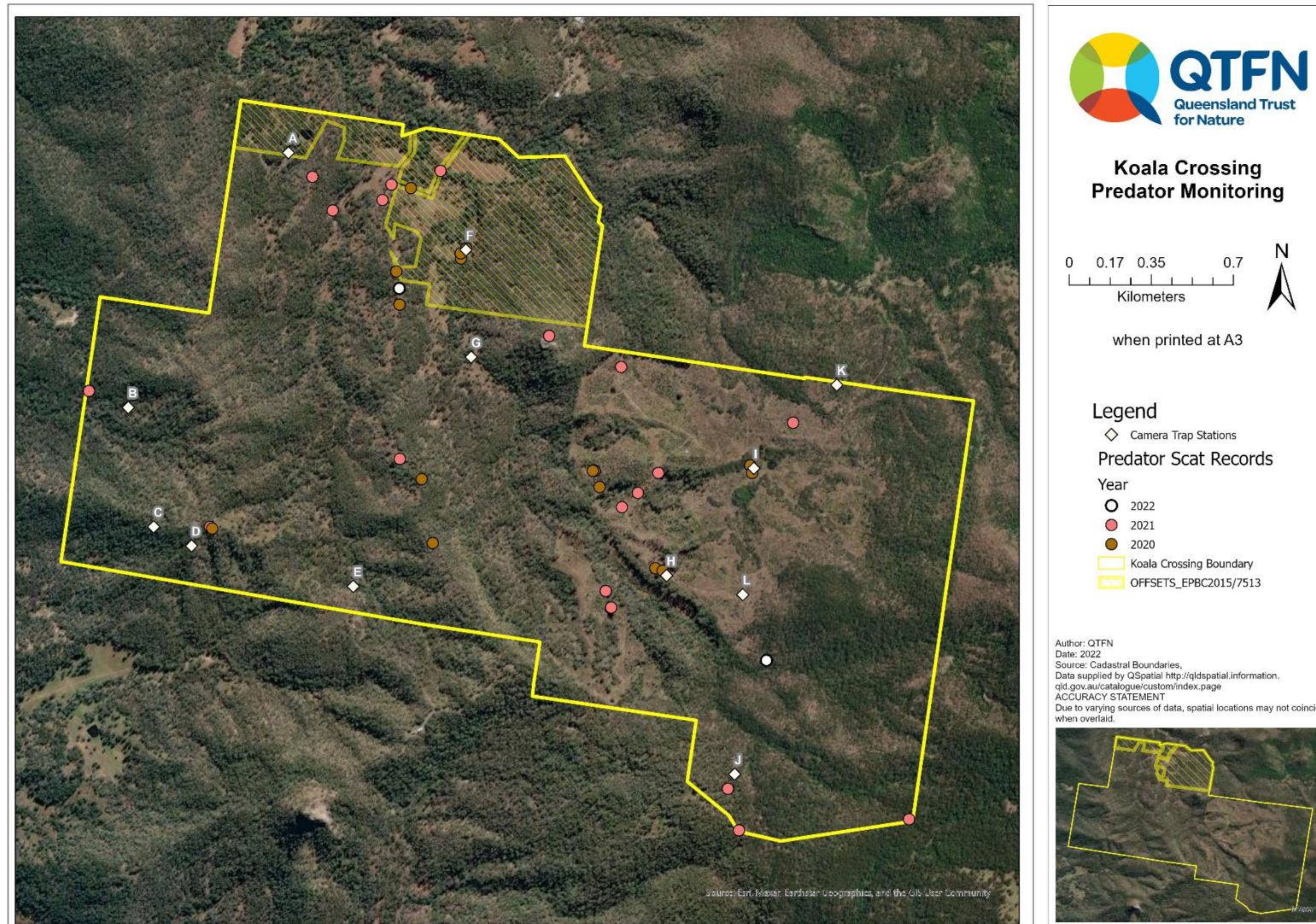
Evidence of feral pigs were observed in the offset area in the last monitoring season. A high abundance of red neck wallabies (*Macropus rufogriseus*) was observed during this survey season, as was breeding across all macropod species present.

### Management actions

A pest fauna contractor is being engaged with a primary focus on reducing the number of dogs and foxes. Biannual monitoring using camera traps will continue, and the feral animal contractor will target the creek line within the offset area that regularly captures predators.

The inherent nature of controlling introduced predators over an unfenced site means some years will see an increase in numbers, regardless of implemented pest animal management actions.

**Map 4. Predator sightings within the offset area and whole of property.**





### 3.5 THREAT TO KOALA FROM VEHICLE STRIKE

Relevant actions	Reporting requirement	Compliant
Any observed koala injury/mortality on roads/tracks within the offset area or roads that front Lots 86, 87, 88 or 89 RP892014 to be recorded.  For full OAMP see Appendix 8.	Incident to be recorded in annual Offset Area Assessment Report.	Y

There were no vehicle strike incidents in any part of the property.

### 3.6 THREAT TO KOALA VIA BARRIERS TO DISPERSAL

Relevant actions	Reporting requirement	Compliant
Vegetation clearing will not be undertaken within the offset area under any circumstances.  For full OAMP see Appendix 9.	The location, extent and associated purpose for any vegetation clearing or damage through natural disaster within the offset area will be detailed within the annual Offset Area Assessment Report.	Y

There was no vegetation clearing (excluding weeds) undertaken in any part of the offset area.

There was no damage associated with a natural disaster within any part of the offset area.

### 3.7 THREAT TO KOALA HABITAT THROUGH HYDROLOGICAL CHANGE

Relevant actions	Reporting requirement	Compliant
If any actions are proposed that may significantly impact the current (at time of offset area being legally secured) hydrological regime and therefore potentially impact koala habitat within the offset area, then actions are required.  For full OAMP see Appendix 10.	Where DoE approved hydrological change has occurred within the offset area, monitoring of the impact to the site's vegetation communities will be a component of an annual site assessment.	Y

There have been no hydrological changes made on any part of the property.

### 3.8 THREAT TO KOALA THROUGH FIRE

Relevant actions	Reporting requirement	Compliant
Except for prescribed burning, which will only be undertaken for the purposes of biodiversity enhancement, the offset area is to be managed to avoid the occurrence of fire by maintaining fire control lines.	To be informed by an Offset Area Bushfire Management Plan.	
Prescribed burning will be undertaken in consultation with, and under the guidance of the Queensland Rural Fire Brigade.	Monitoring results and maintenance log will be detailed within the annual Offset Area Assessment Report.	Y
For full OAMP see Appendix 11.		

The threat to koalas from fire, was addressed in accordance with Table 2.9 (OAMP Stage 1) and Table 3.7 (OAMP Stage 1B) by referring to the 'Koala Crossing Fire Management Plan'.

The Koala Crossing Fire Management Plan divides the property into Fire Management Zones: Land Management Zones, Exclusion Zones and Asset Protection Zones. Within the Land Management Zones, the landscape is broken up into subzones (Fire Management Areas (FMAs) according to practicable containment lines. The Fire Management plan details burning intervals recommended for these FMAs (KCFMP 2015 p.16). The EPBC2015/7513 offset area is located in FMA 1 to 5, and the fire exclusion zone.

#### i. Results and Management Outcomes

No burns were conducted during this reporting period. Fire break trails were monitored and maintained at regular intervals.

### 3.9 THREAT TO KOALA AND KOALA HABITAT FROM DISEASE AND PATHOGENS

Relevant actions	Reporting requirement	Compliant
<p>To reduce the risk of introducing Chlamydia and Koala retrovirus into the resident population; uncontrolled translocation of koala is not permitted within the offset area.</p> <p>Vegetation management activities which include tree lopping/felling, weed removal, tree planting (including nursery suppliers) are deemed to be high risk in the context of introducing pathogens that may potentially impact koala habitat. As such, any person engaged to undertake these activities must satisfy the landholder that they have undertaken all reasonable steps to prevent the introduction of a pathogen/disease to the site (e.g. vehicle and equipment washdown prior to site entry).</p> <p>For full OAMP see Appendix 12.</p>	<p>Incidence of koalas exhibiting disease to be recorded if encountered during any monitoring events within the offset area.</p> <p>Confirmation of translocation activity within the offset area is to be included within annual Offset Area Assessment Reports.</p>	Y

#### i. Monitoring in this period

The initial baseline survey for koala health (July 2015) indicated no incidence of koala diseases within the population at Koala Crossing, however subsequent surveys indicated two instances of koalas infected with chlamydia. Chlamydia is a bacterial infection, which affects most koalas within SEQ. The disease weakens the immune system and causes various problems, including blindness and female infertility. Stress within a population can cause outbreaks of chlamydia. Stressors include habitat clearing, fragmentation and lack of food resources.

Monitoring continues with incidental sightings and monitoring events carried out by QTFN Ecologists and UQs KEG researchers. An ongoing program is in place to continue monitoring Koala Crossing's koala population to ensure they are healthy and thriving.

#### ii. Results and Management Outcomes

No new observations of disease have been made in this reporting interval. No new translocations have occurred.



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# APPENDIX

## Appendix 1. Koala abundance management aims and indicators.

Table 2.1 Occurrence of Koalas within offset area from the Offset Area Management Plan EPBC 2015/7513, QTFN 2017, version 3, pp. 12-13.

Outcome	2.1.1.1 Increase koala density within offset area
Actions	2.1.2.1 Baseline koala density survey completed in June 2015 using Koala Rapid Assessment Method (Woosnam-Merches et al. 2012) and SAT and line transect surveys (Phillips and Callaghan. 2011; Dique et al. 2003) 2.1.2.2 Replicated koala density/occurrence surveys undertaken within the offset area at years 5 and 10 from the date at which the offset is legally secured 2.1.2.3 Koala density surveys to be undertaken by a suitably qualified environmental scientist
Performance Indicators	2.1.3.1 Baseline koala density/occurrence survey undertaken and documented 2.1.3.2 Koala density/occurrence surveys (years 5 and 10) records an increase in koala density/activity within offset area 2.1.3.3 Offset area is legally secured for conservation purposes
Monitoring	2.1.4.1 Baseline assessment of koala density to be undertaken in June 2015 2.1.4.2 Outside of the formal koala density survey event, opportunistic koala sightings to be recorded (location and date) within the Annual Offset Area Assessment Report
Reporting	2.1.5.1 Results of pre-survey methodology review is to be documented within the Annual Offset Area Report 2.1.5.2 Details of expert that undertook the review and the survey study term are also be included 2.1.5.3 The koala density survey results will be incorporated within the relevant Annual Offset Area Assessment Report (years 0, 5 and 10) 2.1.5.4 Opportunistic koala sightings to be incorporated into the Annual Offset Area Assessment Report 2.1.5.5 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of the initial baseline survey 2.1.5.6 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE via email
Corrective Action	2.1.5.7 Should the koala density be found to significantly reduce (as defined by the applied survey method or koala expert) between survey events; a supplementary assessment will be implemented to review the likely cause of the reduced occurrence of koala within the offset area. The outcomes of the review inform adaptation of the management approach

## Appendix 2 Vegetation composition management aims and indicators.

Table 2.2 Vegetation composition from the Offset Area Management Plan EPBC 2015/7513, QTFN 2017, version 3, pp. 13-15.

Outcomes	<p>2.2.1.1 Vegetation composition maintains a ‘high’ score value in relation to habitat that is critical to the survival of the koala</p> <p>2.2.1.2 No significant increase in weed cover for species that could adversely affect the structural composition of vegetation within the offset area in relation to koala habitat value (i.e., weed species that are shrubs, trees, or vines)</p> <p>2.2.1.3 Retain and enhance the structure and floristic diversity of canopy vegetation</p> <p>2.2.1.4 Retain and enhance the structure and floristic diversity of middle and understorey vegetation</p> <p>2.2.1.5 Ongoing retention and recruitment of Koala food trees</p> <p>2.2.1.6 Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses</p> <p>2.2.1.7 Domestic livestock excluded from offset area (unless controlled grazing required for fire risk management)</p>
Actions	<p>2.2.2.1 Monitoring of canopy composition with respect to koala food tree species; adaptive management if required. Monitoring to include representative surveys of all applicable (koala habitat) vegetation communities within the offset area. For example, tertiary-level vegetation surveys in accordance with Neldner et al (2012)</p> <p>2.2.2.2 Monitoring of weed infestations; adaptive management of shrub, tree and vine weed species if required</p> <p>2.2.2.3 Flora surveys to be undertaken by a suitably qualified environmental scientist</p> <p>2.2.2.4 To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire 161.11 ha offset area will be managed for conservation purposes</p> <p>2.2.2.5 Given that the subject property boundary is currently fenced in koala-permeable fencing, livestock will be excluded from the offset area through at least one of the following mechanisms: Livestock will not be kept within balance areas of Lots 87 or 88 RP892014 or, Koala-friendly fencing will be erected along the northern boundary of the offset area to exclude livestock grazing outside of the offset area yet within the subject property in accordance with relevant guidelines</p> <p>2.2.2.6 Domestic livestock will only be introduced if a fire risk professional and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk. In the event, a maximum head of 12 domestic livestock may be introduced for no more than three consecutive weeks. Level of risk is to be re-assessed by the aforementioned professionals following the grazing event</p> <p>2.2.2.7 Vegetation clearing will not be undertaken within the offset area under any circumstances, except the following: Removal of weeds To establish and maintain fencing around the boundary of the offset area To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation and only to the extent necessary to mitigate the risk. This action to be undertaken in accordance with the relevant legislative requirements in place at the time of clearing</p>
Performance Indicators	<p>2.2.3.1 Vegetation composition retains structural attributes of forest or woodland, and maintains koala food tree species diversity recorded by baseline survey</p> <p>2.2.3.2 Weed cover (shrub, tree and vine) does not exceed baseline levels by more than 10%</p>



	2.2.3.3 Offset area is legally secured as an area of High Conservation Value under section 19F of the <i>Vegetation Management Act 1999</i>
Monitoring	<p>2.2.4.1 Baseline assessment of koala food tree species richness to be undertaken within 6 months of the offset area being legally secured</p> <p>2.2.4.2 Baseline assessment of offset area weed infestation levels (shrub, tree and vine species) to be undertaken within 6 months of the offset area being legally secured</p> <p>2.2.4.3 Weed assessment and monitoring to be undertaken annually, during spring or summer to optimise detection</p>
Reporting	<p>2.2.5.1 Monitoring results to be recorded in annual Offset Area Assessment Report</p> <p>2.2.5.2 The location, extent and associated purpose for any vegetation clearing undertaken within the offset area will be detailed within the annual Offset Area Assessment Report</p> <p>2.2.5.3 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of the initial baseline survey</p> <p>2.2.5.4 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE via email</p>
Corrective Action	<p>2.2.6.1 Supplementary planting/assisted natural regeneration of koala food trees to be undertaken where koala food tree species diversity is recorded to have declined from baseline levels</p> <p>2.6.2 Weed control to be undertaken in accordance with accepted best practice principles</p> <p>2.2.6.3 If livestock-proof fencing is breached: Within 7 days livestock will be removed from offset area and temporary fencing measures put in place to ensure livestock are excluded and permanent repairs can be completed Within 28 days: repairs to fencing undertaken to achieve a koala-friendly livestock-proof standard</p>
Term	<p>2.2.7.1 Baseline monitoring for koala food tree species richness undertaken July 2015</p> <p>2.2.7.2 Subsequent koala food tree species richness monitoring to be undertaken every 5 years for the life of the offset</p> <p>2.2.7.3 Baseline monitoring for weed cover (shrub, tree and vine species) undertaken March 2015.</p> <p>2.2.7.4 Subsequent weed assessments and monitoring to be undertaken annually during the active management period</p>

## Appendix 3 Weed transect photos.

Photos of weed transects

2021

2022

**Transect 01**



**Transect 23**





2021

2022

**Transect 27**





## Appendix 4 Habitat connectivity management aims and indicators.

Table 2.3 Habitat connectivity from the Offset Area Management Plan EPBC 2015/7513, QTFN 2017, version 3, pp. 16-17.

Outcomes	<p>2.3.1.1 Maintain contiguous landscapes to allow koalas to establish new territories, facilitate gene flow and respond to environmental changes</p> <p>2.3.1.2 Permanently remove existing threat of habitat degradation associated with clearing, development, or other incompatible land uses</p> <p>2.3.1.3 Contribute to koala movement and dispersal through the Flinders Karawatha corridor through the establishment of a protected habitat corridor (minimum 700m width)</p>
Actions	<p>2.3.2.1 To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire 161.11 ha offset area will be managed for conservation purposes</p> <p>2.3.2.2 Vegetation clearing will not be undertaken within the offset area under any circumstance, except the following:</p> <ul style="list-style-type: none"> <li>• Where necessary for the removal of weeds</li> <li>• To establish and maintain fencing around the boundary of the offset area in accordance with relevant legislation</li> <li>• To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan, that has been prepared by a suitably qualified professional and relevant legislation</li> <li>• To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation and only to the extent necessary to mitigate the risk. This action to be undertaken in accordance with the relevant legislative requirements in place at the time of clearing</li> </ul> <p>2.3.2.3 The subject property boundary is currently fenced in koala-permeable fencing. Any new or replacement fencing is to be 'fauna-friendly' in accordance with a relevant guidelines</p>
Performance indicators	2.3.3.1 Offset area is legally secure as an area of High Conservation Value under section 19F of the <i>Vegetation Management Act 1999</i>
Monitoring	2.3.4.1 Firebreaks and fire control lines to be inspected at a minimum quarterly frequency or after major storm events
Reporting	<p>2.3.5.1 The location, extent and associated purpose for any vegetation clearing undertaken within the offset area will be detailed within the annual Offset Area Assessment Report</p> <p>2.3.5.2 Any change to site connectivity is to be detailed within the annual Offset Area Assessment Report</p> <p>2.3.5.3 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of the initial baseline survey</p> <p>2.3.5.4 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE via email</p>
Corrective Action	2.3.5.5 Any fencing within or adjoining the offset area is koala permeable, and any fencing installed or replaced within the offset area is to be fauna friendly in design as per a relevant guideline such as Wildlife Friendly Fencing Project (2014) or Land for Wildlife (nd).

## Appendix 5. Wild dog predator management aims and indicators.

Table 2.4 Threat to koala from wild dogs from the Offset Area Management Plan EPBC 2015/7513, QTFN 2017, version 3, pp. 17-19.

Outcome	2.4.1.1 Reduction of risk of koala mortality or injury by dog attack within the offset area through reduction in wild dog abundance
Actions	<p>2.4.2.1 Initial survey to establish a baseline of wild dog abundance within the offset area was conducted in June 2015 with subsequent monitoring occurring every six months. The survey method used for the initial abundance survey will be informed using best practice methodology and applicable guidelines available at the time of survey (e.g. DoE, 2007 and Mitchell and Balogh, 2007).</p> <p>2.4.2.2 Baseline predator abundance survey is to be undertaken by a suitably qualified person</p> <p>2.4.2.3 Offset area wide wild dog control program to be undertaken following the monitoring period in June 2015. Where practicable and to increase the effectiveness of a control program the landholder will seek to coordinate control programs with comparable activities being undertaken by neighbouring landholders.</p> <p>2.4.2.4 Post the initial control event, presence/absence surveys for wild dogs to be undertaken each two months</p> <p>2.4.2.5 Post initial control event, abundance surveys for wild dogs to be undertaken bi-annually by suitably qualified person</p> <p>2.4.2.6 Where post control surveys indicate there has been a recurrence of wild dogs within the offset area, control measures will be actioned using methods (controlled shooting or baiting) determined by a pest control professional in consideration of monitoring results</p> <p>2.4.2.7 Any injured koala found on the site will be sent to a veterinary clinic/wildlife rescue facility for rehabilitation</p> <p>2.4.2.8 Installation of appropriate hazard warning signage indicating the offset area is subject to dog control for the purpose of managing the offset site for the benefit of koalas</p>
Performance Indicators	<p>2.4.3.1 Data collected from the initial control action to indicate the successful reduction of wild dog density (based on control method data e.g. bait takes, kills from shooting)</p> <p>2.4.3.2 No records of feral dog abundance within the site</p> <p>2.4.3.3 No records of injury and or death to koala relating to dog attacks recorded from within the offset area</p>
Monitoring	<p>2.4.4.1 Offset area-wide traverse every two months to record the presence/absence of signs of wild dogs (including scats). The monitoring will take place along a set route utilising the existing network of tracks within the offsets area (e.g. fire control lines) to allow for replication of the monitoring events</p> <p>2.4.4.2 Bi-annual abundance surveys to be undertaken by a suitably qualified professional</p> <p>2.4.4.3 Opportunistic monitoring of koala/dog interactions in the form of injured, koala mortality records</p>
Reporting	<p>2.4.5.1 Wild dog abundance baseline survey results will be incorporated within the initial annual Offset Area Assessment Report</p> <p>2.4.5.2 Results of all presence/absence surveys will be reported upon on an annual bases as a component on the Annual Offset Areas Assessment Report</p> <p>2.4.5.3 All records of koala injury or death resulting from a dog attack are to be reported within the annual Offset Areas Assessment Report</p> <p>2.4.5.4 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of initial baseline survey</p> <p>2.4.5.5 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE via email</p>
Corrective action	2.4.6.1 Should the efficacy of the initial and ongoing wild dog control measure no result in a reduction of wild dog numbers (based on initial baseline survey), alternative and/or additional control measures will be implemented and the efficacy evidenced through the ongoing monthly/quarterly monitoring survey results

	<p>2.4.6.2 Any incidence of koala injury/mortality resulting from a dog attack will initiate supplementary monitoring and control measures in addition to the scheduled monthly and quarterly monitoring</p> <p>2.4.6.3 Any required adaptation to wild dog management measures in response to failure to meet the objectives of the OAMP are to be approved by a suitably qualified person</p>
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## Appendix 6 Feral cat and fox predator management aims and indicators.

Table 2.5 Threat to koala from feral cats and foxes from the Offset Area Management Plan EPBC 2015/7513, QTFN 2017, version 3, pp. 19-20.

Outcome	2.5.1.1 Reduction of risk of koala mortality or injury by feral cat or fox attack within the offset area through reduction in feral cat or fox abundance
Actions	<p>2.5.2.1 Initial survey to establish a baseline of feral cats and fox abundance within the offset area was conducted for the entire property in June 2015, with subsequent monitoring occurring every six months. The survey method used for the initial abundance survey is informed using best practice methodology and applicable guidelines available at the time of survey (e.g. DoE, 2007 and Mitchell and Balogh, 2007).</p> <p>2.5.2.2 Offset area wide feral cat or fox control program to be undertaken with the aim of removing all feral cat or foxes from the offset area. The specific control method will be informed by the results of the initial feral cat or fox abundance survey. Where practicable and to increase the effectiveness of a control program the landholder will seek to coordinate control programs with comparable activities being undertaken by neighbouring landholders.</p> <p>2.5.2.3 Post the initial control event, presence/absence surveys for feral cat or foxes to be undertaken each two months</p> <p>2.5.2.4 Post initial control event, abundance surveys for feral cat or foxes to be undertaken bi-annually by suitably qualified person</p> <p>2.5.2.5 Where post control surveys indicate there has been a recurrence of feral cat or foxes within the offset area, control measures will be actioned using methods (controlled shooting or baiting) determined by a pest control professional in consideration of monitoring results</p> <p>2.5.2.6 Any injured koala found on the site will be sent to a veterinary clinic/wildlife rescue facility for rehabilitation</p> <p>2.5.2.7 Installation of appropriate hazard warning signage indicating the offset area is subject to feral cat or fox control for the purpose of managing the offset site for the benefit of koalas</p>
Performance Indicators	<p>2.5.3.1 Data collected from the initial control action to indicate the successful reduction of feral cat or fox density (based on control method data e.g. bait takes, kills from shooting)</p> <p>2.5.3.2 No records of feral cat or fox abundance within the site</p> <p>2.5.3.3 No records of injury and or death to koala relating to feral cat or fox attacks recorded from within the offset area</p>
Monitoring	<p>2.5.4.1 Offset area-wide traverse every two months to record the presence/absence of signs of feral cat or foxes (including scats). The monitoring will take place along a set route utilising the existing network of tracks within the offsets area (e.g. fire control lines) to allow for replication of the monitoring events</p> <p>2.5.4.2 Bi-annual abundance surveys to be undertaken by a suitably qualified professional</p> <p>2.5.4.3 Opportunistic monitoring of koala/feral cat or fox interactions in the form of injured, koala mortality records</p>
Reporting	<p>2.5.5.1 Method and results pertaining to initial offset area-wide baseline abundance survey to be documented within initial annual Offset Area Assessment Report.</p> <p>2.5.5.2 Results of all presence/absence surveys will be reported upon on an annual bases as a component on the Annual Offset Areas Assessment Report</p> <p>2.5.5.3 All records of koala injury or death resulting from a feral cat or fox attack are to be reported within the annual Offset Areas Assessment Report</p> <p>2.5.5.4 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of initial baseline survey</p> <p>2.5.5.5 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE via email</p>
Corrective action	2.5.6.1 Should the efficacy of the initial and ongoing feral cat or fox control measure no result in a reduction of feral cat or fox numbers (based on initial baseline survey),

	<p>alternative and/or additional control measures will be implemented and the efficacy evidenced through the ongoing monthly/quarterly monitoring survey results</p> <p>2.5.6.2 Any incidence of koala injury/mortality resulting from a feral cat or fox attack will initiate supplementary monitoring and control measures in addition to the scheduled monthly and quarterly monitoring</p> <p>2.5.6.3 Any required adaptation to feral cat or fox management measures in response to failure to meet the objectives of the OAMP are to be approved by a suitably qualified person</p>
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## Appendix 7 Feral predator photos from camera traps.

Images from wildlife monitoring cameras

### Dogs – *Canis lupus*



Summer



Winter

### Fox – *Vulpes vulpes*



Summer



Winter

### Pig – *sus scrofa*



Summer



Winter

## Appendix 8 Vehicle strike management aims and indicators.

Table 2.6 Threat to koala from vehicle strike from the Offset Area Management Plan EPBC 2015/7513, QTFN 2017, version 3, pp. 20-21.

Outcome	2.6.1.1 Contribute to the reduction of risk of injury or death to koala in relation to vehicle strike both within the offset area and on adjacent roads
Actions	<p>2.6.2.1 Signs were installed on the property boundary adjacent to unnamed public road that bisects offset area to alert traffic of the koala offset area and the presence of koalas in the local area.</p> <p>2.6.2.2 Signs were installed on the property boundary adjacent to the unnamed public road along the frontage to Lot 89 RP892014 to alert east bound traffic of the presence of koalas in the local area.</p> <p>2.6.2.3 Signs were installed on the property boundary adjacent to Mount Flinders Road along the frontage to Lot 86 RP892014 to alert west-bound traffic of the presence of koalas in the local area.</p> <p>2.6.2.4 Implementation of a slow speed requirement (40km/h) for vehicles traversing the offset area</p> <p>2.6.2.5 Implementation of a slow speed requirement (40km/h) for vehicles traversing the offset area.</p> <p>2.6.2.6 Signs were installed indicating a slow speed area at the main entry points to the offset area.</p>
Performance Indicators	2.6.3.1 No koala mortalities from vehicle strike within the offset area
Monitoring	2.6.4.1 Any observed koala injury/mortality on roads/tracks within the offset area or roads that front Lots 86, 87, 88 or 89 RP892014 to be recorded
Reporting	<p>2.6.5.1 Incident to be reported to:</p> <p>Local Government authority (e.g. currently Beaudesert Regional Council)</p> <p>Relevant State Government department (e.g. currently the DoEHP)</p> <p>2.6.5.2 Incident to be recorded in annual Offset Area Assessment Report</p> <p>2.6.5.3 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of the initial baseline survey</p> <p>2.6.5.4 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE via email</p>
Corrective Action	<p>2.6.6.1 Injured animals to be transported to a vet or suitably qualified and experienced wildlife carer as soon as possible</p> <p>2.6.6.2 Capture and method of transport for injured animals will be in accordance with accepted best practice principles at time of incident:</p> <p>Relevant local or state government websites</p> <p>Non-profit koala organisations</p>



## Appendix 9 Dispersal barrier management aims and indicators.

Table 2.7 Threat to koala via barriers to dispersal from the Offset Area Management Plan EPBC 2015/7513, QTFN 2017, version 3, pp. 22-23.

Outcomes	<p>2.7.1.1 Maintain and improve contiguous landscapes to allow koalas to establish new territories, facilitate gene flow and respond to environmental changes</p> <p>2.7.1.2 Retain and enhance the structure and floristic diversity of canopy vegetation</p> <p>2.7.1.3 Retain and enhance the structure and floristic diversity of middle and understorey vegetation</p> <p>2.7.1.4 Ongoing retention and recruitment of koala food trees</p> <p>2.7.1.5 Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses</p> <p>2.7.1.6 Contribute to koala movement and dispersal through the Flinders Karawatha through the establishment of a protected habitat corridor (minimum 700m width)</p>
Actions	<p>2.7.2.1 To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire 161.11ha offset area will be legally secured as an area of High Conservation Value under section 19F of the vegetation management act 1999</p> <p>2.7.2.2 Given that the subject property boundary is currently fenced in koala permeable fencing, livestock will be excluded from the offset area through at least one of the following mechanisms: Livestock will not be kept within the balance areas of Lots 87 or 88 RP892014 Koala friendly fencing will be erected along the northern boundary of the offset area to exclude livestock grazing outside of the offset area yet within the subject property in accordance with a relevant guideline</p> <p>2.7.2.3 Domestic livestock will only be introduced in the event that a fire risk professional (e.g. representative of Qld Rural Fire Service) and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk (and any need to repeat this grazing cycle) is to be re-assessed by the aforementioned professionals following the grazing event.</p> <p>2.7.2.4 Any fencing installed or replaced within the offset area is to be fauna-friendly in design as per a relevant guideline</p> <p>2.7.2.5 Vegetation clearing will not be undertaken within the offset area under any circumstances except the following: Where necessary for the removal of weeds To establish and maintain fencing around the boundary of the offset area To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation and only to the extent necessary to mitigate the risk</p>
Performance indicators	2.7.3.1 Offset area is legally secured as an area of High Conservation Value under section 19F of the <i>Vegetation Management Act 1999</i>
Monitoring	<p>2.7.4.1 Offset area fencing to be monitored on a monthly basis.</p> <p>2.7.4.2 Firebreaks and fire control lines to be inspected at a minimum quarterly frequency and after major storm events</p>
Reporting	<p>2.7.5.1 The location, extent and associated purpose for any vegetation clearing or damage through natural disaster within the offset area will be detailed within the annual Offset Area Assessment Report</p> <p>2.7.5.2 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of the initial baseline survey</p> <p>2.7.5.3 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE via email</p>
Corrective Action	2.7.5.4 If livestock are kept on the balance of the property and livestock proof fencing is breached:

	<p>Within 7 days: livestock will be removed from offset area and temporary fencing measures put in place to ensure livestock are excluded until permanent fence repairs can be completed</p> <p>Within 28 days: Repairs to fencing undertaken to achieve koala-friendly livestock-proof standard</p>
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## Appendix 10 Hydrological change management aims and indicators.

Table 2.8 Threat to koala habitat through hydrological change from the Offset Area Management Plan EPBC 2015/7513, QTFN 2017, version 3, pp. 23-24.

Outcome	2.8.1.1 To ensure the koala habitat within the offset area is maintained and the potential carrying capacity of the area is not reduced due to anthropogenic hydrological change
Actions	2.8.2.1 If any actions are proposed that may significantly impact the current (at time of offset area being legally secured) hydrological regime and therefore potentially impact koala habitat within the offset area then the following actions will be required: Presentation of proposed hydrological change to DoE, detailing the potential impact koala habitat within the offset area. This will include specialist reports detailing the nature of the hydrological change and the expected impact to the offset areas vegetation communities Only DoE approved hydrological change will be permitted within the offset area
Performance Indicators	2.8.3.1 The overall performance indicator resulting from the stated actions will be no significant impact to koala habitat as a result of hydrological change within the site
Monitoring	2.8.4.1 Where DoE approved hydrological change has occurred within the offset area, monitoring of the impact to the sites vegetation communities will be a component of annual site assessment
Reporting	2.8.5.1 The annual Offset Area Assessment Report will present details relating to requested hydrological change requests made to DoE 2.8.5.2 Assessment of vegetation in relation to potential impacts resulting from hydrological change will be presented within the Annual Offset Area Assessment Report
Corrective Action	2.8.6.1 Only DoE-approved actions which could potentially significantly impact the hydrological status quo within the offset area are permissible. Should it be determined that there is an impact to koala habitat from hydrological change (as evidenced through annual vegetation assessments) then corrective actions, as determined by a suitably qualified professional within affected areas will occur

## Appendix 11. Fire management aims and indicators.

Table 2.9 Threat to koala through fire from the Offset Area Management Plan EPBC 2015/7513, QTFN 2017, version 3, pp. 24-26.

Outcomes	<p>2.9.1.1 Minimise the risk of high intensity fire within the offset area</p> <p>2.9.1.2 Minimise the risk of koala mortality within the offset area due to prescribed burning</p>
Actions	<p>2.9.2.1 A suitably qualified professional will prepare an Offset Area Bushfire Management Plan, detailing: current vegetation condition and fire risk, locations of current and required firebreaks and fire control lines, current fuel loads, recommended actions and timeframes for maintenance of bushfire risk within the context of the adapted Regional Ecosystem Description Database guidelines (refer below) and biodiversity outcomes sought for the offset area.</p> <p>2.9.2.2 With the exception of prescribed burning, which will only be undertaken for the purposes of biodiversity enhancement, the offset area is to be managed to avoid the occurrence of fire by:</p> <p>Maintaining fire control lines relative to the offset area; and</p> <p>Co-locating fire control lines with existing tracks and fence lines on the property where possible</p> <p>2.9.2.3 Existing fencing, firebreaks and fire control lines are to be kept clear of encroaching vegetation to a width as defined by the Offset Area Bushfire Management Plan and in accordance with relevant legislation (e.g. <i>Sustainable Planning Act 2009</i>)</p> <p>2.9.2.4 Vegetation within the offset area will be managed in accordance with the following specifications, which are adapted from the Regional Ecosystem Description Database fire management guidelines for the two vegetation types that occur within the offset area (RE 12.9-10.2 RE 12.9-10.7 and 12.8.24)</p> <p>SEASON: Summer to winter</p> <p>INTENSITY: Low to moderate</p> <p>INTERVAL: 4-25 years</p> <p>STRATEGY: 40-60% mosaic burn. Burn with soil moisture and with a spot ignition strategy so that a patchwork of burn/unburn country is achieved</p> <p>ISSUES: The fire regime will maintain a mosaic of grassy and shrubby understoreys. Ground litter and fallen timber habitats will be maintained by burning only with sufficient soil moisture. Burning will produce fine scale mosaics of unburnt areas. Variability in season and fire intensity will occur, as well as spot ignition in cooler or moister periods to encourage mosaics.</p> <p>2.9.2.5 The following parameters will be adhered to throughout the planning and implementation of any prescribed burning:</p> <p>Undertake pre-burn survey to identify areas of high koala activity;</p> <p>No prescribed burning will be undertaken when female koalas are likely to be carrying dependent young</p> <p>Prescribed burning will only be carried out during appropriate weather conditions (e.g. low temperature, low wind, high soil moisture)</p> <p>Post-fire practices will be implemented to mitigate the risk of uncontrolled fire damage (e.g. extinguishing burning of large trees)</p> <p>Minimise the extent of burning so that the risk of injury or mortality to koalas is reduced, the risk of canopy scorch is lowered, whilst other biodiversity benefits to other species are achieved</p> <p>2.9.2.6 Prescribed burning will be undertaken in consultation with, and under the guidance of the Queensland Rural Fire Brigade</p> <p>2.9.2.7 Domestic livestock will only be introduced in the event that a fire risk professional and environmental scientist deems that conditions are not suitable for an ecological burn. In this event, a maximum of 12 head of domestic livestock may be introduced for no more than 3 consecutive weeks.</p>



Performance Indicators	2.9.3.1 Fuel levels and burning regime maintained in accordance with Offset Area Bushfire Management Plan
Reporting	<p>2.9.4.1 Offset Area Bushfire Management Plan will be prepared within 6 months of the offset area being legally secured</p> <p>2.9.4.2 Monitoring results and maintenance log will be detailed within the annual Offset Area Assessment Report</p> <p>2.9.4.3 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of the initial baseline survey</p> <p>2.9.4.4 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE via email</p>
Corrective action	<p>2.9.5.1 If a wildfire occurs, the following actions will be taken by the landowner to remedy the situation:</p> <p>Inspect the fencing, undertake any repairs required to ensure livestock-proof standard</p> <p>Inspect fire control lines, undertake maintenance required to achieve compliance with the Offset Area Bushfire Management Plan</p> <p>Remove all livestock from the offset area within 7 days of commencing remedial action</p> <p>Engage suitably qualified professional to assess offset area and update Offset Area Bushfire Management Plan</p>

## Appendix 12 Disease and pathogen management aims and indicators.

Table 2.10 Treat to koala and habitat from disease and pathogens from the Offset Area Management Plan EPBC 2015/7513, QTFN 2017, version 3, pp. 26-27.

Outcome	2.10.1.1 Reduce risk of the spread of koala and vegetation diseases within the offset area and adjacent areas of koala habitat 2.10.1.2 Third party contractors do not enter the site carrying pathogens
Actions	2.10.2.1 Baseline offset area condition survey is to include assessment for signs of <i>Phytophthora cinnamomi</i> and myrtle rust and is to be undertaken within six months of securing the offset area 2.10.2.2 To reduce the risk of introducing chlamydia and koala retrovirus into the resident population; uncontrolled translocation of koala is not permitted within the offset area 2.10.2.3 Vegetation management activities which include tree lopping/felling, weed removal, tree planting (including nursery suppliers) are deemed to be high risk in the context of introducing pathogens that may potentially impact koala habitat. As such, any person engaged to undertake these activities must satisfy the landholder that they have undertaken all reasonable steps to prevent the introduction of pathogen/disease to the site (e.g. vehicle equipment washdown prior to site entry)
Performance Indicators	2.10.3.1 In the event that regulator approved translocation of koala is proposed on the site, the animal is to be assessed by a veterinarian prior to introduction 2.10.3.2 Incidence of koala feed trees exhibiting disease to be recorded if encountered during any monitoring events within the offset area
Monitoring	2.10.4.1 Incidence of koalas exhibiting disease to be recorded if encountered during any monitoring events within the offset area
Reporting	2.10.4.1 Baseline data concerning observations around koala and koala habitat diseases and pathogens is to be documented within initial annual Offset Area Assessment Report 2.10.4.2 Confirmation of translocation activity within the offset area is to be included within annual Offset Area Assessment Reports 2.10.4.3 Incidence of koalas exhibiting symptoms of disease to be reported within annual Offset Area Assessment Report 2.10.4.4 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of the initial baseline survey 2.10.4.5 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE via email
Corrective action	2.10.5.1 Should there be an increase in trees exhibiting disease symptoms and/or evidence of vegetation dieback (as noted during annual offset area assessments) the following corrective actions will take place: Review of the efficacy of current biosecurity measures Review of plant stock/management services suppliers should it be suspected plant pathogens have been introduced via external sources.

## Appendix 13 Koala management and rescue protocol.

### KOALA MANAGEMENT AND RESCUE PROTOCOL QTFN-KC-010115

If injured or orphaned koalas are found, note its condition and location, and contact the following emergency phone number:

- Ipswich Koala Protection Society (IKPS) operate two 24/7 ambulances
- RUTH LEWIS - 0419 760 127/ 5464 6274.

IKPS is licenced with Department of Environment and Science (DES) to care for injured and orphaned wildlife, specialising in koala rescue and rehabilitation. They have appropriate facilities and members who are appropriately skilled and have access to reliable sources of a variety of recognised koala food tree species and an ability to collect it.

Other wildlife emergency numbers:

- RSPCA Qld on 1300 ANIMAL, 1300 264 625. RSPCA will usually refer calls to IKPS.
- Australia Zoo Wildlife Hospital 1300 369 652. Based on the Sunshine Coast.

### SYMPTOMS OF SICK OR INJURED KOALAS

- Puffy or inflamed eyes which may have a crust or a weepy discharge surrounding them;
- Dribbling saliva from the mouth;
- Fur that appears constantly wet or matted;
- A dirty tail with brown staining;
- Weakness or unusual behaviour;
- Remaining in the same tree for more than a few days;
- Sitting on the ground or very low down in a tree and not moving when approached. (This may indicate that the animal is too weak to climb);
- Not using all four limbs normally while walking or climbing;
- Very skinny and emaciated appearance;
- Signs of trauma such as cuts or blood on fur.

Signs of a dog attack could be wet, matted fur from the dog's saliva, and bleeding. Because koalas have very little fat under their skin, their internal organs can be easily punctured by the sharp teeth of a dog even though there may be very little damage to the skin surface, so it is very important that the animal is assessed by a vet or carer if a koala is found that is suspected to have been the victim of a dog attack.

### PROTOCOL FOR ROAD INJURIES OR DOG ATTACKS

Follow the instructions below for road injuries in handling sick or orphaned koalas or koalas which have been attacked by dogs or injured in some other way. However, unless the koala is in immediate danger, it is better to leave it to the experts to catch it if they think it necessary.

For road injuries:

- Pull off the road safely. If possible, phone the IKPS for instructions.
- Make sure it is safe before you go onto the road to attend to the animal. Stop any traffic if necessary.
- Approach the animal carefully from behind.

- Place a sack, blanket, towel or box over the koala, enclosing its arms and head. Remember, the koala is frightened and has very sharp claws, so be careful. Injured or orphaned animals need immediate dark, warmth and quiet. They may never have been touched by humans and any stress can cause further injury and death from shock. Also you may be injured.
- Move the animal to a safe place away from any traffic.
- Handle the koala as little as possible and keep the environment quiet. Keep it contained until help arrives or you get it to a vet or carer.
- Keep people and dogs away from the animal. Do not allow people to peek at or touch it.
- Do not try to feed the koala or give it anything to drink.

### PROTOCOL FOR DEAD KOALAS

The information on the death of a koala is valuable to record, and samples from these koalas can contribute to research. IKPS will collect dead koalas as well as sick/injured/orphaned. Accurate records can and have made significant impacts and changes to the future conservation and protection of koala habitat. IKPS collects and records data, statistics and produces mapping of koala habitat and populations.

Look for ear tags which may have been placed by wildlife authorities or researchers so they can be notified of the death. Collect all relevant information, where possible, such as location, cause of death, date, sex and age of koala (age can only be determined by looking at teeth – this is done post-mortem).

Samples can be made available for research, where possible. All koalas should be autopsied where cause of death is not positively known. An option that can possibly be utilised is the calling the Moggill Koala Hospital on 3202 0267. The Moggill Koala Hospital is the involved in ongoing koala research alongside University of Queensland researchers and scientists. Australian Zoo Wildlife Hospital on the Sunshine Coast (1300 369 652) also conducts necropsies.

Always check in the pouch of a dead female koala for the presence of a joey which may have survived. Call one of the wildlife emergency phone numbers and ask for instructions on what to do. If not able to contact someone, follow the procedure below:

- If the joey is still attached to the teat, do not remove it as you may cause injury to the tiny baby. Get the dead mother and joey to a vet, or carer as soon as possible.
- If the joey is not attached, gently remove it from the pouch and wrap it in a towel or article of clothing and place it somewhere warm, such as under your jumper. (Very young joeys rely on their mother's body heat for warmth.) Alternatively use a warm hot water bottle or a plastic bottle filled with warm water. Use warm, not hot, water and cover the bottle with a jumper or other fabric so that you do not overheat or burn the joey. A backpack lined with soft towels or fabric is a good way to transport the infant.
- Handle the infant as little as possible and do not let other people peek at it or handle it. Remember, these tiny infants can die very easily from stress and noise.
- Do not give the joey anything to drink. Young koalas need a specialised diet and feeding the wrong formula could cause the infant to die.
- Get the joey to a vet or carer as soon as possible (Contact IKPS as soon as possible.)

### RECORD KEEPING

All koalas observed on the property will be recorded. Information to be collected includes date, time, GPS location, type of tree, condition of koala, sex if known and behaviour.

Copies of records will be provided to the Moggill Koala Hospital, State Government database, Wildnet, and IKPS on a regular basis. Sightings will be recorded on Koala Record Sheets provided by DES.