Annual Compliance Report

9 July 2019 to 8 July 2020 EPBC 2014/7306
Springview Village One, Springfield,
Ipswich City, Queensland
Stockland Development Pty Ltd
7 October 2020

Job No: 8473 E

Stockland
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Document control

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A	7 October 2020	KH / HS	MS
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Prepared by

ABN 24 144 972 949
www.saundershavill.com

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1. Introduction

Saunders Havill Group have prepared this Annual Compliance Report (ACR) for the Springview Village One project at Springfield, Queensland on behalf of Stockland Development Pty Limited (Stockland). In 2018, the Springview Village One project was rebranded Kalina Springfield and all project references use the latter name from hereon in. This report provides an assessment of the project's compliance with the approval granted under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (ref EPBC 2014/7306), and is specifically required by condition 10 of the approval granted on 14 September 2016 (refer **Appendix A**). The reporting period for this ACR is the twelve months ending on 8 July, 2020.

Kalina Springfield is located approximately 2.5 kilometres (km) north of Springfield Central, and is adjacent to existing urban development comprising residential housing and Springfield Anglican College in the Ipswich City local government area (refer **Figure 1**). Within the project area, an impact to no more than 39.75 ha of Matters of National Environmental Significance (MNES) habitat being Koala habitat was permitted under the approval conditions. A land-based offset accompanied this clearing to counterbalance the impacts and is located in the locality of Calvert, approximately 40 km west of the project.

1.1. Approval summary

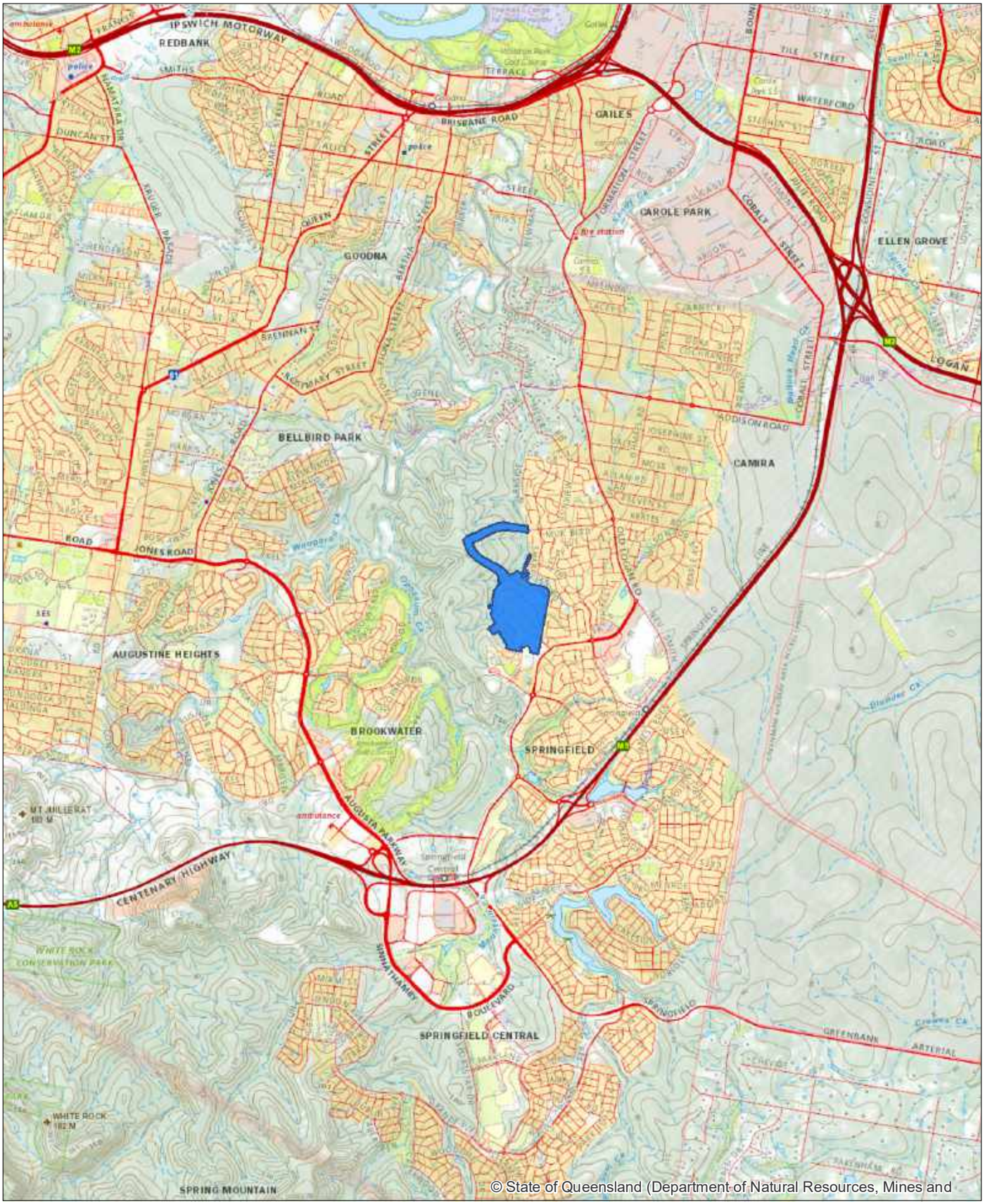
There are three approval documents issued under the EPBC Act relevant to the project:

1. *Approval* dated 12 June, 2016.
2. *Notice of Transfer of Approval* dated 16 June, 2017.
3. *Variation to Conditions Attached to Approval* dated 12 June, 2018.

The original approval holder was Cherish Enterprises Pty Ltd. **Table 1** summarises the approval details under the EPBC Act relevant to Kalina Springfield. The approval was granted by, and is currently administered by, the Australian Government Department of Agriculture, Water and the Environment (the Department) (previously named the Department of the Environment and Energy).

Table 1: EPBC Act approval summary

Department reference	EPBC 2014/7306
Approval holder, ACN	Stockland Development Pty Limited, 000 064 835
Approval date	14 September 2016
Expiry date of approval	30 September 2041
Approved action	To develop Springview Village One residential development at Lot 43 on SP2442290 at the junction of Mur Boulevard and Panorama Drive, Springfield, Queensland as described in the referral received by the Department on 15 August 2014.
Controlling provision	Approved - listed threatened species and communities (sections 18 & 18A)
Address	Mur Boulevard, Springfield Queensland 4300



Legend

EPBC Act approved Clearance Area

Figure 1:
Project Area Locality

File ref. *8473 E Figure 1 PROJECT AREA LOCALITY*

Prepared on *2/10/2020*
Project *8473 E*

0 250 500 1,000 1,500 2,000 m

N

Scale (A4): 1:50,000 [GDA 1994 MGA Z56]

EPBC 2014/7306
Kalina Springfield - Residential Development

Client: Stockland

Prepared by: saunders havill group

1.2. 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	7 October 2020

2. Description of activities – impact area

The Kalina Springfield project is a residential development situated in Springfield, a suburb of Ipswich City. The development encompasses the establishment of residential land parcels and open space areas and construction is ongoing.

A total of 145 residential allotments have been created during the first two years of construction. Works on-site commenced on 9 July, 2018. Clearing commenced with a high level of diligence afforded by Stockland to minimise potential harm to Koala and other fauna potentially residing on-site and was completed with a fauna spotter catcher in attendance at all times. Furthermore, minimising disturbances to neighbours was also an ongoing priority.

During the reporting period, the following activities were under construction or established in the project area:

- residential land parcels (**Photo set 1**);
- internal road network and associated infrastructure (**Photo set 2**);
- rehabilitation associated with drainage areas in the north (**Photo set 3**);
- open space area Central Park and Café Kalina (**Photo set 4**);
- planting for landscaping purposes; and
- associated construction work facilities (**Photo set 5**).

As part of constructing these land uses, earthworks and vegetation clearing have expanded across the entire site except for the park and connectivity road north (refer **Figure 2**). The completion of accompanying stability and rehabilitation works are ongoing as a management measure to support construction in accordance with industry standards and mitigate potential impacts on the surrounding environment. Stability and rehabilitation activities were completed with approvals from state and/or local administering authorities in place, where applicable. These activities included the following:

- Lotus Place bund rehabilitation works (**Photo set 6** and **Photo set 7**);
- West bund rehabilitation works (**Photo set 8**);
- retention of vegetation within Central Park (refer **Photo set 4**)

Sediment and erosion control measures continued to be observed within and bounding the works extent (refer **Photo set 8**). These works have been focused along the interface between the retained bushland area and works extent, and in association with utility infrastructure (e.g. drainage culverts, stormwater drainage). Demarcation of clearing extents and areas to retain in the form of fencing and / or bunting was observed to reflect correlating approvals.

Photo set 1: Residential land parcels

Photo set 2: Internal road network and associated infrastructure

Photo set 3: Rehabilitation associated with drainage areas in the north

Photo set 4: Tree retention throughout Central Park and Café Kalina

Photo set 5: Associated construction work facilities

Legend

QLD dcdb

EPBC Act approved Clearance Area

Figure 2:
Site Aerial

File ref. *8473 E Figure 2 SITE AERIAL*

Prepared on *2/10/2020*
Project *8473 E*

0 25 50 100 150 200 m

N

Scale (A4): 1:10,000 [GDA 1994 MGA Z56]

EPBC 2014/7306
Kalina Springfield - Residential Development

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Prepared by: saunders havill group

Photo set 6: Rehabilitation works at Lotus Place

Photo set 7: Rehabilitation works at Lotus Place

Photo set 8: Erosion and sediment control adjacent to gully line proximal to West Bund

2.1. Koala habitat

The Kalina Springfield project was deemed a controlled action based on impacts to the vulnerable-listed Koala species. Field survey effort conducted across the site during the referral process determined that Koalas occur on-site infrequently and at an implied low usage. This finding is supported by subsequent fauna spotter catcher reports (2018 and 2019) which showed Koalas were not observed during pre-clearance surveys.

For information, a copy of the fauna spotter catcher reports completed during this reporting period are presented in **Appendix B**. These inspections also failed to locate any Koalas in the active portion of the site during the pre-clearance survey or while clearing works were underway. Further, surveys have been completed across the site to understand Koala usage and presence, and the results are discussed in **Sections 2.1.1** and **2.1.2**.

2.1.1 Unmanned aerial vehicle thermal imagery survey

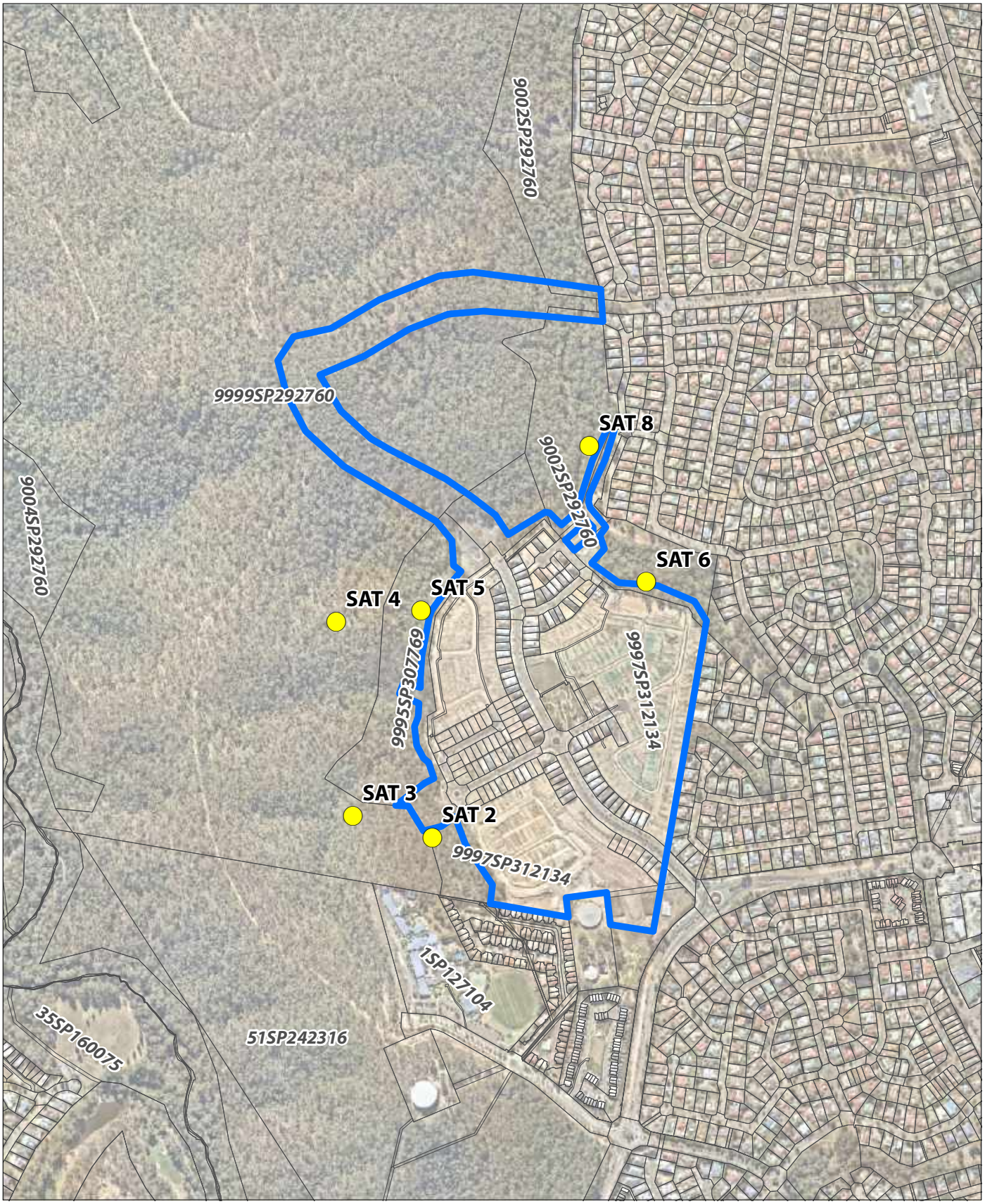
In the previous reporting period (*i.e.*, 2018 to 2019), subsequent to the commencement of on-site clearing works, an aerial survey using a mounted thermal camera was deployed to identify the presence of *Phascolarctos cinereus* (Koala). A CASA qualified pilot operated the unmanned aerial vehicle (UAV) (*i.e.*, drone) and completed pre- and post-flight procedures as required by their licence. The UAV surveys were completed on 2 November, 2018. The survey identified no Koalas on-site or in the immediate vicinity.

During this reporting period, it was deemed unnecessary to conduct the UAV survey to assist in understanding Koala presence / absence. Alternate surveys, specifically Spot Assessment Technique (SAT) surveys and opportunistic sightings, were considered to provide sufficient information in understanding presence / absence where usage is low and detectable through implementing this survey method.

2.1.2 SAT survey

Surveys were undertaken across the site and surrounding vegetation to measure Koala activity using the SAT, originally developed by the Australian Koala Foundation. The SAT method involves identifying a non-juvenile tree of any species within the site that is either observed to have a Koala or scats, or is known to be a food tree or otherwise important for Koalas, and recording any evidence of Koala usage of that tree including presence, identifiable scratches or scats. The nearest non-juvenile tree is then identified and the same data recorded. The number of trees showing evidence of Koala activity is expressed as a percentage of the total number of trees sampled to indicate the frequency of Koala usage. The next closest non-juvenile tree to the first tree is then assessed and so on until 30 trees have been surveyed. Assessment of each tree involves a systematic search for Koala scats beneath the tree within a 1 m radius of the trunk. After approximately 2 minutes of searching for scats, the base of the trunk is observed for scratches and the crown for Koala.

A total of six SAT surveys were completed within retained vegetation areas on 25 September 2020 (refer **Figure 3**). During the previous reporting period, a total of eight SAT surveys were completed as reference sites. Two of these locations, namely SAT 1 and SAT 7, have been since cleared of vegetation as part of the approved clearing extent, and therefore, were not resurveyed during this reporting period. The remaining SAT survey locations were resurveyed, and results of the SAT surveys over the two reporting years is provided in **Table 2**.



Legend

- QLD dcdb
- EPBC Act approved Clearance Area
- SAT survey (2020)

Figure 3:
SAT Surveys

File ref. *8473 E Figure 3 SAT SURVEYS*

Prepared on *6/10/2020*
Project *8473 E*

0 25 50 100 150 200 m

Scale (A4): 1:10,000 [GDA 1994 MGA Z56]

N

EPBC 2014/7306
Kalina Springfield - Residential Development

Client: Stockland

Prepared by: saunders havill group

Each of these surveys produced low Koala activity results as defined within the Australian Koala Foundation Koala activity classification table using the East Coast (med-high) benchmark assessment category[1] (refer **Table 2**). Detailed results of the SAT survey for this reporting period are provided in **Appendix C** and a total of eight trees were recorded with Koala faecal pellets during the survey effort. An example of Koala faecal pellets identified on-site and vegetation characteristics associated with SAT survey locations where Koala faecal pellets were identified are shown in **Photo set 9** and **Photo set 10**.

Table 2: SAT survey results summary

SAT survey site ID	2020 reporting period		2019 reporting period	
	Evidence of Koala activity (%)	Koala use (east coast med-high)	Evidence of Koala Activity (%)	Koala use (east coast med-high)
1	-	-	0.00	Low
2	0.00	Low	6.67	Low
3	10.00	Low	6.67	Low
4	3.33	Low	0.00	Low
5	0.00	Low	0.00	Low
6	0.00	Low	3.33	Low
7	-	-	3.33	Low
8	13.33	Low	0.00	Low

Photo set 9: Vegetation characteristics associated with SAT 8

[1] Phillips, S & Callaghan, J 2011, 'The *Spot Assessment Technique*: a tool for determining localised levels of habitat use by Koalas *Phascolarctos cinereus*', *Australian Zoologist*, 35(3), pg. 774-780.

Photo set 10: Vegetation characteristics associated with SAT 3 (left) and SAT 4 (right)

2.2. Department site visit

On 25 September, 2018 three Department representatives from the Environmental Audit Section visited the Kalina Springfield construction site to assess compliance with conditions 1 and 2 of the approval. A site walkover was completed and a brief of site works was provided to the Department. Subsequent to the site visit, the Department confirmed in writing that Stockland were compliant with conditions 1 and 2 of the approval. This letter of confirmation from the Department is included in the 2019 Annual Compliance Report.

No site visits by the Department have occurred since the visit on 25 September, 2018.

3. Description of activities – offset area

The 65 ha offset area in accordance with Condition 2 of the EPBC Act approval occurs across one land parcel that comprises confirmed Koala habitat. The offset parcel (described as 230/CH311791) is situated within Ipswich City local government area (refer **Figure 4**). Under Ipswich City Council's (ICC) Nature Conservation Strategy, the site is mapped as Core Habitat, and is within a large contiguous vegetation area of predominantly eucalypt forest. The offset area was legally secured on 6 June 2018 using the Voluntary Declaration (VDec) process administered under the *Vegetation Management Act 1999* (refer **Appendix E**). The securement of the offset occurred after the action was referred to the Department. As part of the VDec application, an Offset Management Plan (OMP) (refer **Appendix F**) was prepared and came into force across the site.

The primary outcomes and milestones to managing the offset area are as follows:

> Outcome #1: *By 20 years after the commencement of construction, there must be a gain in Koala habitat quality to nine across the whole offset area.*
>
> Outcome #2: *For the life of the approval, the approval holder must ensure no net loss in the extent of Koala habitat in the offset area.*
>
> Milestone #1: *By five years after the commencement of construction, a gain in Koala habitat quality to nine must be achieved in more than 50% of the offset area through rehabilitation.*

Five years after commencement is 8 July, 2023.

Existing key threats to Koalas and Koala habitat within the offset area identified in the OMP include:

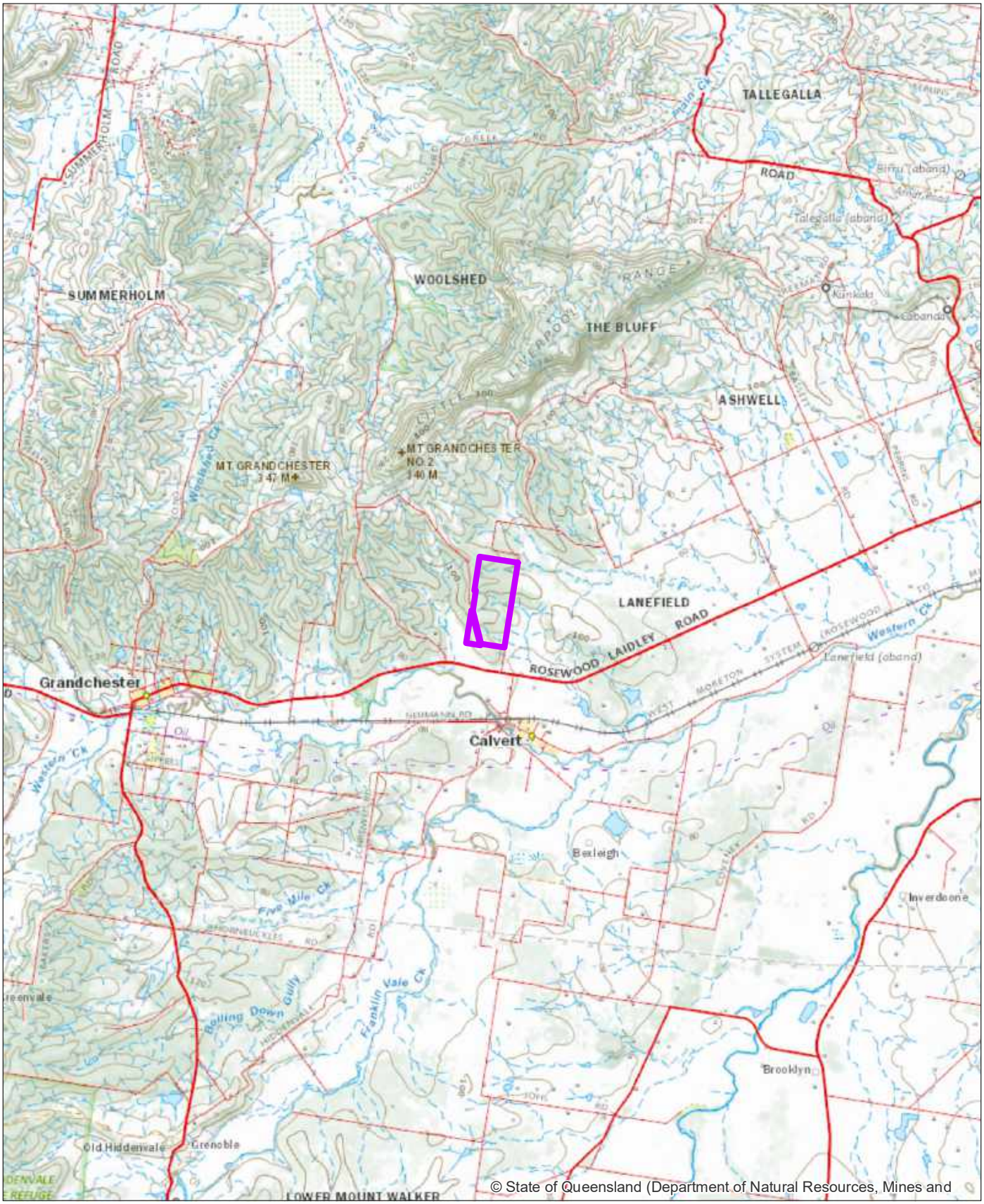
- wild dog attacks;
- habitat degradation through weed invasion, of particular concern *Lantana camara* (Lantana) and *Opuntia stricta* (Common Prickly Pear);
- unauthorised public access;
- erosion caused by vehicular access and loss of vegetation cover; and
- habitat loss from fire.

To meet the primary outcomes, existing threats to the offset site were identified and management actions were designed to improve Koala habitat quality to nine across the entirety of the offset area. In accordance with condition 3 of the federal approval, to compensate for impacts to Koala habitat, detailed outcomes and milestones must be achieved. Baseline values were recorded in July and August 2018 (refer **Appendix G**). The quality of vegetation will be measured across future years through continued habitat improvement monitoring assessments to measure the success of vegetation management efforts. During this reporting period, five photo reference points were established using the condition assessment transects as a base for ongoing monitoring. A map of the reference sites and geo-referenced photo points is contained in the OMP Annual Report in **Appendix G**.

The current quality and extent of vegetation are influenced by several factors, including the presence and intensity of invasive flora and fauna, and vegetation community characteristics (*e.g.*, species diversity, canopy cover, ecologically dominant layer). The OMP identifies a number of management actions to be undertaken to improve Koala habitat quality and meet the primary outcomes for the offset area, as follows:

1. Weed management.
2. Infill planting.
3. Erosion mitigation.
4. Access infrastructure.
5. Fire management.
6. Fencing.
7. Wild dog management.

Details on the progress of these actions are provided in **Table 3**. This table will be reviewed annually as part of completing the Annual Compliance Report in accordance with condition 10 of the approval and the resultant status of actions discussed accordingly. The table will be reviewed in conjunction with the OMP Annual Report prepared by Cherish the Environment Foundation Limited. The OMP Annual Report for this reporting period is provided in **Appendix G**.



Legend

Calvert offset site

Figure 4:
Legally Secured Offset Area

File ref.	*8473 E Figure 4 LEGALLY SECURED OFFSET AREA*
Prepared on	*2/10/2020*
Project	*8473 E*

0 0.250.5 1 1.5 2 Kilometers

N

Scale (A4): 1:75,000 [GDA 1994 MGA Z56]

EPBC 2014/7306
Kalina Springfield - Residential Development

Client: Stockland

Prepared by: saunders havill group

Table 3: Summary of offset site actions during reporting period.

Management action	Monitoring action	Improvement proposed	Timeframe		Progress to June 2020	Evidence of progress
			Trigger-based	Progress to 2020		
Erosion mitigation	Inspect completed mitigation measures.	- Repair significant erosion points where possible and feasible - Repair work involves re-profiling and re-directing overland water flow away from erosion path using cross-drainage - Cross-drainage to be located along all permanent access tracks at appropriate intervals - Allow for future maintenance of cross-drainage throughout the site	- approximately one month post completion; and - approximately two weeks post first minor rainfall event; and - approximately two weeks post first major rainfall event.	- Assessment and mitigation actions completed. - Inspections post severe rain events completed.	No major storm events received and overall rainfall only 64% of long-term average (Amberley BoM). Previously constructed erosion control diversion drains on abandoned tracks and washouts were inspected and are in serviceable condition.	-
Access infrastructure	Inspect existing and new access infrastructure.	- Construction and/or re-opening of tracks to facilitate weed management, infill planting establishment and maintenance, fence line construction and maintenance, pest management and fire protection activities	Existing access infrastructure: - approximately two weeks post major rainfall event. New access infrastructure: - approximately one month post completion; and - approximately two weeks post first minor rainfall event; and - approximately two weeks post first major rainfall event.	- Maintenance tracks and cross-drainage maintained x 2. - Inspections post severe rain events completed.	Tracks were slashed and maintained twice through the period. This involved repair to the cut-off drains due largely to settlement. Inspections immediately following severe rain events were conducted to assess and ensure any erosion could be repaired.	Access track recently maintained with cross drainage (June 2020): 

Weed management	Assess weed infestations and success of weed reduction measures.	- An intensive, 5-year weed management program is proposed for remnant and regrowth parts of the offset area
		- Primary weed treatment process to commence as soon as practical, with follow-up weed treatment undertaken annually
		- After first 3-years, required management intensity should reduce significantly
		- Weed management will occur in two phases throughout the approval period:
		  ○ Intensive weed management until year 6; and
		  ○ Ad-hoc weed management from year 6 until the end of the approval period.
			Weed reduction measures:
			- approximately six months post completion.
				- Comprehensive weed control across the entire site completed. June 2019 – October 2019.
				- Inspections to assess regrowth conducted.
					Follow up weed treatment commenced in June 2020 with an ongoing focus on lantana, climbing asparagus and prickly pear.	Weed control – an area of treated Lantana (October 2019):
						 

Fire management	Assess suitability of fire breaks and access tracks.	- At this stage in the project, fire management activities have been limited to fire exclusion and asset protection.	- approximately one month post fire event	- Boundary firebreaks slashed x 2 along with access tracks and inter-rows in the in-fill plantings.	Slashing of all boundary and maintenance tracks as well as inter-rows of the in-fill plantings is maintained to reduce fuel loads.	-

Management action	Monitoring action	Improvement proposed	Timeframe: Trigger-based	Timeframe: Progress to 2020	Progress to June 2020	Evidence of progress
		- Prescribed burning is restricted within the V-Dec area until a Fire Management Plan is developed (to be reviewed/endorsed or similar by the rural fire brigade or other relevant stakeholder prior to implementation)				
Infill planting	Assess success of infill planting.	- A small, one hectare patch of open, grassy area in south-east corner of 230CH311971 will require infill planting - Approximately 400 trees typical of regional ecosystems 12.9-10.2 and 12.9-10.3 will be planted in the area	- approximately six months post completion	- Completed and maintained weed free.	The infill area is established but growth is slow due to the continuing dry conditions and competition from established trees. The area is maintained weed free in the rows and slashed between the rows to reduce both competition and fire risk. Post-plant weed control conducted in January 2020 and April 2020. Post-plant spray has been effective (weeds and grass along the tree rows is dead or dying). Planted trees are healthy and show no signs of spray damage. Perimeter and inter-rows were slashed in April 2020.	Infill planting – RE12.9-10.2 Regrowth, dry conditions: 
Pest and animal management	Assess presence of pests and suitability of boundary fencing. Undertake pest management.	- There is no internal fencing on the property – boundary fencing will be constructed, repaired and maintained to exclude domestic stock and pests - Pest animals such as wild dogs will be addressed via a control program that will be implemented at the discretion of the landholder - The fencing is schedules to be established / constructed within 12-months of the V-Dec being certified and must be in place for the duration of the approval - A wild dog control program will occur ad hoc during the approval period	- ad hoc as part of property management	- Boundary fencing erected so the entire site excludes stock. - Wildlife cameras at strategic locations to monitor for species richness. No feral species, e.g. wild dogs or pigs, captured on camera.	Fencing has been inspected regularly and repaired as required, mainly due to limbs falling across the fence. Wildlife cameras have been deployed and are regularly monitored. Due to the drought and lack of water on site, a small water station was deployed to attract wildlife to the camera. The water station was popular with a range of birds. Images captured include kangaroos, wallabies, echidna, lace monitors and possums. There has been no evidence or wild dogs or pigs presence across the site.	Photo camera setup: 

4. EPBC approval conditions compliance table

The EPBC approval conditions for the Kalina Springfield, Springfield 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
1	The approval holder must not clear more than 39.75 hectares of Koala habitat. Clearing must not occur outside of the clearance area.	Compliant	The approval holder has not cleared more than 39.75 ha of Koala habitat during year 2 of the action. Clearing has not occurred outside of the clearance area.
2	To compensate for the loss of Koala habitat, the approval holder must: a) secure, prior to the commencement of construction, a minimum of 65 hectares of Koala habitat within the offset area; and b) provide the Department with relevant evidence on securing the offset area and the offset attributes clearly defining the location and boundary of the offset within 10 business days of lodgement of the offset with the Titles Office.	Compliant	a) An offset site, accounting for 65 ha (located at 40-160 Harrison Road, Calvert QLD 4340 (230/CH311791)), was secured prior to the commencement of construction. Clearing works began on 9 July, 2018 and the offset site was secured on 6 June, 2018 (**Appendix D**). b) The Department was notified of the offset securement and provided with relevant evidence on 7 June, 2018 (refer **Appendix D**). The Queensland Government Department of Natural Resources, Mines and Energy administers the VDec process and land titles, and therefore notification to the Titles Office would have occurred on 7 June, 2018 at the latest.

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
3	To compensate for the impacts to Koala habitat, the approval holder must achieve the following outcomes and milestones as compared to baseline values for Koala habitat quality and extent: a) Outcomes • By 20 years after the commencement of construction, there must be a gain in Koala habitat quality to nine across the whole offset area; and • For the life of the approval, the approval holder must ensure no net loss in the extent of Koala habitat in the offset area. b) Milestones • By five years after the commencement of construction, a gain in Koala habitat quality to nine must be achieved in more than 50% of the offset area through rehabilitation.	Not applicable	a) The 20-year outcome has not surpassed and is due to occur in 2038. No net loss of Koala habitat in the offset area has occurred to date. b) The 5-year milestone has not surpassed and is due to occur in 2023. Habitat quality monitoring is being undertaken across the offset site in accordance with the approved OMP. Habitat quality monitoring results are reported annually to assess the progress towards achieving a gain in Koala habitat quality to nine in more than 50% of the offset area through rehabilitation works and natural regeneration. Benchmark site condition assessments were completed in July and August 2018 to record current vegetation condition. Concurrent site condition assessments were completed in this reporting period. The Offset Management Plan describes baseline site condition (refer **Appendix E**). Offset Management Plan Annual Report (June 2020) describes the ongoing site condition, and is provided in **Appendix F**. Site rehabilitation progress to the end of the second Annual Compliance Report reporting period indicates site condition is tracking towards achieving the five-year milestone. Future assessments will be completed to allow future verification of management action successes.
4	The approval holder must have an Offset Management Plan in place. The Offset Management Plan must: a) include monitoring and be designed so that the results are adequate to inform adaptive management and demonstrate whether the outcomes and milestones	Compliant	An OMP is in place and has applied to the offset area since 6 June, 2018. The OMP was developed to respond to condition 4. a) Monitoring timeframes have been scheduled to occur both trigger-based and recurring. An inspection is completed annually

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
	required by these conditions are on track to be achieved (before they are due) and have been achieved (at the time they are due); b) include contingency measures to mitigate the risks of not achieving the outcomes and milestones required by these conditions; c) be prepared in consultation with a suitably qualified person, and include written evidence of how the suitably qualified person's advice has been considered; d) be in accordance with the Koala Habitat Offset Report; and e) demonstrate how the plan is consistent with the Koala Conservation Advice.		to support the progress towards outcomes and milestones, as dictated in condition 3, and ensure they are achieved. b) Contingency measures to mitigate the risk of not achieving the outcomes and milestones in condition 3 are included within Sections 5, 7 and 9 of the OMP (refer **Appendix E**). c) Cherish the Environment Foundation Limited has prepared the OMP in consultation with Saunders Havill Group who have experience in coordinating offset management plans seeking to deliver an improvement of Koala habitat. d) The Koala Habitat Offset Report and OMP propose consistent management actions and the latter expands upon key parameters (*e.g.*, timing of events, monitoring, and reporting) relating to demonstrating compliance. e) The Koala Conservation Advice was reviewed as part of preparing the OMP. The Koala Conservation Advice identifies the main threats to the Koala as loss and fragmentation of habitat, vehicle strike, disease, and predation by dogs. The OMP and VDec support the protection of Koala habitat from fragmentation and loss. Pest and animal management measures have also been incorporated into the OMP and progress on these management measures is reviewed annually. Further, no formed roads intersect the offset site.

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
5	The Offset Management Plan must be implemented. Unless otherwise agreed to in writing by the Minister, the approval holder must publish the Offset Management Plan on their website prior to the commencement of construction and the Offset Management Plan must remain on the website for the life of the approval. The results of the Offset Management Plan must be included in the annual compliance report required under condition 10.	Compliant	The OMP was implemented in 2018 and has continued to be implemented across the 2019 and 2020 reporting periods. An OMP Annual Report to present the results of monitoring the offset site in accordance with the OMP during each reporting period. The 2019 OMP Annual Report was provided in the 2019 Annual Compliance Report. The 2020 OMP Annual Report is provided in **Appendix F**. The OMP was published on the approval holders' website prior to the commencement of construction, and remains published on the approval holders' website to date.
6	If, at any time during the life of the approval, the approval holder identifies that the outcomes or milestones required under these conditions 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.	Compliant	The approval holder did not identify that the outcomes or milestones required under these conditions were not on track to being achieved. Therefore, no report notifying the Department was completed during the reporting period.
7A	If the Minister is not satisfied that the outcomes or milestones required by these conditions are likely to be achieved, or is not satisfied that there is sufficient evidence that the outcomes or milestones required by these conditions 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.	Not applicable	The approval holder has not received a request from the Minister to submit a plan to monitor, manage, avoid, mitigate, offset, record or report on, impacts to Koala habitat.

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
7B	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.	Not applicable	The approval holder has not received a request from the Minister to submit a plan specified in condition 7A, therefore a timeframe was not set by the Minister to submit the plan.
7C	If the Minister approves the plan in writing then the approval holder must implement that plan (or a revised version if approved in writing by the Minister or otherwise allowed under these conditions). Note: Cost recovery does not apply to a plan required under this condition.	Not applicable	The approval holder has not received a request from the Minister to submit a plan specified in condition 7A. This condition is not applicable.
8	Within 20 business days after the commencement of construction, the approval holder must advise the Department in writing of the actual date of the commencement of construction.	Compliant	The actual date of the commencement of construction was 9 July, 2018. The Department was notified of the commencement of construction on 19 July, 2018.
9	The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the Offset Management Plan 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.

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
10	Within three months of every 12 month anniversary of the commencement of construction, the approval holder must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of the Offset Management Plan 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. Reports must remain on the website for the period this approval has effect. The approval holder may cease preparing and publishing compliance reports required by this condition with written agreement of the Minister to do so.	Not applicable	The anniversary of the commencement of the action is 9 July, annually. The annual deadline for publishing the report addressing compliance with each of the conditions of the approval (*i.e.*, this Annual Compliance Report) is 8 October. When this deadline is a non-business day in Brisbane, the next business day is taken to be the deadline. Documentary evidence providing proof of the date of publication will be provided to the Department when the report is published. The Annual Compliance Report for the 12 month period ending 8 July 2019 was published on the Stockland Kalina development website on 4 October 2019. The Department was notified of the report publication and provided with evidence on 4 October 2019. The approval holder and Saunders Havill Group have not become aware of a potential or suspected non-compliance with the conditions during the reporting period.
11	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 must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Not applicable	The Minister has not provided a direction to complete an independent audit of compliance.

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence / comments
12	If, at any time after five years from the date of this approval, the approval holder has not substantially commenced the action, then the approval holder must not substantially commence the action without the written agreement of the Minister.	Not applicable	The action commenced on 9 July, 2018.

5. Appendices

Appendix A

EPBC approval and conditions granted 14 September, 2016

Appendix B

Fauna management and spotter catcher services reports

Appendix C

SAT survey results – raw data

Appendix D

Offset securement for EPBC 2014/7306

Appendix E

Offset Management Plan

Koala Habitat Offset (EPBC 2014/7306)

Appendix F

Offset Management Plan – Annual Report June 2020

Appendix A

EPBC approval and conditions granted

14 September, 2016

Approval

Springview Village One, Springfield, Ipswich City, Queensland (EPBC 2014/7306)

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	Cherish Enterprises Pty Ltd ACN: 052 055 811
proposed action	To develop Springview Village One residential development at Lot 43 on SP2442290 at the junction of Mur Boulevard and Panorama Drive, Springfield, Queensland as described in the referral received by the Department on 15 August 2014 [See EPBC Act referral 2014/7306].

Approval decision

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

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 30 September 2041.

Decision-maker

name and position	James Barker Assistant Secretary Assessments (QLD, Vic, Tas) and Sea Dumping Branch
signature	
date of decision	14 / 9 / 2016

Conditions attached to the approval

1. The **approval holder** must not clear more than 39.75 hectares of **Koala habitat**. Clearing must not occur outside of the **clearance area**.

2. To compensate for the loss of **Koala habitat**, the **approval holder** must:

   a) **secure**, prior to the **commencement of construction**, a minimum of 65 hectares of **Koala habitat** within the **offset area**; and

   b) provide the **Department** with relevant evidence on securing the **offset area** and the **offset attributes** clearly defining the location and boundary of the offset within 10 **business days** of lodgement of the offset with the **Titles Office**.

3. To compensate for the impacts to **Koala habitat**, the **approval holder** must achieve the following outcomes and milestones as compared to **baseline values** for **Koala habitat quality** and **extent**:

   a) Outcomes

      - By 20 years after the **commencement of construction**, there must be a gain in **Koala habitat quality** to nine across the whole **offset area**; and

      - For the life of the approval, the **approval holder** must ensure no net loss in the **extent** of **Koala habitat** in the **offset area.**

   b) Milestones

      - By five years after the **commencement of construction**, a gain in **Koala habitat quality** to nine must be achieved in more than 50% of the **offset area** through rehabilitation.

4. The **approval holder** must have an Offset Management Plan in place. The Offset Management Plan must:

   a) include monitoring and be designed so that the results are adequate to inform adaptive management and demonstrate whether the outcomes and milestones required by these conditions are on track to be achieved (before they are due) and have been achieved (at the time they are due);

   b) include contingency measures to mitigate the risks of not achieving the outcomes and milestones required by these conditions;

   c) be prepared in consultation with a **suitably qualified person**, and include written evidence of how the **suitably qualified person**'s advice has been considered;

   d) be in accordance with the **Koala Habitat Offset Report**; and

   e) demonstrate how the plan is consistent with the **Koala Conservation Advice**.

5. The Offset Management Plan must be implemented. Unless otherwise agreed to in writing by the **Minister**, the **approval holder** must publish the Offset Management Plan on their website prior to the **commencement of construction** and the Offset Management Plan must remain on the website for the life of the approval. The results of the Offset Management Plan must be included in the annual compliance report required under condition 10.

6. If, at any time during the life of the approval, the **approval holder** identifies that the outcomes or milestones required under these conditions 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.

7A. If the **Minister** is not satisfied that the outcomes or milestones required by these conditions are likely to be achieved, or is not satisfied that there is sufficient evidence that the outcomes or milestones required by these conditions 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**.

7B. 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**.

7C. If the **Minister** approves the plan in writing then the **approval holder** must implement that plan (or a revised version if approved in writing by the **Minister** or otherwise allowed under these conditions).

Note: Cost recovery does not apply to a plan required under this condition.

8. Within 20 **business days** after the **commencement of construction**, the **approval holder** must advise the **Department** in writing of the actual date of the **commencement of construction**.

9. The **approval holder** must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the Offset Management Plan 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.

10. Within three months of every 12 month anniversary of the **commencement of construction**, the **approval holder** must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of the Offset Management Plan 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. Reports must remain on the website for the period this approval has effect. The **approval holder** may cease preparing and publishing compliance reports required by this condition with written agreement of the **Minister** to do so.

11. 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 must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.

12. If, at any time after five years from the date of this approval, the **approval holder** has not **substantially commenced** the action, then the **approval holder** must not **substantially commence** the action without the written agreement of the **Minister**.

Definitions

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

Baseline values: baseline **extent** is 65 hectares and baseline **Koala habitat quality** is seven, as described in the **Koala Habitat Offset Report**.

Business days: measured in relation to the doing of any action, any day other than a Saturday, a Sunday, or a public holiday that occurs in Queensland.

Clearance area: the area labelled as 'Referral Area' in Map 1.

Commencement of construction: any preparatory works required to be undertaken including clearing vegetation, the erection of any onsite temporary structures and the use of heavy equipment for the purposes of breaking the ground for road construction, buildings or infrastructure.

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

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

EPBC Act Environmental Offsets Policy: Department of Sustainability, Environment, Water, Population and Communities (2012). *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (October 2012).* Commonwealth of Australia, Canberra.

EPBC Act offsets assessment guide: the *offsets assessment guide* tool and *how to use the offsets assessment guide* document that accompany the **EPBC Act Environmental Offsets Policy**.

Extent: the coverage of **Koala habitat** measured in hectares.

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

Koala Conservation Advice: Threatened Species Scientific Committee (2012). *Approved Conservation Advice for* Phascolarctos cinereus *(combined populations of Queensland, New South Wales and the Australian Capital Territory).* Commonwealth of Australia, Canberra.

Koala habitat: habitat containing tree species whose leaves are consumed by the **Koala**, including *Eucalyptus moluccana, Eucalyptus propinqua, Eucalyptus tereticornis, Corymbia citriodora,* and *Lophostemon confertus.*

Koala habitat Quality: means the **Koala habitat** quality score comprised of site condition, site context and species stocking rate calculated in accordance with the requirements of the **EPBC Act offsets assessment guide**.

Koala Habitat Offset Report: the document provided to the **Department** named '*Koala Habitat Offset Report - 40-100 Harrison Road, Calvert*'. Prepared by Cherish the Environment Foundation (Appendix J to *'Response to Request for Additional Information - Springview Village One, Springfield, QLD (EPBC 2014/7306)*, dated 6 June 2016).

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

Offset area: the area labelled as 'Offset Area' in Map 2.

Offset attributes: means electronic files including '.xls' files and ESRI shapefiles containing '.shp', '.shx' and '.dbf' files capturing the relevant attributes of the offset area/s, including the **EPBC Act** reference number, the physical address of the offset area/s, coordinates of the boundary points in decimal degrees, the **EPBC Act** protected matters that the offset area/s compensates for, any additional **EPBC Act** protected matters benefiting from the offset/s and the size of the offset area/s (in hectares).

Secure: means long-term protection under a legal mechanism that is establishing a covenant on the title as a voluntary declaration under the *Vegetation Management Act 1999* (Qld).

Substantially commence/d: means creation of residential allotments, roadways and infrastructure services (sewerage, electricity, water, stormwater) associated with the action. This does not include preparatory works.

Suitably qualified person: A person who has professional qualifications, training, skills and/or experience related to the **Koala** and can give authoritative independent assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods and/or literature.

Titles Office: means the relevant authority responsible for registering the land title transaction.

Map 1: Clearance Area labelled as 'Referral Area'

Map 2: Offset Area

OFFSET MAP

40-160 Harrison Road, Calvert, Queensland
Lot 230 CH311791 & Lot 1 CC2262

LEGEND

Offset Area (Lot 230 CH311791)
Property Boundary

Printed 04 August 2015 · Imagery: 2014 | Job 45797

Australian Government
Department of the Environment and Energy

NOTICE OF TRANSFER OF APPROVAL

Springview Village One, Springfield, Ipswich City, Queensland (EPBC 2014/7306)

This decision is made under (Section 145B) of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Proposed transfer of approval

Transferor (holder of approval)	Cherish Enterprises Pty Ltd ACN: 052 055 811
Transferee (person proposing to accept the transfer of approval)	Stockland Development Pty Limited ACN: 000 664 835
proposed action	To develop Springview Village One residential development at Lot 43 on SP2442290 at the junction of Mur Boulevard and Panorama Drive, Springfield, Queensland, as described in the referral received by the Department on 15 August 2014 [See EPBC Act referral 2014/7306]

Transfer Decision

Person to whom the approval is transferred	Stockland Development Pty Limited ACN: 000 664 835
Proposed action	To develop Springview Village One residential development at Lot 43 on SP2442290 at the junction of Mur Boulevard and Panorama Drive, Springfield, Queensland, as described in the referral received by the Department on 15 August 2014 [See EPBC Act referral 2014/7306]

Person authorised to make decision

Name and position	Rod Whyte Director Post Approvals Section Compliance and Enforcement Branch
Signature	
Date of decision	16 June 2017

Australian Government
Department of the Environment and Energy

VARIATION TO CONDITIONS ATTACHED TO APPROVAL

Springview Village One, Springfield, Ipswich City, Qld (EPBC 2014/7306)

This decision to vary conditions of approval is made under section 143 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Approved action

Person to whom the approval is granted	Stockland Development Pty Limited ACN: 052 055 811
Approved action	To develop Springview Village One residential development at Lot 43 on SP2442290 at the junction of Mur Boulevard and Panorama Drive, Springfield, Queensland as described in the referral received by the Department on 15 August 2014 [See EPBC Act referral 2014/7306].

Variation

Variation of conditions of approval	The variation is: Delete Map 1 and definition of 'Clearance area' attached to the approval and substitute with Map 1 and definition of 'Clearance area' specified below.
Date of effect	This variation has effect on the date the instrument is signed

Person authorised to make decision

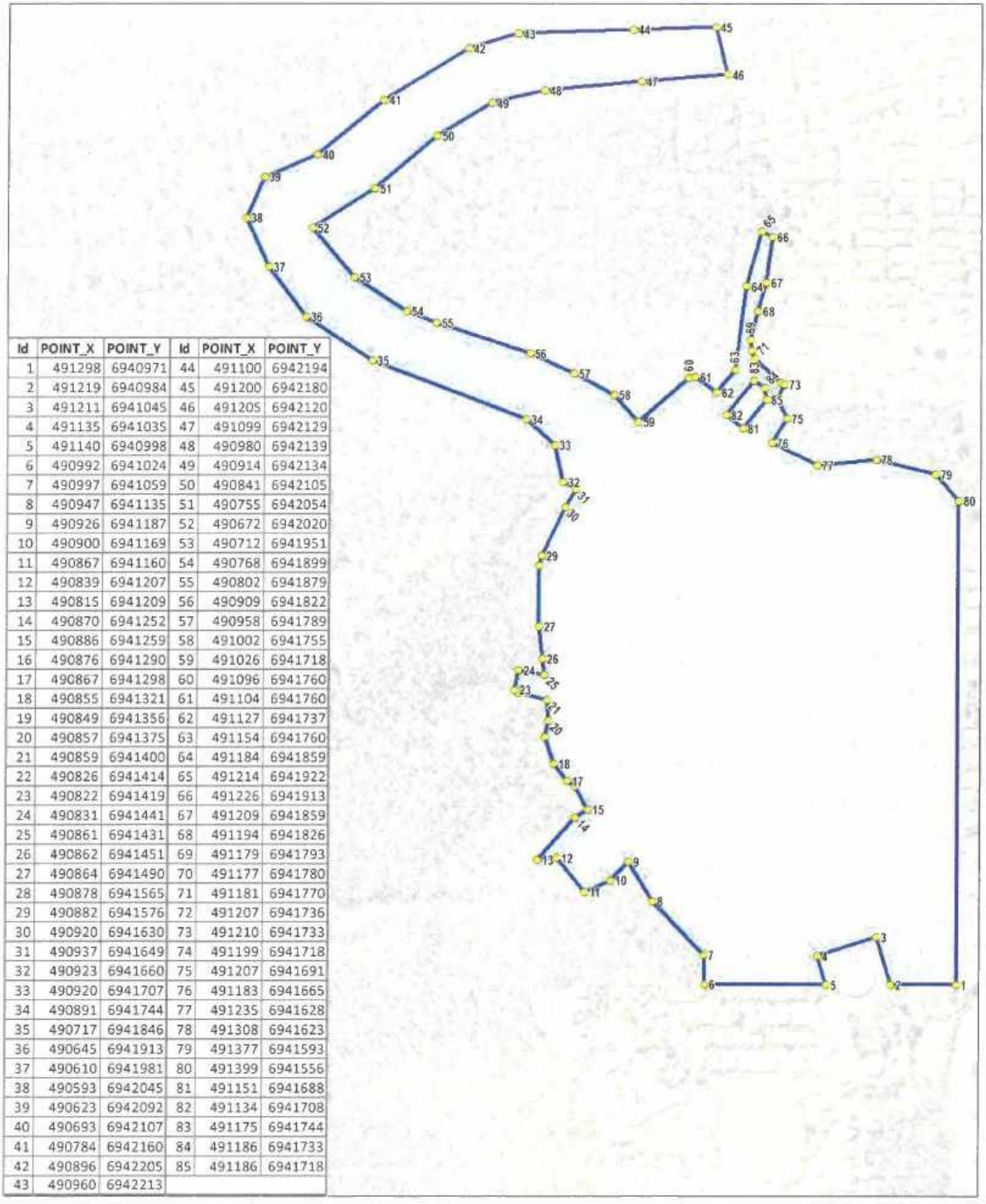
Name and position	Greg Manning Assistant Secretary Assessments (WA, SA, NT) and Post Approvals Branch
Signature	
Date of decision	12 June 2018

Definition

Clearance area: the area labelled as 'Clearance area' in Map 1.

Map 1 attached to the approval

See over.



Id	POINT_X	POINT_Y	Id	POINT_X	POINT_Y
1	491298	6940971	44	491100	6942194
2	491219	6940984	45	491200	6942180
3	491211	6941045	46	491205	6942120
4	491135	6941035	47	491099	6942129
5	491140	6940998	48	490980	6942139
6	490992	6941024	49	490914	6942134
7	490997	6941059	50	490841	6942105
8	490947	6941135	51	490755	6942054
9	490926	6941187	52	490672	6942020
10	490900	6941169	53	490712	6941951
11	490867	6941160	54	490768	6941899
12	490839	6941207	55	490802	6941879
13	490815	6941209	56	490909	6941822
14	490870	6941252	57	490958	6941789
15	490886	6941259	58	491002	6941755
16	490876	6941290	59	491026	6941718
17	490867	6941298	60	491096	6941760
18	490855	6941321	61	491104	6941760
19	490849	6941356	62	491127	6941737
20	490857	6941375	63	491154	6941760
21	490859	6941400	64	491184	6941859
22	490826	6941414	65	491214	6941922
23	490822	6941419	66	491226	6941913
24	490831	6941441	67	491209	6941859
25	490861	6941431	68	491194	6941826
26	490862	6941451	69	491179	6941793
27	490864	6941490	70	491177	6941780
28	490878	6941565	71	491181	6941770
29	490882	6941576	72	491207	6941736
30	490920	6941630	73	491210	6941733
31	490937	6941649	74	491199	6941718
32	490923	6941660	75	491207	6941691
33	490920	6941707	76	491183	6941665
34	490891	6941744	77	491235	6941628
35	490717	6941846	78	491308	6941623
36	490645	6941913	79	491377	6941593
37	490610	6941981	80	491399	6941556
38	490593	6942045	81	491151	6941688
39	490623	6942092	82	491134	6941708
40	490693	6942107	83	491175	6941744
41	490784	6942160	84	491186	6941733
42	490896	6942205	85	491186	6941718
43	490960	6942213			

Legend

Background land parcels

Clearance Area coordinate points

Clearance Area
The approval holder must not clear more than 39.75 hectares of Koala habitat. Clearing must not occur outside of the Clearance Area with the exception of works for rehabilitation or landscape activities approved by Ipswich City Council that will ultimately improve Koala habtiat.

Map 1

File ref. *8473 E F08_05 Map 1*

Date *17/05/2018*
Project *8473 E*

0 25 50 100 150 200 250 m

Scale (A4): 1:6,500 [GDA 1994 MGA Z56]

N

Stockland

saunders havill group

Appendix B

Fauna management and spotter catcher services reports

QUEENSLAND FAUNA CONSULTANCY Pty Ltd

June to July 2019

Fauna Management and Spotter/Catcher Services Report

Kalina Springfield Estate – Phase 2 and Parkside Drive Bund, Springfield

Report prepared for Golding Contractors Pty Ltd

Report prepared by

QLD Fauna Consultancy Pty Ltd

Phone: (07) 3376 9780

Fax: (07) 3376 9740

Email: fauna@qfc.com.au

Date:	09/07/19
Title:	Fauna Management and Spotter/Catcher Services Report Kalina Springfield Estate – Phase 2 and Parkside Drive Bund, Springfield.
Author/s:	Bryan Robinson, Ramona Rohwedder
Reviewed by:	Bryan Robinson
Field personnel:	Brett Bennett, Jonathan Pickvance, Rodney Whitaker, Jason Raguse
Status:	Final Report
Filed as:	QFC FMR Golding Kalina Springfield June-July 2019.doc

Contents

1 Introduction

Qld Fauna Consultancy Pty Ltd has been engaged by Golding Contractors Pty Ltd to conduct Fauna Spotter/Catcher and Fauna Management activities for works at Kalina Springfield Estate – Phase 2 Clearing and Parkside Drive Bund, Panorama Drive, Springfield.

All activities were conducted under the provisions of Rehabilitation Permit (WA0001454) issued to Queensland Fauna Consultancy Pty Ltd by the Department of Environment and Science (DES), formerly the Department of Environment and Heritage Protection (DEHP), approving the observation and relocation of protected animals.

This report covers clearance activities undertaken in June and July 2019.

2 Methodology

2.1 Clearance Investigations

A standard set of observational and active searching techniques were employed each day during clearance to ascertain and identify existing fauna values for each location. These include:

- Assessment of terrestrial microhabitats such as ground hollows, rock, burrows, leaf litter, fallen branches and bark exfoliations,
- Observation and assessment of occupancy of arboreal microhabitats such as tree hollows, fissures and exfoliations,
- Direct observation of active or exposed fauna,
- Identification of scats, tracks and scratchings to determine fauna present on the site.

All microhabitats were identified and subsequently inspected during clearance.

2.2 Specific methodology for Koalas *Phascolarctos cinereus*

Due to the specific requirements relating to the Koala the following techniques were employed at the clearance site to ascertain presence/absence status:

- Use of binoculars to inspect the crown, forks and trunk of trees;
- 'Drip zone' searches at the base of known food trees for the presence of scats to a radius equal to that of the crown of individual trees;
- Inspection of trunks for scratchings indicative of use by Koalas.

Recent changes to Koala management strategies highlighted in the *Nature Conservation (Koala) Conservation Plan 2006 and Management Program 2006-2016* have resulted in particular conditions placed on vegetation clearance involving the removal of Koala food trees.

Further provisions include the restriction of all clearance that may directly interfere with the tree a Koala is residing in. Koalas are to leave via their own volition and may not be interfered with by any means. Only when Koalas have vacated a tree can clearance operations include the host tree and surrounding vegetation.

2.3 Felling Procedures

Trees identified as having potential fauna values (such as hollows, fissures and exfoliating bark) were clearly marked for supervision during felling and inspected once felled. Efforts were made to determine potentially occupant species by way of investigations for indicative signs (scats, scratchings and tracks). Where no signs were found or occupant species undeterminable, machinery operators were instructed to fell trees in a manner directed at minimising the potential risk of injury to fauna.

Limbs were inspected, and the direction of felling determined with regards to safety of both machinery and operators. Considerations to potentially occupant fauna were assessed and felling procedures formulated. Felling procedures may have included the following techniques:

- Machinery blades were utilised to shake the tree in an attempt to disturb fauna out of hollows or fissures to determine species present.
- If fauna were present, the tree was either left standing overnight to allow the occupant animal(s) time to leave via their own volition, or if species detected were able to be encouraged from the tree by shaking or direct capture by a wildlife spotter(s). The tree was felled with considerations to potentially undetected fauna.
- Where possible potentially occupied trees were felled with the identified microhabitat receiving minimal contact on impact.
- Adjacent felled trees were utilised to absorb the impact of potential fauna bearing trees.

2.4 Communications during Clearance

Each spotter/catcher was equipped with a hand-held radio to make positive communications with machinery operators. Communications by radio and positive hand signals were utilised to indicate intentions to machinery operators.

3 Results

The following daily inventory details fauna-based investigation results for the clearing area. Inspection activities, location, habitat values and fauna found are documented where required. Refer to Appendix A for fauna photos.

Monday 24th June

- Pre-clearance activities carried out (refer to Methodology) at Kalina Springfield Estate – Phase 2
- Vegetation clearance carried out at Kalina Springfield Estate – Phase 2
- Refer to **Fauna Register** for fauna found
- 7 trees flagged
- Two personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 7 Nest (N) ☒Y ☐N Hollows (H) ☒Y ☐N Arboreal termitaria (ATM) ☒Y ☐N Other: Fissure, exfoliating bark No. & size of hollow/s (mm): 50-99: 3 150-199: 2
Terrestrial Microhabitats: Hollow logs ☒Y ☐N Woody debris ☒Y ☐N Rock piles ☒Y ☐N Burrows ☐Y ☒N Other: Termitaria, long grass, bark exfoliations
Aquatic habitat/s: Dam ☐Y ☒N Creek ☒Y ☐N (Dry) Wetland ☐Y ☒N

Tuesday 25th June

- Pre-clearance activities carried out (refer to Methodology) at Kalina Springfield Estate – Phase 2
- Vegetation clearance carried out at Kalina Springfield Estate – Phase 2
- Refer to **Fauna Register** for fauna found
- 3 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 3 Nest (N) ☐Y ☒N Hollows (H) ☐Y ☒N Arboreal termitaria (ATM) ☒Y ☐N Other: Possum Drey No. & size of hollow/s (mm): 0
Terrestrial Microhabitats: Hollow logs ☐Y ☒N Woody debris ☒Y ☐N Rock piles ☒Y ☐N Burrows ☐Y ☒N
Aquatic habitat/s: Dam ☐Y ☒N Creek ☐Y ☒N Wetland ☐Y ☒N

Wednesday 26th June

- Pre-clearance activities carried out (refer to Methodology) at Kalina Springfield Estate – Phase 2
- Vegetation clearance carried out at Kalina Springfield Estate – Phase 2
- 11 trees flagged
- Two personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 11 Nest (N) ☒Y ☐N Hollows (H) ☒Y ☐N Arboreal termitaria (ATM) ☒Y ☐N Other: Possum Drey, exfoliating bark No. & size of hollow/s (mm): 0-49: 13 50-99: 3 100-149: 1 200-249: 1
Terrestrial Microhabitats: Hollow logs ☒Y ☐N Woody debris ☒Y ☐N Rock piles ☒Y ☐N Burrows ☒Y ☐N Other: Bark exfoliations, artificial debris, dense leaf litter, termitaria
Aquatic habitat/s: Dam ☐Y ☒N Creek ☒Y ☐N (Dry) Wetland ☐Y ☒N
No Fauna Found

Thursday 27th June

- Pre-clearance activities carried out (refer to Methodology) at Kalina Springfield Estate – Phase 2
- Vegetation clearance carried out at Kalina Springfield Estate – Phase 2
- 11 trees flagged
- Two personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 11 Nest (N) ☒Y ☐N Hollows (H) ☐Y ☒N Arboreal termitaria (ATM) ☐Y ☒N Other: Exfoliating bark No. & size of hollow/s (mm): 0
Terrestrial Microhabitats: Hollow logs ☒Y ☐N Woody debris ☒Y ☐N Rock piles ☐Y ☒N Burrows ☒Y ☐N Other: Bark exfoliations, dense leaf litter, termitaria, long grass
Aquatic habitat/s: Dam ☐Y ☒N Creek ☒Y ☐N (Dry) Wetland ☐Y ☒N
No Fauna Found

Friday 28th June

- Pre-clearance activities carried out (refer to Methodology) at Kalina Springfield Estate – Phase 2
- Vegetation clearance carried out at Kalina Springfield Estate – Phase 2
- 9 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 9 Nest (N) ☒Y ☐N Hollows (H) ☐Y ☒N Arboreal termitaria (ATM) ☐Y ☒N Other: Exfoliating bark No. & size of hollow/s (mm): 0
Terrestrial Microhabitats: Hollow logs ☒Y ☐N Woody debris ☒Y ☐N Rock piles ☐Y ☒N Burrows ☒Y ☐N Other: Bark exfoliations, dense leaf litter, termitaria
Aquatic habitat/s: Dam ☐Y ☒N Creek ☒Y ☐N (Dry) Wetland ☐Y ☒N
No Fauna Found

Monday 1st July

- Pre-clearance activities carried out (refer to Methodology) at Kalina Springfield Estate – Phase 2
- Vegetation clearance carried out at Kalina Springfield Estate – Phase 2
- Refer to **Fauna Register** for fauna found
- 12 trees flagged
- Two personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 12
Nest (N) ☒Y ☐N Hollows (H) ☐Y ☒N Arboreal termitaria (ATM) ☐Y ☒N
Other: Exfoliating bark, Possum drey
No. & size of hollow/s (mm): 0
Terrestrial Microhabitats:
Hollow logs ☒Y ☐N Woody debris ☒Y ☐N Rock piles ☒Y ☐N Burrows ☐Y ☒N
Other: Dense leaf litter, bark exfoliations, termitaria
Aquatic habitat/s: Dam ☐Y ☒N Creek ☐Y ☒N Wetland ☐Y ☒N

Tuesday 2nd July

- Pre-clearance activities carried out (refer to Methodology) at Kalina Springfield Estate – Phase 2
- Vegetation clearance carried out at Kalina Springfield Estate – Phase 2
- 7 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 7
Nest (N) ☒Y ☐N Hollows (H) ☐Y ☒N Arboreal termitaria (ATM) ☒Y ☐N
Other: Exfoliating bark, Possum drey
No. & size of hollow/s (mm): 0-49: 16 50-99: 7 100-149: 2 150-199: 1
Terrestrial Microhabitats:
Hollow logs ☒Y ☐N Woody debris ☒Y ☐N Rock piles ☒Y ☐N Burrows ☐Y ☒N
Other: Dense leaf litter
Aquatic habitat/s: Dam ☐Y ☒N Creek ☒Y ☐N (Dry) Wetland ☐Y ☒N

Thursday 4th July

- Pre-clearance activities carried out (refer to Methodology) at Kalina Springfield Estate – Parkside Drive Bund
- Vegetation clearance carried out at Kalina Springfield Estate – Parkside Drive Bund
- Refer to **Fauna Register** for fauna found
- 1 tree flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 1 Nest (N) ☐Y ☒N Hollows (H) ☒Y ☐N Arboreal termitaria (ATM) ☐Y ☒N No. & size of hollow/s (mm): 50-99: 1
Terrestrial Microhabitats: Hollow logs ☐Y ☒N Woody debris ☒Y ☐N Rock piles ☐Y ☒N Burrows ☐Y ☒N Other: Dense leaf litter, bark exfoliations
Aquatic habitat/s: Dam ☐Y ☒N Creek ☒Y ☐N (Dry) Wetland ☐Y ☒N

Friday 5th July

- Pre-clearance activities carried out (refer to Methodology) at Kalina Springfield Estate – Parkside Drive Bund and Phase 2
- Vegetation clearance carried out at Kalina Springfield Estate – Parkside Drive Bund and Phase 2
- 3 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 3 Nest (N) ☐Y ☒N Hollows (H) ☒Y ☐N Arboreal termitaria (ATM) ☒Y ☐N No. & size of hollow/s (mm): 0-49: 5 50-99: 3 100-149: 1 150-199: 1
Terrestrial Microhabitats: Hollow logs ☐Y ☒N Woody debris ☐Y ☒N Rock piles ☐Y ☒N Burrows ☐Y ☒N Other: Termitaria
Aquatic habitat/s: Dam ☐Y ☒N Creek ☒Y ☐N (Dry) Wetland ☐Y ☒N Other: Gully
No Fauna Found

4 Fauna Register

			Capture Location						Release Details			Actions					
Collectors Name	**Date**	**Time**	**Capture Location**	**Latitude**	**Longitude**	**Count Type**	**Status**	***Common Name - Scientific Name***	**Count**	**Date**	**Latitude**	**Longitude**	**R1**	**R2**	**D**	**I**	**Release Location Description**	**Comments**
Brett Bennett	24/06/19	12:07	Kalina Springfield Estate – Phase 2	-27.6531	152.9090	Alive	Least Concern	Sugar Glider *Petaurus breviceps*	1	24/06/19	NA	NA	X				Self-relocation into adjacent tree.	
Jonathan Pickvance	25/06/19	11:46	Kalina Springfield Estate – Phase 2	-27.6506	152.9108	Alive	Least Concern	Common Ringtail Possum *Pseudocheirus peregrinus*	1	25/06/19	-27.6491	152.9120	X				Relocated in tree with dense foliage.	
Brett Bennett	01/07/19	09:30	Kalina Springfield Estate – Phase 2	-27.6499	152.9119	Alive	Least Concern	Common Brushtail Possum *Trichosurus vulpecula*	1	01/07/19	NA	NA	X				Self-relocation.	
Rodney Whitaker	01/07/19	14:12	Kalina Springfield Estate – Phase 2	-27.6512	152.9124	Alive	Least Concern	Squirrel Glider *Petaurus norfolcensis*	1	01/07/19	-27.6500	152.9127	X				Released in hollow-bearing tree.	
Jason Raguse	04/07/19	13:27	Kalina Springfield Estate – Parkside Drive Bund	-27.6547	152.9091	Alive	Least Concern	Native Stingless Bee *Tetragonula sp*.	1 Hive	04/07/19	-27.6548	152.9093	X				Log with hive retained and moved adjacent to site.	

5 Conclusion

All vegetation clearance was supervised as requested by Golding Contractors Pty Ltd and in accordance with stipulations as expressed in the *Nature Conservation (Koala) Conservation Plan 2017.*

No Koalas were observed during clearance. Fauna found during clearance works were relocated (or self-relocated) to adjacent localities comprising suitable refugia and feeding resources consistent with individual species requirements.

All supervised clearance activities were conducted with the full co-operation of onsite personnel and machinery operator/s.

6 References

Department of Environment and Heritage Protection (2017) *Nature Conservation (Koala) Conservation Plan 2017*. Queensland Government.

References for nomenclature

Menkhorst, K. & Knight, F. (2011) *A Field Guide to the Mammals of Australia*. 3rd edn. Oxford University Press, South Melbourne.

Strahan, R. And Van Dyck, S. (2008) *The Mammals of Australia*, 3rd edn Sydney: New Holland Publishers.

Queensland Museum (2007) *Wildlife of Greater Brisbane,* 2nd edition, Brisbane: Queensland Museum Publishers.

7 Appendix A: Fauna Photos

Common Ringtail Possum
Pseudocheirus peregrinus

Native Stingless Bee
Tetragonula sp.

Appendix C

SAT survey results – raw data

Site: SAT 2

Tree ID	Scientific name	Common name	DBH (mm)	Scat
1	*Eucalyptus fibrosa*	Broad-leaved Ironbark	170	Nil
2	*Eucalyptus moluccana*	Gum-topped Box	150	Nil
3	*Eucalyptus moluccana*	Gum-topped Box	120	Nil
4	*Eucalyptus fibrosa*	Broad-leaved Ironbark	240	Nil
5	*Corymbia citriodora*	Spotted Gum	120	Nil
6	*Eucalyptus moluccana*	Gum-topped Box	170	Nil
7	*Eucalyptus moluccana*	Gum-topped Box	290	Nil
8	*Eucalyptus moluccana*	Gum-topped Box	225	Nil
9	*Eucalyptus fibrosa*	Broad-leaved Ironbark	335	Nil
10	*Eucalyptus fibrosa*	Broad-leaved Ironbark	320	Nil
11	*Eucalyptus moluccana*	Gum-topped Box	130	Nil
12	*Eucalyptus fibrosa*	Broad-leaved Ironbark	180	Nil
13	*Eucalyptus moluccana*	Gum-topped Box	170	Nil
14	*Eucalyptus moluccana*	Gum-topped Box	210	Nil
15	*Eucalyptus moluccana*	Gum-topped Box	180	Nil
16	*Eucalyptus siderophloia*	Northern Grey Ironbark	100	Nil
17	*Eucalyptus fibrosa*	Broad-leaved Ironbark	250	Nil
18	*Eucalyptus moluccana*	Gum-topped Box	310	Nil
19	*Eucalyptus moluccana*	Gum-topped Box	140	Nil
20	*Eucalyptus moluccana*	Gum-topped Box	215	Nil
21	*Eucalyptus moluccana*	Gum-topped Box	210	Nil
22	*Eucalyptus moluccana*	Gum-topped Box	130	Nil
23	*Eucalyptus moluccana*	Gum-topped Box	120	Nil
24	*Eucalyptus moluccana*	Gum-topped Box	220	Nil
25	*Eucalyptus moluccana*	Gum-topped Box	115	Nil
26	*Corymbia citriodora*	Spotted Gum	110	Nil
27	*Corymbia citriodora*	Spotted Gum	140	Nil
28	*Eucalyptus moluccana*	Gum-topped Box	320	Nil
29	*Eucalyptus moluccana*	Gum-topped Box	170	Nil
30	*Eucalyptus moluccana*	Gum-topped Box	150	Nil
Total scats recorded				**Nil**
Percentage of scats recorded				**0.00%**
Level of Koala usage (based on East Coast Med-High Activity Category)				**Low**

Site: SAT 3

Tree ID	Scientific name	Common name	DBH (mm)	Scat
1	*Eucalyptus moluccana*	Gum-topped Box	170	Scat
2	*Eucalyptus moluccana*	Gum-topped Box	300	Scat
3	*Eucalyptus moluccana*	Gum-topped Box	240	Scat
4	*Eucalyptus moluccana*	Gum-topped Box	230	Nil
5	*Eucalyptus moluccana*	Gum-topped Box	130	Nil
6	*Eucalyptus moluccana*	Gum-topped Box	195	Nil
7	*Corymbia citriodora*	Spotted Gum	130	Nil
8	*Eucalyptus moluccana*	Gum-topped Box	150	Nil
9	*Corymbia citriodora*	Spotted Gum	190	Nil
10	*Eucalyptus moluccana*	Gum-topped Box	140	Nil
11	*Eucalyptus moluccana*	Gum-topped Box	150	Nil
12	*Eucalyptus moluccana*	Gum-topped Box	310	Nil
13	*Eucalyptus moluccana*	Gum-topped Box	150	Nil
14	*Eucalyptus moluccana*	Gum-topped Box	190	Nil
15	*Eucalyptus moluccana*	Gum-topped Box	230	Nil
16	*Corymbia citriodora*	Spotted Gum	155	Nil
17	*Eucalyptus moluccana*	Gum-topped Box	110	Nil
18	*Eucalyptus moluccana*	Gum-topped Box	150	Nil
19	*Eucalyptus moluccana*	Gum-topped Box	130	Nil
20	*Angophora leiocarpa*	Smooth-barked Apple	170	Nil
21	*Eucalyptus moluccana*	Gum-topped Box	140	Nil
22	*Corymbia citriodora*	Spotted Gum	130	Nil
23	*Corymbia citriodora*	Spotted Gum	120	Nil
24	*Corymbia citriodora*	Spotted Gum	220	Nil
25	*Corymbia citriodora*	Spotted Gum	130	Nil
26	*Eucalyptus moluccana*	Gum-topped Box	290	Nil
27	*Eucalyptus moluccana*	Gum-topped Box	200	Nil
28	*Eucalyptus moluccana*	Gum-topped Box	170	Nil
29	*Eucalyptus moluccana*	Gum-topped Box	150	Nil
30	*Eucalyptus moluccana*	Gum-topped Box	180	Nil
Total scats recorded				**3**
Percentage of scats recorded				**10.00%**
Level of Koala usage (based on East Coast Med-High Activity Category)				**Low**

Site: SAT 4

Tree ID	Scientific name	Common name	DBH (mm)	Scat
1	*Eucalyptus crebra*	Narrow-leaved Ironbark	210	Nil
2	*Eucalyptus fibrosa*	Broad-leaved Ironbark	180	Nil
3	*Eucalyptus crebra*	Narrow-leaved Ironbark	220	Nil
4	*Eucalyptus fibrosa*	Broad-leaved Ironbark	275	Nil
5	*Eucalyptus moluccana*	Gum-topped Box	180	Nil
6	*Eucalyptus fibrosa*	Broad-leaved Ironbark	110	Nil
7	*Eucalyptus fibrosa*	Broad-leaved Ironbark	150	Nil
8	*Eucalyptus fibrosa*	Broad-leaved Ironbark	120	Nil
9	*Corymbia citriodora*	Spotted Gum	100	Nil
10	*Eucalyptus moluccana*	Gum-topped Box	190	Nil
11	*Eucalyptus fibrosa*	Broad-leaved Ironbark	280	Nil
12	*Eucalyptus fibrosa*	Broad-leaved Ironbark	330	Nil
13	*Eucalyptus fibrosa*	Broad-leaved Ironbark	180	Nil
14	*Eucalyptus fibrosa*	Broad-leaved Ironbark	380	Nil
15	*Eucalyptus fibrosa*	Broad-leaved Ironbark	155	Nil
16	*Eucalyptus fibrosa*	Broad-leaved Ironbark	380	Nil
17	*Eucalyptus fibrosa*	Broad-leaved Ironbark	260	Nil
18	*Eucalyptus fibrosa*	Broad-leaved Ironbark	120	Nil
19	*Eucalyptus crebra*	Narrow-leaved Ironbark	250	Nil
20	*Corymbia citriodora*	Spotted Gum	220	Nil
21	*Eucalyptus fibrosa*	Broad-leaved Ironbark	240	Scat
22	*Eucalyptus crebra*	Narrow-leaved Ironbark	130	Nil
23	*Eucalyptus fibrosa*	Broad-leaved Ironbark	110	Nil
24	*Eucalyptus fibrosa*	Broad-leaved Ironbark	110	Nil
25	*Eucalyptus fibrosa*	Broad-leaved Ironbark	340	Nil
26	*Eucalyptus fibrosa*	Broad-leaved Ironbark	240	Nil
27	*Eucalyptus crebra*	Narrow-leaved Ironbark	180	Nil
28	*Eucalyptus moluccana*	Gum-topped Box	275	Nil
29	*Eucalyptus fibrosa*	Broad-leaved Ironbark	175	Nil
30	*Eucalyptus crebra*	Narrow-leaved Ironbark	320	Nil
Total scats recorded				**1**
Percentage of scats recorded				**3.33%**
Level of Koala usage (based on East Coast Med-High Activity Category)				**Low**

Site: SAT 5

Tree ID	Scientific name	Common name	DBH (mm)	Scat
1	*Eucalyptus moluccana*	Gum-topped Box	100	Nil
2	*Eucalyptus moluccana*	Gum-topped Box	105	Nil
3	*Lophostemon suaveolens*	Swamp Box	120	Nil
4	*Eucalyptus moluccana*	Gum-topped Box	130	Nil
5	*Corymbia intermedia*	Pink Bloodwood	120	Nil
6	*Eucalyptus moluccana*	Gum-topped Box	110	Nil
7	*Eucalyptus moluccana*	Gum-topped Box	140	Nil
8	*Eucalyptus moluccana*	Gum-topped Box	150	Nil
9	*Eucalyptus moluccana*	Gum-topped Box	130	Nil
10	*Eucalyptus moluccana*	Gum-topped Box	120	Nil
11	*Eucalyptus moluccana*	Gum-topped Box	130	Nil
12	*Acacia disparrima*	Hickory Wattle	100	Nil
13	*Eucalyptus moluccana*	Gum-topped Box	130	Nil
14	*Eucalyptus propinqua*	Grey Gum	160	Nil
15	*Eucalyptus crebra*	Narrow-leaved Ironbark	340	Nil
16	*Acacia disparrima*	Hickory Wattle	100	Nil
17	*Eucalyptus moluccana*	Gum-topped Box	110	Nil
18	*Eucalyptus moluccana*	Gum-topped Box	110	Nil
19	*Corymbia citriodora*	Spotted Gum	250	Nil
20	*Eucalyptus moluccana*	Gum-topped Box	110	Nil
21	*Eucalyptus moluccana*	Gum-topped Box	100	Nil
22	*Eucalyptus crebra*	Narrow-leaved Ironbark	380	Nil
23	*Eucalyptus crebra*	Narrow-leaved Ironbark	240	Nil
24	*Eucalyptus moluccana*	Gum-topped Box	110	Nil
25	*Eucalyptus moluccana*	Gum-topped Box	130	Nil
26	*Eucalyptus moluccana*	Gum-topped Box	100	Nil
27	*Corymbia citriodora*	Spotted Gum	190	Nil
28	*Corymbia citriodora*	Spotted Gum	240	Nil
29	*Eucalyptus crebra*	Narrow-leaved Ironbark	360	Nil
30	*Eucalyptus moluccana*	Gum-topped Box	100	Nil
Total scats recorded				**Nil**
Percentage of scats recorded				**0.00%**
Level of Koala usage (based on East Coast Med-High Activity Category)				**Low**

Site: SAT 6

Tree ID	Scientific name	Common name	DBH (mm)	Scat
1	*Eucalyptus siderophloia*	Northern Grey Ironbark	260	Nil
2	*Eucalyptus crebra*	Narrow-leaved Ironbark	250	Nil
3	*Lophostemon suaveolens*	Swamp Box	115	Nil
4	*Lophostemon suaveolens*	Swamp Box	110	Nil
5	*Lophostemon suaveolens*	Swamp Box	130	Nil
6	*Eucalyptus tereticornis*	Forest Red Gum	120	Nil
7	*Lophostemon suaveolens*	Swamp Box	100	Nil
8	*Lophostemon suaveolens*	Swamp Box	110	Nil
9	*Eucalyptus siderophloia*	Northern Grey Ironbark	330	Nil
10	*Lophostemon suaveolens*	Swamp Box	110	Nil
11	*Lophostemon suaveolens*	Swamp Box	120	Nil
12	*Eucalyptus crebra*	Narrow-leaved Ironbark	250	Nil
13	*Lophostemon suaveolens*	Swamp Box	120	Nil
14	*Eucalyptus crebra*	Narrow-leaved Ironbark	150	Nil
15	*Lophostemon suaveolens*	Swamp Box	150	Nil
16	*Eucalyptus crebra*	Narrow-leaved Ironbark	350	Nil
17	*Lophostemon suaveolens*	Swamp Box	130	Nil
18	*Lophostemon suaveolens*	Swamp Box	130	Nil
19	*Lophostemon suaveolens*	Swamp Box	135	Nil
20	*Lophostemon suaveolens*	Swamp Box	100	Nil
21	*Acacia concurrens*	Black Wattle	100	Nil
22	*Eucalyptus crebra*	Narrow-leaved Ironbark	210	Nil
23	*Lophostemon suaveolens*	Swamp Box	110	Nil
24	*Eucalyptus crebra*	Narrow-leaved Ironbark	390	Nil
25	*Eucalyptus crebra*	Narrow-leaved Ironbark	200	Nil
26	*Eucalyptus siderophloia*	Northern Grey Ironbark	280	Nil
27	*Lophostemon suaveolens*	Swamp Box	140	Nil
28	*Eucalyptus propinqua*	Grey Gum	120	Nil
29	*Eucalyptus propinqua*	Grey Gum	210	Nil
30	*Lophostemon suaveolens*	Swamp Box	120	Nil
Total scats recorded				**Nil**
Percentage of scats recorded				**0.00%**
Level of Koala usage (based on East Coast Med-High Activity Category)				**Low**

Site: SAT 8

Tree ID	Scientific name	Common name	DBH (mm)	Scat
1	*Eucalyptus tereticornis*	Forest Red Gum	250	Nil
2	*Lophostemon suaveolens*	Swamp Box	200	Nil
3	*Eucalyptus crebra*	Narrow-leaved Ironbark	190	Nil
4	*Lophostemon suaveolens*	Swamp Box	200	Nil
5	*Alphitonia excelsa*	Soap Tree	200	Nil
6	*Lophostemon suaveolens*	Swamp Box	235	Nil
7	*Lophostemon suaveolens*	Swamp Box	275	Nil
8	*Alphitonia excelsa*	Soap Tree	125	Nil
9	*Acacia fimbriata*	Fringed Wattle	110	Nil
10	*Eucalyptus tereticornis*	Forest Red Gum	265	Nil
11	*Eucalyptus tereticornis*	Forest Red Gum	200	Nil
12	*Lophostemon suaveolens*	Swamp Box	160	Nil
13	*Acacia leiocalyx*	Early Flowering Wattle	180	Nil
14	*Lophostemon suaveolens*	Swamp Box	130	Nil
15	*Lophostemon suaveolens*	Swamp Box	110	Nil
16	*Lophostemon confertus*	Brush Box	200	Nil
17	*Acacia disparrima*	Hickory Wattle	150	Scat
18	*Eucalyptus crebra*	Narrow-leaved Ironbark	260	Nil
19	*Lophostemon suaveolens*	Swamp Box	160	Nil
20	*Eucalyptus crebra*	Narrow-leaved Ironbark	390	Scat
21	*Corymbia intermedia*	Pink Bloodwood	270	Scat
22	*Eucalyptus crebra*	Narrow-leaved Ironbark	290	Nil
23	*Lophostemon suaveolens*	Swamp Box	180	Nil
24	*Eucalyptus crebra*	Narrow-leaved Ironbark	110	Nil
25	*Eucalyptus crebra*	Narrow-leaved Ironbark	100	Nil
26	*Eucalyptus siderophloia*	Northern Grey Ironbark	235	Nil
27	*Eucalyptus siderophloia*	Northern Grey Ironbark	260	Nil
28	*Lophostemon suaveolens*	Swamp Box	200	Nil
29	*Eucalyptus siderophloia*	Northern Grey Ironbark	300	Nil
30	*Eucalyptus siderophloia*	Northern Grey Ironbark	280	Scat
Total scats recorded				**4.00**
Percentage of scats recorded				**13.33%**
Level of Koala usage (based on East Coast Med-High Activity Category)				**Low**

Appendix D

Offset securement for EPBC 2014/7306

Certification of a voluntary declaration on 230 CH311791 – Ipswich City Council

Australian Government
Department of the Environment and Energy

Our reference: EPBC 2014/7306

Jordan Bachmann
Senior Environmental Planner
Saunders Havill Group
9 Thompson Street
BOWEN HILLS QLD 4006

Dear Ms Bachmann

Environmental Audit Site Visit – *Springview Village One, Springfield, Ipswich City, QLD*
EPBC 2014/7306

I write in relation to the site visit of the Springview Village One project, undertaken by the Department of the Environment and Energy on 25 September 2018.

Officers of the department conducted a site visit of the project area and reviewed compliance with approval Conditions 1 and 2 under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

During the site visit, officers did not identify any non-compliance with the EPBC Act approval conditions.

We appreciate the opportunity to meet with you and your team and would like to thank you for your time and assistance in facilitating the site visit.

Please continue to maintain accurate records of all activities associated with, or relevant to, the conditions of the approval so that they can be made available to the department on request. Such documents may be subject to audit and be used to verify compliance.

If you would like to discuss this matter further please contact Ms Kim Morgan on (02) 6274 2425 or email audit@environment.gov.au.

Yours sincerely

Dwaine McMaugh
Director
Environmental Audit Section
Office of Compliance

7 November 2018

Appendix E

Offset Management Plan

Koala Habitat Offset (EPBC 2014/7306)

Prepared by Cherish the Environment Foundation Limited

Offset Management Plan

Koala Habitat Offset
40-100 Harrison Road Calvert
EPBC 2014/7306

Stockland Development Pty Ltd

Prepared by Cherish the Environment Foundation Limited

20 April 2018

Cherish the Environment Foundation Limited
Hayden Centre, 37 South Street, Ipswich Qld 4305
PO Box 191, Ipswich Qld 4305
ABN 41 154 545 589

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Details of published document versions and revisions:

Version	Date	Document details, revision information
1.0	20 April 2018	First issue/publication

Table of contents

1. Introduction

This Offset Management Plan (OMP) has been prepared to accompany an application to request land owned by Cherish The Environment Foundation Limited, declared as a Category A area representing a Voluntary Declaration (V-Dec) over the land under the *Vegetation Management Act 1999* (Qld) (VMA).

This plan is associated with a new residential development known as Springview Village One and located at Springfield, Ipswich, Queensland (EPBC 2014/7306). The residential development is approved under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the delivery of this offset of part of the approval conditions.

The conditional approval under the EPBC Act was granted to Cherish Enterprises Pty Ltd on 22 August 2016 and provides for a clearance area of 39.75 ha and an offset of 65 ha to compensate for the impact on listed threatened species and communities (sections 18 & 18A), specifically koala habitat.

Condition 2 of the approval requires the approval holder to secure the offset area for long-term protection under a legal mechanism. A V-Dec administered under the VMA is the nominated legal mechanism and this report accompanies the V-Dec application for the offset area.

Condition 3 of the approval requires the approval holder to achieve a gain in koala habitat quality across the offset compared to baseline offset koala habitat quality and extent. This OMP provides details of overarching management intent, actions and outcomes to satisfy the requirements of Condition 4 and Condition 5 of the EPBC Act approval and support the request for a V-Dec under the VMA.

The V-Dec area incorporates 65 hectares of Lot 230 CH311791 (refer Figure 1) which forms part of the Little Liverpool Range Corridor. The offset for EPBC 2014/7306 is entirely land based and is facilitated through an agreement between Cherish The Environment Foundation Limited and Stockland Development Pty Ltd.

1.1. OMP information requirements

Condition 4 of the EPBC Act approval triggers the requirement for an OMP to be implemented (refer extract below).

4. *The approval holder must have an Offset Management Plan in place. The Offset Management Plan must:*
   a) *include monitoring and be designed so that the results are adequate to inform adaptive management and demonstrate whether the outcomes and milestones required by these conditions are on track to be achieved (before they are due) and have been achieved (at the time they are due);*
   b) *include contingency measures to mitigate the risks of not achieving the outcomes and milestones required by these conditions;*
   c) *be prepared in consultation with a suitably qualified person, and include written evidence of how the suitably qualified person's advice has been considered;*
   d) *be in accordance with the Koala Habitat Offset Report; and*
   e) *demonstrate how the plan is consistent with the Koala Conservation Advice.*

This OMP provides all information required under Condition 4 and a cross-reference table is provided in Appendix A.

Figure 1: Offset Area Location

40-160 Harrison Road, Calvert

1.2. Consultation

This OMP is authored by Cherish The Environment Foundation Limited who has experience in managing koala habitat in South East Queensland and authored the Koala Habitat Offset Report (2016) for this site (approval Condition 4 (d)). A review of the OMP was completed by consultants Saunders Havill Group who have experience in coordinating offset management plans seeking to deliver an improvement of koala habitat.

Saunders Havill Group's advice has included guidance and direction around establishing workable and achievable management actions to support koala habitat improvement. Additionally, monitoring and reporting timeframes have been streamlined with Saunders Havill Group's input based on their experience with delivering annual compliance reports.

2. Description of the Offset Management Area

2.1. Property and Ownership Details

The site is located in the Ipswich City Council LGA and development is subject to the provisions of the Ipswich City Council Planning Scheme, henceforth referred to as the 'Planning Scheme'. The site is shown on the Zoning Map 49 of the Planning Scheme and is in the Rural E (Special Land Management) land use themes. The intent for this zone is detailed in Division 8 for Rural E (Special Land Management). In summary, the key outcome that is sought for the Rural E (Special Land Management) Zone supports sustainable use and conservation.

Table 1: Property details

Name of Registered Owner(s) / Licensee/s or Trustee/s	Cherish The Environment Foundation Limited
Postal Address	c/- PO Box 191, Ipswich, Qld, 4305
Real Property Description	Lot 230 CH311791
Area (ha)	65 hectares
Local Government Area	Ipswich City Council
Tenure Type	Freehold

Table 2: Registered interests

Parcel (lot and plan)	Type of Registered Interest	Registered interest holder's name and contact details
Lot 230 CH311791	Owner	Cherish The Environment Foundation Limited, refer above

2.2. Legally Secured Offset Details

The offset area satisfies criteria for declaration under the Guide to Voluntary Declarations under the VMA. The V-Dec area is considered an:

- Area of high nature conservation value, specifically: (d) an area that makes a significant contribution to the conservation of biodiversity.

The certification of a V-Dec over the offset area will permit the landholder to undertake actions that are in accordance with this plan which are based on the intent to achieve a gain in koala habitat quality. Actions contrary to those stipulated in this plan or prohibited under the VMA due to the Category A area designation are not supported or permitted. Once the gain in koala habitat quality required under the EPBC Act approval has been achieved, the objectives of the OMP and V-Dec will be considered as fulfilled.

2.3. Site Description

2.3.1 Site Location and Tenure

The offset site is located on Harrison Road and Rosewood Laidley Road, Calvert, Queensland, approximately 1 km north of Calvert and 33 km west of Ipswich. The offset site comprises of one 65 ha freehold land parcel identified as Lot 230 CH311791.

The site is bounded by unformed roads on the southern and eastern boundaries, and part of an unformed road dissects the south-western corner of the lot. The boundaries of the offset site are shown and tabulated in Figure 2.

Cherish The Environment Foundation Limited purchased the land in 2016 and it has historically been used for grazing purposes.

2.3.2 Climate

Climate data from Bureau of Meteorology (BoM) Amberley site Number 040004 shows annual mean maximum and minimum temperatures of 27.3°C and 13.9°C respectively, and an annual mean rainfall of 865.3 mm. January has mean maximum and minimum temperatures of 31.1 °C and 19.6 °C, respectively, and July has mean maximum and minimum temperatures of 21.2°C and 5.3°C, respectively (BoM 2016). On average, the wettest month is December (mean rainfall of 120.9 mm) and the driest month is August (mean rainfall of 29 mm) (BoM 2016).

2.3.3 Topography, Soils and Geology

The topography of the site is undulating with rounded ridge lines and flat areas. Slopes are generally less than 15% with some steeper ridge lines. The highest point is a ridge line to the north west of the property at 130 m ASL and the lowest is the south east at 70 m ASL. Drainage is generally west to east in three distinct ephemeral drainage lines.

The geology of the site consists of lands formed on Jurassic Marburg formations (Geological Survey of Queensland 1:100,000 Ipswich Geological Map (DME 2008)).

Pre-clearing Broad Vegetation Groups of Queensland (EHP 2012a) is shown to consist of land zones 9-10. Land zone 9 is described as fine grained sedimentary rocks, generally with little or no deformation and usually forming undulating landscapes. Siltstones, mudstones, shales, calcareous sediments, and labile sandstones are typical rock types although minor interbedded volcanics may occur. Includes a diverse range of fine textured soils of moderate to high fertility, predominantly Vertosols, Sodosols, and Chromosols (EHP 2012b). Land zone 10 is described as medium to coarse grained sedimentary rocks, with little or no deformation, forming plateaus, benches and scarps. Includes siliceous (quartzose) sandstones, conglomerates and minor interbedded volcanics, and springs associated with these rocks. Excludes overlying Cainozoic sand deposits (land zone 5). Soils are predominantly shallow Rudosols and Tenosols of low fertility, but include sandy surfaced Kandosols, Kurosols, Sodosols and Chromosols (EHP 2012b).

Soils mapping indicates the site comprises of sodosols, chromosols and kandosols (*Ipswich Soil Management Guidelines 2015* Ipswich City Council, Ipswich Rivers Improvement Trust).

Figure 2: Bounding coordinates for offset area

Id	MGA X	MGA Y	X	Y
1	451877.15	6942260.86	152.5122634548[illegible]	-27.6428863618326
2	452414.38	6942176.58	152.5176060[illegible]	-27.643666246524[illegible]
3	452226.83	6940979.25	152.5156572[illegible]	-27.654468455621[illegible]
4	451899.88	6941032.379	152.5123446834[illegible]	-27.653977197454[illegible]
5	451777.51	6941495.219	152.5111226732[illegible]	-27.649794575499[illegible]
6	451821.98	6941780.86	152.5115849496[illegible]	-27.647217560843[illegible]
7	451801.34	6941784.139	152.5113258449[illegible]	-27.647187222700[illegible]
8	451883.77	6941014.62	152.5121806481[illegible]	-27.654436940824[illegible]
9	451756.99	6941494.15	152.5109146056[illegible]	-27.649803492146[illegible]
10	451686.93	6941046.799	152.5101863683	-27.653839410522[illegible]

2.4. Existing Vegetation and Habitat

Overall, the site is in relatively good ecological condition. A reduced level of grazing compared to historical intensities and few recent fires have contributed to an improving ecosystem with the major weed threat being lantana which is scattered throughout the site. Heavier infestations in previously cleared drainage lines and open areas require management. Other disturbances include some erosion along tracks and drainage lines however this is typical of a rural property with varying slopes.

The Commonwealth's Protected Matters Report identified several Matters of National Environmental Significance (MNES) under the EPBC Act that may occur in the locality (Appendix 1). The results of the report are summarised below:

- Two (2) listed Threatened Ecological Communities (TEC);
- A total of 59 threatened species; and
- A total of 30 listed migratory species.

A review of the Wildlife Online database identified that one vulnerable species (koala) as scheduled under the *Nature Conservation (Wildlife) Regulation 2006* has previously been recorded within the 10 km search area (Appendix 2). The koala is the only protected matter known to utilise the offset site.

Overstocked forest areas on this site are represented by two distinct age-classes: an older class of defective and senescing trees that were considered too poor for historical harvesting; and a class of regrowth that developed following the last harvest event. Without follow-up treatment, the regeneration event has resulted in gradual thickening and the reduction in sunlight reaching ground layers. When a forest has a healthy range of age-classes it is necessarily more open (because eucalypts require sunlight and soil disturbance to regenerate) and has a strongly developed strata of groundcover species (because greater levels of sunlight are able to reach the ground). The herbaceous groundcover layer is critical to protecting the soil from water erosion. Further, a structurally diverse forest is able to support a greater range of native plants.

2.4.1 Vegetation Communities

The Regulated Vegetation Management Map (DNRME 2018) presents the distribution and status of remnant regional ecosystems as gazetted under the VMA (refer Figure 3). The *Vegetation Management Act class* (i.e. endangered, of concern, least concern) is based on the Department of Natural Resources, Mines and Energy's (DNRME) assessment of the pre-clearing and remnant extent of a regional ecosystem and is as per the *Vegetation Management Regulation 2012*.

The VMA defines a community as 'remnant' when the vegetation exhibits more than 50% of the undisturbed predominant canopy, averages more than 70% of the undisturbed height and is composed of species characteristic of the undisturbed predominant canopy of the given vegetation community. The vegetation community surveys identified that the site primarily comprises remnant vegetation which generally correspond to remnant areas mapped and the proposed changes by DNRME.

The Vegetation Management Supporting Map (refer Figure 4) shows the site contains areas of Category X (non-remnant) and Category B (remnant) vegetation containing composite regional ecosystems including Of Concern (12.9-10.3, 12.9-10.7), Least Concern (12.9-10.2, 12.9-10.5, 12.9-10.19). Regrowth (Category C) is also proposed to be mapped across the site. A description of each of these regional ecosystems is present in Table 3.

A field assessment was undertaken by Ipswich City on 26 April 2016 to validate the desktop information. Vegetation values were found to generally correlate with the DNRME mapping.

Table 3: Regional ecosystems mapped as occurring in the offset area

Regional ecosystem	Description
12.9-10.2 Least concern	Corymbia citriodora subsp. variegata open forest or woodland usually with *Eucalyptus crebra*. Other species such as *Eucalyptus tereticornis*, *E. moluccana*, *E. acmenoides* and *E. siderophloia* may be present in scattered patches or in low densities. Understorey can be grassy or shrubby. Shrubby understorey of *Lophostemon confertus* (whipstick form) often present in northern parts of bioregion. Occurs on Cainozoic and Mesozoic sediments. (BVG1M: 10b)
12.9-10.3 Of concern	*Eucalyptus moluccana +/- Corymbia citriodora subsp. variegata* open forest. Other species include *Eucalyptus siderophloia* or *E. crebra*, *E. tereticornis*. Understorey generally sparse but can become shrubby in absence of fire. Occurs on Cainozoic and Mesozoic sediments, especially shales. Prefers lower slopes. (BVG1M: 13d)
12.9-10.5 Least concern	Shrubby woodland complex. More widely distributed and abundant species include *Corymbia trachyphloia subsp. trachyphloia*, *C. citriodora subsp. variegata*, *Eucalyptus crebra*, *E. fibrosa subsp. fibrosa*, *E. major*, *Angophora leiocarpa*, *E. helidonica*. Understorey of sclerophyllous shrubs. Localised occurrences of *Eucalyptus baileyana*, *E. pilularis*, *Corymbia henryi*, *E. dura*, *E. decorticans* (extreme west of bioregion), *E. taurina*, *Angophora woodsiana*, *Lysicarpus angustifolius* and *Lophostemon confertus*. Tends to shrubland or monospecific woodland of species such as *Eucalyptus dura* on shallow lithosols. Occurs on quartzose sandstone scarps and crests. (BVG1M: 9h)
12.9-10.7 Of concern	*Eucalyptus crebra +/- E. tereticornis*, *Corymbia tessellaris*, *Angophora leiocarpa*, *E. melanophloia* woodland. Occurs on Cainozoic and Mesozoic sediments. (BVG1M: 13c)
12.9-10.19 Least concern	*Eucalyptus fibrosa subsp. fibrosa* woodland *+/- Corymbia citriodora subsp. variegata*, *E. acmenoides* or *E. portuensis*, *Angophora leiocarpa*, *E. major*. Understorey often sparse. Localised occurrences of *Eucalyptus sideroxylon*. Occurs on Cainozoic and Mesozoic sediments. (BVG1M: 12a)

2.4.2 Threatened Species Habitat

Essential Habitat mapping under the VMA does not designate any areas as such however field surveys have confirmed the site contains koala habitat.

Koala habitat can be broadly defined as any forest or woodland containing species that are known koala feed trees, or shrubland with emergent food trees (DoE 2014). Koala feed trees are generally defined as trees of the Corymbia, Melaleuca, Lophostemon or Eucalyptus genera (DERM 2010). More specifically, within the Ipswich region, Ipswich City Council has identified the following species as preferred koala food trees to be retained/planted for the koala: *Eucalyptus tereticornis*, *Corymbia citriodora*, *Eucalyptus crebra*, *Eucalyptus grandis*, *Eucalyptus microcorys*, *Eucalyptus moluccana*, *Eucalyptus propinqua*, *Eucalyptus seeana* and *Lophostemon confertus* (ICC 2014a). REs present on-site (refer Table 3) contain *Eucalyptus moluccana*, *Corymbia citriodora* and *E. crebra* with *E. tereticornis* and *E.siderophloia* presence within the community.

Additionally, koala scats were identified within the offset area during the koala faecal pellet survey completed by OWAD Environment on 7 May 2016 utilising a koala scat dog. The results of the survey indicate a significant amount of koala activity on the property originating from multiple individuals.

2.4.3 Koala Importance and Values

The site is mapped as Core Habitat in Ipswich City Council's (ICC) Nature Conservation Strategy, and is within a large contiguous vegetation area of predominantly eucalypt forest. While there is little data of koala populations and extents, a scat survey undertaken in 2016 revealed koala presence within the offset site.

Figure 3: Regulated Vegetation Management Map

05/04/2018 13:51:15
Lot 230 Plan CH3 11791

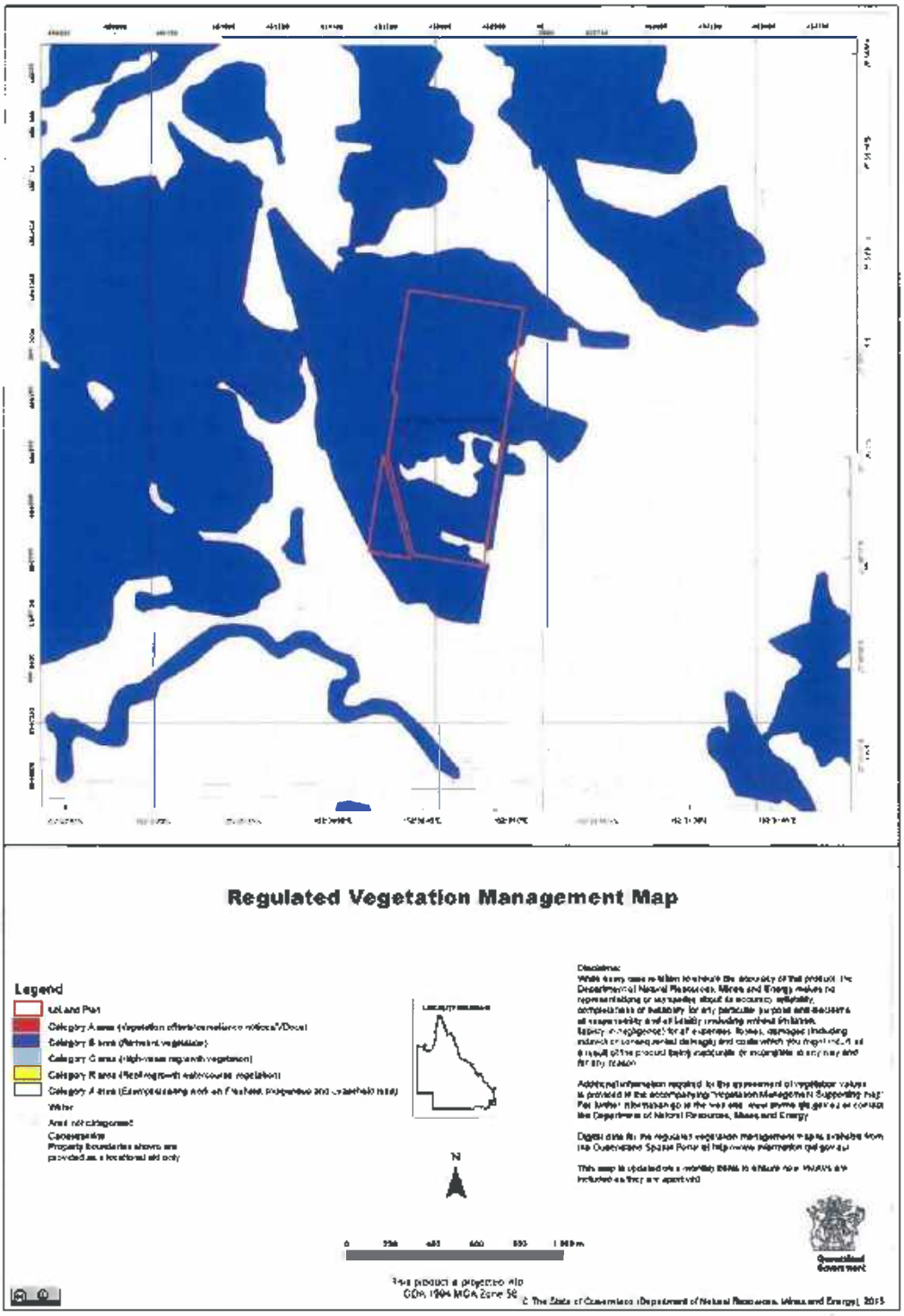
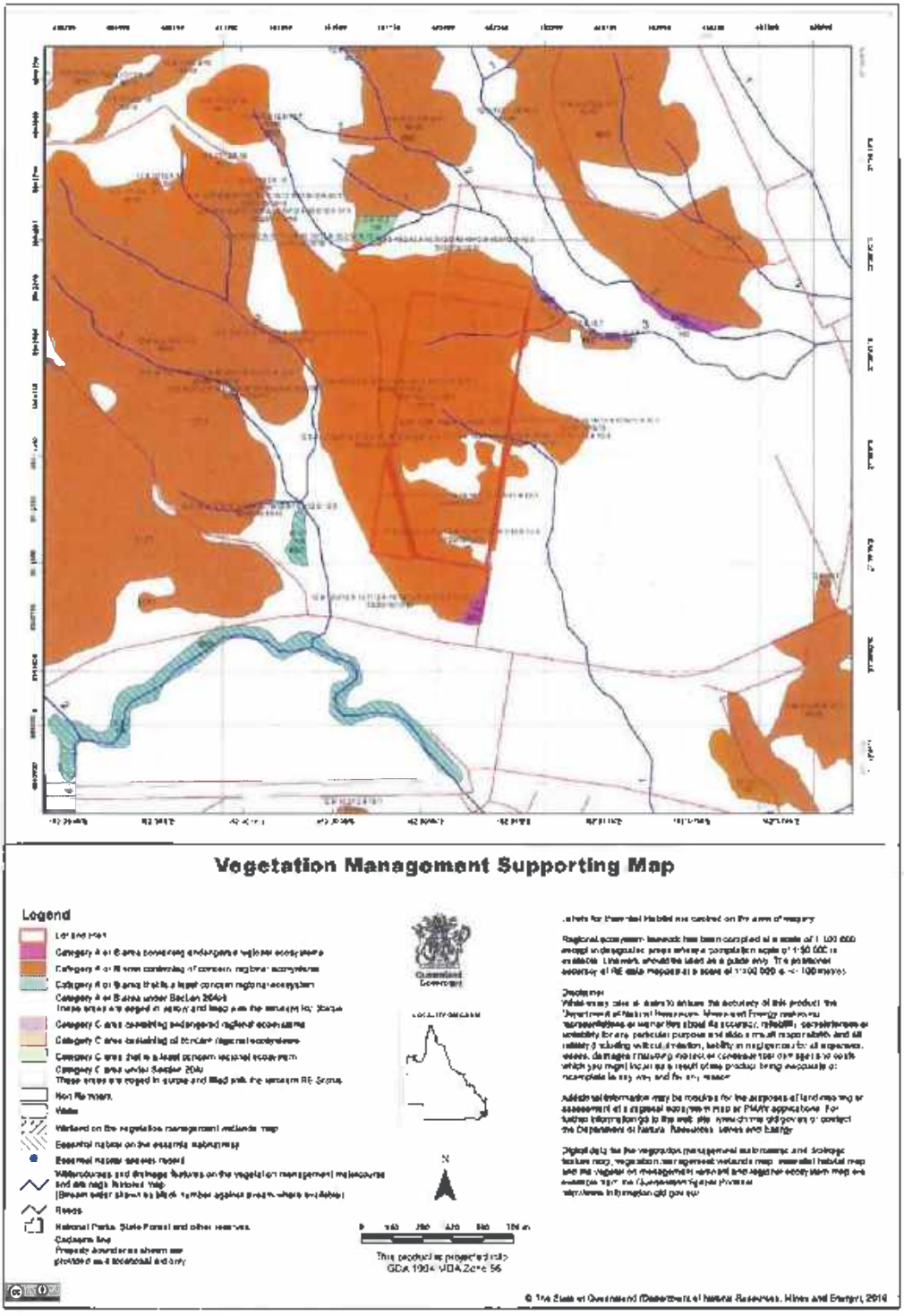


Figure 4: Vegetation Management Supporting Map

05/04/2018 13:51:15
Lot: 230 Plan: CH311791



2.4.4 Threats

Koalas and koala habitats within the proposed offset footprint are currently subject to threats. Key threats include:

- wild dog attacks;
- habitat degradation through weed invasion;
- unauthorised public access;
- erosion caused by vehicular access and loss of vegetation cover; and
- habitat loss from fire.

A field survey identified two (2) flora species declared under the *Land Protection (Pest and Stock Route Management) Act 2002* and two (2) Weeds of National Significance (WoNS) species were recorded on-site. No pest fauna species were recorded on-site during the field survey however a dog scat was found which may be from a wild dog.

Weeds present a concern to the site habitat quality, although only scattered and light infestations were noted. Weeds present and of concern are:

- *Lantana camara*, lantana, Class 3, WoNS; and
- *Opuntia stricta*, common prickly pear, Class 2, WoNS.

2.5. Site Values and Risks

Existing Land Use Protections

Section 43B of the EPBC Act provides for the continuation of existing land uses without the requirement for approval under the Act. Historically the site has been used for rural purposes – including grazing. Historical land uses have resulted in vegetation clearing throughout the flatter areas of the site, with the overall extent of clearing being low. The field investigation also found historical and recent evidence of clearing as a result of logging and thinning, which was observed within the flatter areas of the site and on the moderate to steeper slopes.

Additionally, no exclusion fencing was encountered within the site. On the basis of Section 43B of the EPBC Act and the historical and continuing land uses associated with the site, it is considered there is provision for ongoing clearing of koala habitat to be lawful under the Act. Specifically, provided that routine management activities and grazing levels do not exceed historical use patterns, it is understood that ongoing clearing of koala habitat associated with historical land uses would be exempt from requiring approval under the EPBC Act.

Under the Queensland VMA framework, there are three protection categories mapped across the site: Category B (remnant vegetation), Category X (non-remnant vegetation) and proposed Category C (regrowth vegetation). Category X vegetation is unregulated within the context of State Government planning instruments. Proposed Category C is part of proposed amendments to the VMA and is yet to be passed as legislation.

According to the Ipswich City Council Planning Scheme, the site is located within the Rural Zone E. Based on the Planning Scheme, the existing land use within the site would conform to animal husbandry, which is defined as 'the use of premises for the non-intensive keeping, breeding, grazing and depasturing of animals, if such use does not normally require the importation of feed'. The land use and Planning Scheme zoning are discussed below within the context of Local Government regulation of vegetation clearing. Within Rural E areas animal husbandry is an exempt land use and can therefore be undertaken without the need for Council approval. However, this does not necessarily enable the exempt clearing of vegetation from Local Government regulations. Based on the applicable Planning Scheme provisions, key considerations applicable to the level of protection for koala habitat on site relate to slope and vegetation size (i.e. circumference at 1.2 m above the ground).

The Planning Scheme allows for vegetation to be cleared in the E zone on the site without Local Government approval, provided that clearing does not:

- Occur on land with a slope of 15% or more; and
- Involve a species that is listed as threatened or near threatened under State or Commonwealth legislation; and
- Involve the removal of trees with a circumference of greater than 50 cm at 1.2 m above the ground.

Within the Rural E Zone, vegetation that does not meet all of the above criteria may still be cleared. However, in these instances vegetation clearing would be contingent upon an application being made to, and approved by Local Government.

Planning Protection Mechanisms Summary

Based on a review of the Commonwealth, State and Local planning and environmental regulations applicable to the site, it has been found that koala habitat on site is exempt from clearing regulation at all levels of government to the extent that it complies with the following.

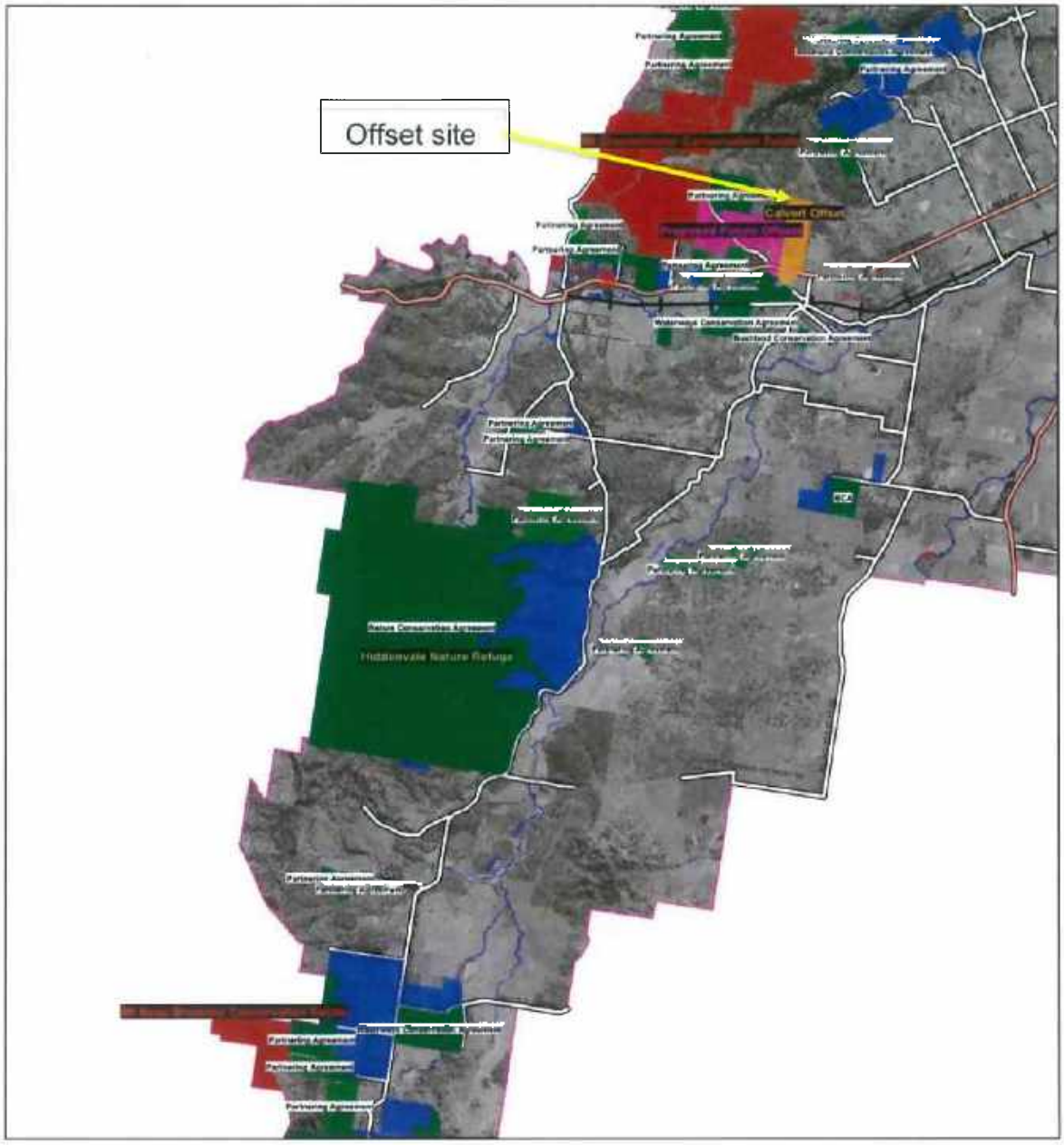
- Clearing is undertaken for the purposes of facilitating the ongoing historical land use of grazing/animal husbandry. This land use may be intensified to the extent that it is consistent with historical use patterns; and
- Clearing is limited to Category X areas, as shown on the Regulated Vegetation Management Map and Proposed Regulated Vegetation Management Map; and
- Clearing does not:
    - Occur on land with a slope of 15% or more; and
    - Involve removal of a species that is listed as threatened or near threatened under State or Commonwealth legislation; and
    - Involve the removal of trees with a circumference of greater than 50 cm at 1.2 m above the ground.

Connectivity and Regional Context

The Ipswich City Council Nature Conservation Strategy identified three terrestrial regional corridors that support mobile species. These corridors are larger landscape connections, linking core habitats. The site specifically sits in an area identified under the Ipswich LGA Conservation Strategy as a Priority Conservation Area.

The site is located within the Little Liverpool Range Corridor which connects to the Main Range National Park to the south. Large areas of the corridor are currently protected through a range of mechanisms including Local Government ownership for conservation purposes (Grandchester Conservation Estate), Nature Refuge (Old Hiddenvale), State Conservation Park (Mr Beau Brummell Regional Park), land owner by QLD Trust For Nature and voluntary conservation agreements. Figure 5 provides mapping of this regional context and identifies areas identified for future formal protection to establish key linkages within the regional Corridor.

Figure 5: Regional Context Map



3. Koala Habitat Assessment Tool

The focus of this OMP is to deliver a gain in koala habitat quality in accordance with the milestones and outcomes required under the EPBC Act approval. Table 4 specifies which koala habitat attributes are expected to improve in line with each milestone and outcome listed below.

Milestone #1: *By five years after the commencement of construction, a gain in Koala habitat quality to nine must be achieved in more than 50% of the offset area through rehabilitation.*

Outcome #1: *By 20 years after the commencement of construction, there must be a gain in Koala habitat quality to nine across the whole offset area.*

Outcome #2: *For the life of the approval, the approval holder must ensure no net loss in the extent of Koala habitat in the offset area.*

Table 4: Koala habitat assessment tool

Attribute	Coastal*	Attribute Score	Milestone #1 offset area score	Outcome #1 offset area score
Koala Occurrence	Evidence of one or more koalas within the last 2 years	+2	+2	+2
	Evidence of one or more koalas within 2km of the edge of the Impact area within the last 5 years	+1		
	None of the above	0		
Vegetation Composition	Has forest or woodland with 2 or more known koala food tree species in the canopy, OR 1 food tree species that alone accounts for >50% of the vegetation in the relevant strata	+2	+2	+2
	Has forest or woodland with only 1 species of known koala food tree present in the canopy	+1		
	None of the above	0		
Habitat Connectivity	Area is part of a contiguous landscape >500ha	+2	+2	+2
	Area if part of a contiguous landscape <500ha, but >300ha	+1		
	None of the above	0		
Key Existing Threats	Little or no evidence of koala mortality from vehicle strike or dog attack at present in areas that score 1 or 2 for koala occurrence.	+2	+2	+2
	Evidence of infrequent or irregular koala mortality from vehicle strike or dog attack at present in areas that score 1 or 2 for koala occurrence.	+1		
	Evidence of frequent or regular koala mortality from vehicle strike or dog attack in the study area at present, or Areas which score 0 for koala occurrence and have a significant dog or vehicle threat present.	0		

Attribute	Coastal*	Attribute Score	Milestone #1 offset area score	Outcome #1 offset area score
Recovery Value	Habitat is likely to be important for achieving the interim recovery objectives for the relevant context, as outlined in the koala Assessment Tool.	+2	+1	+1
	Uncertainty exists as to whether the habitat is important for achieving the interim recovery objectives for the relevant context, as outlined in the koala Assessment Tool.	+1		
	Habitat is unlikely to be important for achieving the interim recovery objectives for the relevant context, as outlined in the koala Assessment Tool.	0		
Koala habitat assessment tool score			9	9

4. Offset Strategy

4.1. Management Objectives

The overarching management intent for the offset area is the removal of weeds, reduction of threats and protection of native vegetation to prevent the loss of biodiversity, maintain ecological processes and improve koala habitat quality. The successful implementation of proposed management mechanisms will assist with the creation of a self-sustaining, continuous area of high quality koala habitat supporting their population within the local landscape. This will help to achieve ICC's vision to create a locally significant conservation area within the Little Liverpool Range Corridor.

Natural regeneration and regrowth will be encouraged in open/sparse areas and areas of remnant vegetation will be managed to enhance and sustain their ecological condition and local environmental values to reduce their exposure to threatening processes including weed invasion, pests, pollution, clearing and disturbance.

4.2. Management Outcomes

The management strategies aim to protect and improve the value of the offset area as koala habitat. This will be primarily achieved through rehabilitation of the offset area (weed control) and implementation of other strategies such as restricting human and livestock access and fire management within the offset area. Management of the site will be undertaken for a minimum of ten years with ultimate weed control to achieve less than 5% total weed coverage. The intensity of management will be driven by the results of condition assessments completed on a regular basis. These assessments will be used to inform future determinations of koala habitat quality and are anticipated to show an improvement within five years across 50% of the offset area.

The dominant feature regarding ecological benefit within the offset area will be achieved through rehabilitation of the vegetation communities, thereby improving the quality of the habitats provided. It is expected that the greatest ecological benefit/improvement of the offset site may be attained within a year. This result is possible because as soon as the area is gazetted as an offset, it will be subject to a targeted management regime including ongoing management of weeds and grazing livestock as well as protection from self-assessable vegetation clearing.

The management outcome for the declared area is that the vegetation within meets the criteria, thresholds and descriptions outlined in the definition of remnant vegetation in the VMA. Additionally, that the entire declaration area is controlled and managed for the removal and suppression of declared weed species. Management outcomes are consistent with the requirements EPBC Act *Environmental Offsets Policy* and generally in accordance with management outcomes of the *Queensland Environmental Offsets Policy 2014*, specifically in terms of:

- Size of the offset area
- Location
- Regional Ecosystem Type
- Habitat Values
- Condition
- Landscape Features, including connectivity
- Biodiversity Values
- Environmental Values

5. Offset Management Actions

The management actions that will deliver improved koala habitat quality are detailed below. The landholder is responsible for undertaking the management actions in a timely, coordinated and lawful manner. These management actions are in accordance with those stipulated in the Koala Habitat Offset Report (6 June 2016).

5.1. Erosion Mitigation

Significant active erosion points must be repaired where possible and feasible (i.e. likely to succeed or be effective). Repair work involves re-profiling (where appropriate) and re-directing overland water flow away from the erosion path using cross-drainage. Cross-drainage should be located along all permanent access tracks at appropriate intervals. Allowance should be made for future maintenance of cross-drainage throughout the site.

Excessive soil disturbance can also exacerbate erosion problems by exposing larger areas of sodic subsoil. Re-profiling should only be carried out on significant erosion sites or areas that will be utilised for long-term access or water storage. Wherever possible, access tracks or new infrastructure will be located over erosion repair zones to limit disturbance of vegetation.

A broad improvement in erodibility of the forest soils can be achieved by improving the structure of the forest. Good forest structure is characterised by a healthy representation of the different forest strata. Broadly, this structural diversity can be represented with a bell curve of age-classes:

- a representation of young trees regenerating from seed, lignotubers or coppice;
- a series of old, senescing trees that provide hollows for habitat; and
- a range of developing saplings and mature trees in the middle age classes.

Timing

Erosion mitigation will be undertaken as necessary and will be determined by the landholder and/or project superintendent.

5.2. Access Infrastructure

The construction or re-opening of tracks will be necessary to facilitate weed management, infill planting establishment and maintenance, fence line construction and maintenance, pest management and fire protection activities.

Access tracks are generally located along the centre of major ridgelines, avoiding, where possible, the need to disturb grass cover or vegetation. Some gully crossings will be required where ridge access is not available. The final placement of tracks will be partly determined by requirements for fence line repair/construction, strategic fire management planning outcomes and possible access from neighbouring properties.

Tracks are constructed (or re-profiled) using an excavator with batter bucket. Cross-drainage is constructed at appropriate intervals. The preferential outcome is a grassed track with cross-drainage.

Timing

Access infrastructure will be established and maintained as necessary and will be determined by the landholder and/or project superintendent.

5.3. Weed Management

An intensive, 5-year weed management program is proposed for the remnant and regrowth parts of the offset area. The primary weed treatment process will begin as soon as practical, with follow-up weed treatment undertaken annually. After the first three years, the required management intensity should reduce significantly.

Methods of weed treatment will be applied as appropriate for the species and the growth stage of the plant:

- Lantana: in most instances, lantana will be treated using the cut-stump method.
    - Where larger infestations occur, foliar spraying will be used as primary treatment and cut-stump as a follow-up method.
- Prickly pear: in all instances, prickly pear will be stem injected with tordon.
- Climbing asparagus fern: basal bark application of Fluroxypyr and diesel (as per off label use permit).
- Fireweed: spot spraying with appropriate herbicide (in autumn/winter) and hand-pulling/bagging in spring/summer.

Once the intensive weed management actions have been completed, a reduced intensity will follow for the duration of the approval period.

Timing

Weed management will occur in two phases throughout the approval period (refer Table 5):

1. Intensive weed management until year 6; and
2. Ad-hoc weed management from year 6 until the end of the approval period.

Table 5: Weed management schedule of activities

Project year/s	Activity	Description	No.	Unit	Timing
1	Primary weed treatment	Spot spray, patch spray and cut stump treatment of weeds.	65	ha	Jun-18
2	Follow-up weed treatment	Spot spray, patch spray and cut stump treatment of weeds.	65	ha	Jun-19
3	Follow-up weed treatment	Spot spray, patch spray and cut stump treatment of weeds.	65	ha	Jun-20
4	Follow-up weed treatment	Spot spray, patch spray and cut stump treatment of weeds.	65	ha	Jun-21
5	Follow-up weed treatment	Spot spray, patch spray and cut stump treatment of weeds.	65	ha	Jun-22
6-24	Follow-up weed treatment	Control activities as deemed necessary by landholder or project superintendent	65	ha	As required

5.4. Fire Management

At this stage in the project, fire management activities have been limited to fire exclusion and asset protection. Prescribed burning (for fuel reduction or regeneration initiation) is restricted within the V-Dec area until a Fire Management Plan is developed. This plan will need to be reviewed/endorsed or similar by the rural fire brigade or other relevant stakeholder prior to implementation.

Timing

Development and implementation of a Fire Management Plan is scheduled for completion by the end of 2018. In the meantime strategic fire access tracks should be planned and established in consultation with neighbours where possible along the property boundary or at other strategic locations. Fire management actions will be undertaken throughout the approval period.

5.5. Infill Planting

A small, one hectare patch of open, grassy area in the south-east corner of Lot 230 CH311971 will require infill planting. Approximately 400 trees typical of regional ecosystems 12.9-10.2 and 12.9-10.3 will be planted in the area.

Timing

Infill planting is scheduled to occur within 12 months of the V-Dec being certified and maintenance will occur until year 2022 as detailed in Table 6.

Table 6: Infill planting schedule of activities

Project year	Milestone	Activity	Description	No.	Unit	Timing (indicative)
1	1	Site preparation	Mark-out and spot cultivate plant sites	1	ha	Nov-17
	2	Pre-plant spray	Pre-plant weed control	1	ha	Mar-18
		Planting	Plant 400 trees (fertilise and mulch)	1	ha	Mar-18
	3	Post-plant weed control	Weed control around trees (dribble bar)	1	ha	May-18
		Post-plant slash	Annual slash around infill planting for fire protection and grass suppression.	1	ha	May-18
	4	Post-plant weed control	Weed control around trees (dribble bar)	1	ha	Nov-18
2	5	Post-plant slash	Annual slash around infill planting for fire protection and grass suppression.	1	ha	May-19
		Post-plant weed control	Weed control around trees (dribble bar)	1	ha	May-19
	6	Post-plant weed control	Weed control around trees (dribble bar)	1	ha	Jan-20
3	7	Post-plant slash	Annual slash around infill planting for fire protection and grass suppression.	1	ha	Apr-20
		Post-plant weed control	Weed control around trees (dribble bar)	1	ha	Apr-20
	8	Post-plant weed control	Weed control around trees (dribble bar)	1	ha	Jan-21
4	9	Post-plant slash	Annual slash around infill planting for fire protection and grass suppression.	1	ha	Oct-21
		Post-plant weed control	Weed control around trees (dribble bar)	1	ha	Oct-21
5	10	Post-plant slash	Weed control around trees (dribble bar)	1	ha	Oct-22
		Post-plant weed control	Annual slash around infill planting for fire protection and grass suppression.	1	ha	Oct-22

5.6. Pest and Animal Management

There is no internal fencing on the property. Boundary fencing will be constructed, repaired and maintained to exclude domestic stock and pests. Pest animals such as wild dogs will be addressed via a control program that will be implemented at the discretion of the landholder.

Timing

This fencing is scheduled to be established/constructed within 12 months of the V-Dec being certified and must be in place for the duration of the approval.

A wild dog control program will occur ad hoc during the approval period.

5.7. Ongoing Management

It is intended that the offset area will be managed to enhance the biodiversity values to maximise koala habitat at a lesser intensity after five years. All management actions will be continued as necessary to support high value koala habitat quality and meet the EPBC Act approval objectives and milestone.

5.8. Adaptive Management

Monitoring (refer section 7) may reveal that management actions are not achieving the levels of success anticipated and review of the management actions may be warranted.

Without knowing which management actions may falter during the approval period, specific adaptive management actions will be determined as required and incorporated into future versions/updates of this OMP. Ongoing communication between Cherish The Environment Foundation Limited and Stockland Development Pty Ltd on the status and achievements of the offset area will be an important part of identifying the need for adaptive management measures.

5.9. Consistency with Koala Conservation Advice

The Koala Conservation Advice (2012) identifies the following threats to koala habitat:

> *The main identified threats to this species are loss and fragmentation of habitat, vehicle strike, disease, and predation by dogs. Drought and incidences of extreme heat are also known to cause very significant mortality, and post-drought recovery may be substantially impaired by the range of other threatening factors.*

This OMP and associated V-Dec will protect 65 ha of koala habitat from loss and fragmentation that may otherwise occur if the land was utilised to its historical grazing intensity. The likelihood of predation by dogs/feral animals will also be reduced with these management actions in place as a control program is supported as part of landholder property management.

6. Roles and Responsibilities

The key personnel involved in delivering improved koala habitat quality across the offset area are detailed in Table 7.

Table 7: Roles and Responsibilities

Position	Roles	Responsibilities
Landholder	Cherish the Environment Foundation Limited Company Secretary: Bryce Hines – bhines@cherishtheenvironment.com.au Ph: 07 3810 6558	Implementation of this OMP including management actions and reporting requirements.
Project Superintendent	Geoff Faulkner Faulkner Consulting Pty Ltd	Coordinate the implementation of this OMP as instructed by the landholder.
Rehabilitation Contractor	Private Forestry Service Queensland Inc 8 Fraser Road Gympie QLD 4570 pfsq@bigpond.com Ph: 07 5483 6535	Undertake infill planting and maintenance as directed by the project superintendent or landholder.
Emergency Contact	Private Forestry Service Queensland Inc 8 Fraser Road Gympie QLD 4570 pfsq@bigpond.com Ph: 07 5483 6535	Provide assistance to contractors/site visitors in case of emergency.

7. Monitoring and Reporting

7.1. Monitoring Objectives

The core objective of this OMP is to maintain and enhance the koala habitat values throughout the declaration area. This will be primarily achieved through weed management works. Other management actions (section 5) will also contribute however these are viewed as secondary to weed management. As such, monitoring and reporting will be undertaken to confirm if this primary objective has been or is going to be achieved. This includes both short term and long term criteria to measure success. The area, which is already functioning as koala habitat, is to be managed through weed removal and cooperative fire management and predator exclusion.

Photo point monitoring sites will be established and photos and locations of sites will be included in reporting. Reporting will also include:

- Other monitoring results (e.g. transect surveys, BioCondition, survey details etc)
- Presence/absence of koalas — this may include the results of ad hoc observations or targeted surveys
- Recommended amendments to the management activities/schedule, restrictions or monitoring and reporting requirements.

Monitoring of weed management and predators allows for:

- A review of the pre-established performance indicators for measuring the success of the weed removal and control;
- Ensure level of protection for existing identified native vegetation inclusive of that which has naturally regenerated;
- Review the rate of spread or contraction of weed infestation under the control program;
- Identification of new weed threats or other factors which may be affecting areas designated for rehabilitation and;
- Monitor presence of species, frequency and distribution of predators.

7.2. Habitat Improvement Monitoring

In accordance with Condition 3 of the approval, to compensate for the impacts to koala habitat, the following outcomes and milestone must be achieved. Success will be measured by comparing baseline values for koala habitat quality and extent to future data. The outcomes and milestone are:

Milestone #1: *By five years after the commencement of construction, a gain in Koala habitat quality to nine must be achieved in more than 50% of the offset area through rehabilitation.*

Outcome #1: *By 20 years after the commencement of construction, there must be a gain in Koala habitat quality to nine across the whole offset area.*

Outcome #2: *For the life of the approval, the approval holder must ensure no net loss in the extent of Koala habitat in the offset area.*

The assessment of habitat improvement will be interpreted from the various datasets collected throughout each year and presented in the annual compliance report (refer section 7.5).

7.3. Benchmark

The weed management actions aim to improve the flora and fauna values of the area through weed removal and promoting native species growth and will provide the greatest positive impact on koala habitat. The following breakdown of works are proposed to achieve the improvement:

- Primary weed removal
- Secondary weed removal
- Minimum 90% weed removal from existing vegetation
- 10% or less weeds present on-site
- Photo point sites established within the offset area including infill planting areas.

Following on from the schedule of activities provided in Tables 5 and 6, monitoring and reporting of weed removal works will be undertaken annually within the works area. Post treatment inspections within six months of action will be undertaken to assess the success rate and inform future works.

7.4. Timeframes

The frequency of monitoring events for each management action will vary and the following schedule sets out the anticipated timing (refer Table 8). All completed management actions will be captured in the annual reporting (refer section 7.5).

Table 8: Monitoring events schedule

Management action	Monitoring action	Timeframe	
		Trigger-based	Recurring
Erosion mitigation	• inspect completed mitigation measures	• approximately one month post completion; and • approximately two weeks post first minor rainfall event; and • approximately two weeks post first major rainfall event	• annual report inspection
Access infrastructure	• inspect existing and new access infrastructure	Existing access infrastructure: • approximately two weeks post major rainfall event New access infrastructure: • approximately one month post completion; and • approximately two weeks post first minor rainfall event; and • approximately two weeks post first major rainfall event	• annual report inspection
Weed management	• assess weed infestations and success of weed	Weed reduction measures: • approximately six months post completion	• annual report inspection

	reduction measures		
Fire management	• assess suitability of fire breaks and access tracks	• approximately one month post fire event	• annual report inspection
Infill planting	• assess success of infill planting	• approximately six months post completion	• annual report inspection
Pest and animal management	• assess presence of pests and suitability of boundary fencing • undertake pest management	• ad hoc as part of property management	• annual report inspection

Future revisions of this OMP may amend this schedule, for example to reflect contemporary changes to monitoring and management actions.

7.5. Reporting

A report detailing the OMP implementation, management actions undertaken in accordance with the OMP and success of such actions will be completed annually by Cherish The Environment Foundation Limited and issued to Stockland Development Pty Ltd. The two entities will negotiate the timing of this report as it must align with other reporting timeframes stipulated in the approval.

The annual report prepared by Cherish The Environment Foundation Limited will include details of any emergent risk issues and associated responses, and recommendations to amend the OMP if necessary. Reports completed in years 3 to 6 and 18 to 21 must include commentary around whether or not the milestones and outcomes are on track to be achieved. If the available information indicates the habitat improvements are not on track and do not appear to be moving towards achieving the milestone and outcomes, an OMP review may be necessary.

7.6. Contingency Measures

The nature of any management action failures will inform suitable contingency measures that need to be applied. The annual report prepared by Cherish The Environment Foundation Limited will provide an indication of the likelihood of the management actions supporting the achievement of the outcomes and milestone. If the likelihood is low, a review of the OMP may be necessary and the contingency measures will be explored accordingly.

8. Risks to Offset Management Objectives

8.1. Risk Assessment

The following risk assessment matrix (refer Table 9) was used to complete the risk assessment detailed in Table 10.

Table 9: Risk Assessment Matrix

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

Likelihood and consequence

Qualitative measure of likelihood (how likely is it that this event/circumstances will occur after management actions have been put in place/are being implemented)	
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances
Qualitative measure of consequences (what will be the consequence/result if the issue does occur)	
Minor	Minor risk of failure to achieve the plan's objectives. Results in short term delays to achieving plan objectives, implementing low cost, well characterised corrective actions.
Moderate	Moderate risk of failure to achieve the plan's objectives. Results in short term delays to achieving plan objectives, implementing well characterised, high cost/effort corrective actions.
High	High risk of failure to achieve the plan's objectives. Results in medium-long term delays to achieving plan objectives, implementing uncertain, high cost/effort corrective actions.
Major	The plan's objectives are unable to be achieved, with significant legislative, technical, ecological and/or administrative barriers to attainment that have no evidenced mitigation strategies.
Critical	The plan's objectives are unable to be achieved, may include widespread and severe environmental harm, with no evidenced mitigation strategies.

Table 10: Risk Assessment for Offset Management Actions

Management objective/desired outcome	Event or circumstance	Likelihood consequence and risk level			Management actions/risk reduction measures	Residual risk level			Detection/monitoring activity/ies	Feasible/effective corrective actions
		L	C	RL		L	C	RL		
To achieve EPBC condition class 9/10 by 2023 across 50% of the offset area. AND To achieve EPBC condition class 9/10 by 2038 across the whole offset area.	Weed control failure	2	1	L	• Implement weed control action plan for the project	2	1	L	• Quarterly and ad hoc monitoring of weed species	• Increased weed control where necessary
	Grazing as a result of fences being damaged	3	3	M	• Construction and repair of boundary fencing • Regular inspections to ensure boundary fencing is maintained and no grazing occurs	2	1	L	• Quarterly and ad hoc monitoring of all fences	• Stock removed within seven business days when practical, otherwise as soon as possible under the circumstances
	Increased pest population	3	2	M	• Timely implementation of animal control management programs	3	1	L	• Ad hoc observations as part of property management	• Undertake animal control events
	Lack of serviceable tracks for vehicular access	3	2	M	• Construct and maintain tracks to a level where they can be easily accessed by 4WD vehicles and trailers and rural fire service vehicles • Ensure no tracks are dead ends and all tracks interconnect within the property	2	2	M	• Degraded or inaccessible tracks to be reported when identified	• Tracks to be repaired as soon as possible under the circumstances
	Infill planting failure	3	2	M	• Planted to AFS standards • Weed control and management actions in accordance with the management plan	2	2	M	• Regular inspections during establishment phase	• Remedial actions as soon as possible

Management objective/desired outcome	Event or circumstance	Likelihood consequence and risk level			Management actions/risk reduction measures	Residual risk level			Detection/monitoring activity/ies	Feasible/effective corrective actions
		L	C	RL		L	C	RL		
	Fire	2	2	M	• Fire breaks established and maintained ▪ Cooperative fire management plan established with neighbouring properties	2	2	M	• Monitoring of fuel load	• Maintain fire breaks and establish new fire breaks where deemed necessary

9. Appendices

Appendix A: Approval Condition 4 cross-reference table

Appendix B: Protected Matters Search Tool (2018)

Appendix C: Wildlife Online search results (2018)

Appendix A: Approval Condition 4 cross-reference table

EPBC Act Condition 4 extract:

4. *The approval holder must have an Offset Management Plan in place. The Offset Management Plan must:*
   a) *include monitoring and be designed so that the results are adequate to inform adaptive management and demonstrate whether the outcomes and milestones required by these conditions are on track to be achieved (before they are due) and have been achieved (at the time they are due);*
   b) *include contingency measures to mitigate the risks of not achieving the outcomes and milestones required by these conditions;*
   c) *be prepared in consultation with a suitably qualified person, and include written evidence of how the suitably qualified person's advice has been considered;*
   d) *be in accordance with the Koala Habitat Offset Report; and*
   e) *demonstrate how the plan is consistent with the Koala Conservation Advice.*

Condition 4	**Report section**
a)	Monitoring will occur across varying timeframes depending on the management action being monitored (refer section 7.4). Monitoring results will be incorporated into the annual compliance report as required by Condition 10 of the approval. These results will note if the outcomes and milestone are on track to be achieved. The necessity to revise the OMP will be considered as part of the annual compliance reporting.
b)	Corrective actions are detailed in the risk assessment (refer section 8). Contingency measures are dependent on the matter hampering the achievement of the milestone and outcomes and will be explored in detail if the results indicate there is a threat to such achievements (refer section 7.6).
c)	As part of preparing this OMP, Cherish The Environment Foundation Limited has consulted Saunders Havill Group (refer section 1.2).
d)	The Koala Habitat Offset Report and this OMP propose consistent management actions and the latter expands upon key parameters (e.g. timing of events, monitoring, and reporting) relating to demonstrating compliance.
e)	The Koala Conservation Advice was reviewed as part of preparing this OMP. Details on how the OMP is consistent with the advice are presented in section 5.

Appendix B: Protected Matters Search Tool (2018)

Appendix B

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

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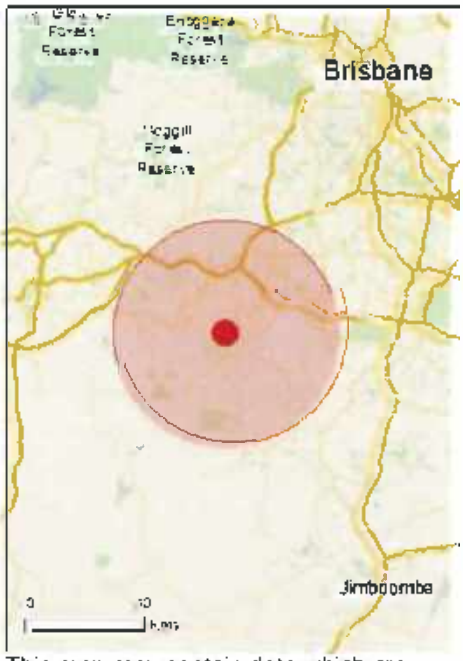

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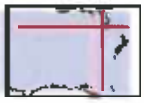


Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	59
Listed Migratory Species:	30

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	2
Commonwealth Heritage Places:	1
Listed Marine Species:	41
Whales and Other Cetaceans:	1
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	5
Regional Forest Agreements:	None
Invasive Species:	46
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Endangered	Species or species habitat may occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat known to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
Poephila cincta cincta Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Thalassarche cauta cauta Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta steadi White-capped Albatross [82344]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area
Fish		
Epinephelus daemelii Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat may occur within area
Neoceratodus forsteri Australian Lungfish, Queensland Lungfish [67620]	Vulnerable	Species or species habitat known to occur within area
Insects		
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within

Name	Status	Type of Presence area
Phyllodes imperialis smithersi Pink Underwing Moth [86084]	Endangered	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat may occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat known to occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat known to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat may occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area
Plants		
Arthraxon hispidus Hairy-joint Grass [9338]	Vulnerable	Species or species habitat may occur within area
Bosistoa transversa Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
Corchorus cunninghamii Native Jute [14659]	Endangered	Species or species habitat may occur within area
Cycas ophiolitica [55797]	Endangered	Species or species habitat likely to occur within area
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area
Macadamia tetraphylla Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area
Notelaea ipsviciensis Cooneana Olive [81858]	Critically Endangered	Species or species habitat known to occur within area
Notelaea lloydii Lloyd's Olive [15002]	Vulnerable	Species or species habitat likely to occur

Name	Status	Type of Presence within area
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area
Plectranthus habrophyllus [64589]	Endangered	Species or species habitat likely to occur within area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Furina dunmalli Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area
Saiphos reticulatus Three-toed Snake-tooth Skink [88328]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Migratory Marine Species		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area
Orcaella brevirostris Irrawaddy Dolphin [45]		Species or species habitat known to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur

Name	Threatened	Type of Presence within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Defence - GREENBANK TRAINING AREA
Defence - SANANANDA BARRACKS - WACOL

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Natural		
Greenbank Military Training Area (part)	QLD	Listed place

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Ardea alba Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis Cattle Egret [59542]		Breeding likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Cuculus saturatus Oriental Cuckoo, Himalayan Cuckoo [710]		Species or species habitat known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within

Name	Threatened	Type of Presence area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Species or species habitat may occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur

Name	Threatened	Type of Presence within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area

Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
Orcaella brevirostris		
Irrawaddy Dolphin [45]		Species or species habitat known to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Blunder Creek Reserve	QLD
Pooh Corner	QLD
Stewartdale	QLD
Wacol Bushlands	QLD
White Rock	QLD

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis		
Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos		
Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis		
European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia		
Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata		
Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus		
House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis		
Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris		
Common Starling [389]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Alternanthera philoxeroides Alligator Weed [11620]		Species or species habitat likely to occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Baskel Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus africanus Climbing Asparagus, Climbing Asparagus Fern [66907]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332]		Species or species habitat likely to occur within area
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913]		Species or species habitat likely to occur within area
Dolichandra unguis-cati Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]		Species or species habitat likely to occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Hymenachne amplexicaulis Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Protasparagus densiflorus Asparagus Fern, Plume Asparagus [5015]		Species or species habitat likely to occur within area
Protasparagus plumosus Climbing Asparagus-fern, Ferny Asparagus [11747]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Nationally Important Wetlands [Resource Information]

Name	State
Greenbank Army Training Area C	QLD

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point localities and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species.

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-27.65134 152.9096

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

Appendix C: Wildlife Online search results (2018)

Appendix C

Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Status: Rare and threatened species
Records: All
Date: All
Latitude: -27.0409
Longitude: 152.9198
Distance: 10
Email: jordanbachmann@saundershavill.com
Date submitted: Friday 19 Jan 2018 16:35:23
Date extracted: Friday 19 Jan 2018 16:40:03

The number of records retrieved = 26

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Hylidae	*Litoria freycineti*	wallum rocketfrog		V		3
animals	amphibians	Limnodynastidae	*Adelotus brevis*	tusked frog		V		21
animals	amphibians	Myobatrachidae	*Mixophyes iteratus*	giant barred frog		E	E	3
animals	amphibians	Myobatrachidae	*Crinia tinnula*	wallum froglet		V		35/ 6
animals	birds	Cacatuidae	*Calyptorhynchus lathami lathami*	glossy black-cockatoo (eastern)		V		8
animals	birds	Charadriidae	*Charadrius mongolus*	lesser sand plover		E	E	1
animals	birds	Diomedeidae	*Thalassarche cauta*	shy albatross		V	V	1
animals	birds	Meliphagidae	*Anthochaera phrygia*	regent honeyeater		E	CE	1
animals	birds	Meliphagidae	*Grantiella picta*	painted honeyeater		V	V	1
animals	birds	Rostratulidae	*Rostratula australis*	Australian painted snipe		V	E	1
animals	birds	Strigidae	*Ninox strenua*	powerful owl		V		2
animals	insects	Nymphalidae	*Argynnis hyperbius inconstans*	Australian fritillary		E	CE	1
animals	insects	Papilionidae	*Ornithoptera richmondia*	Richmond birdwing		V		1
animals	malacostracans	Parastacidae	*Tenuibranchiurus glypticus*			E		1
animals	mammals	Dasyuridae	*Dasyurus maculatus maculatus*	spotted-tailed quoll (southern subspecies)		V	E	2
animals	mammals	Phascolarctidae	*Phascolarctos cinereus*	koala		V	V	483/ 1
animals	mammals	Pseudocheiridae	*Petauroides volans volans*	southern greater glider		V	V	3
plants	higher dicots	Apiaceae	*Lilaeopsis brisbanica*			E		1/ 1
plants	higher dicots	Apocynaceae	*Marsdenia coronata*	slender milkvine		V		1/ 1
plants	higher dicots	Haloragaceae	*Gonocarpus effusus*			V		3/ 3
plants	higher dicots	Myrtaceae	*Leptospermum luehmannii*			V		7/ 5
plants	higher dicots	Myrtaceae	*Leptospermum oreophilum*			V		3/ 3
plants	higher dicots	Myrtaceae	*Eucalyptus dunnii*	Dunn's white gum		V		1
plants	higher dicots	Proteaceae	*Macadamia ternifolia*	bopple nut		V	V	1
plants	higher dicots	Sapindaceae	*Dodonaea rupicola*			V	V	9/ 8
plants	lower dicots	Hernandiaceae	*Hernandia bivalvis*	cudgerie		NT		1

CODES

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

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

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

Records – The first number indicates the total number of records of the taxon for the record option selected (i.e. All, Confirmed or Specimens). This number is output as 99999 if it equals or exceeds this value. The second number located after the / indicates the number of specimen records for the taxon. This number is output as 999 if it equals or exceeds this value

Appendix F

Offset Management Plan – Annual Report June 2020

Offset Management Plan
Annual Report June 2020

Koala Habitat Offset
40-100 Harrison Road Calvert
EPBC 2014/7306

Stockland Development Pty Ltd

Prepared by Cherish the Environment Foundation Limited

June 2020

Cherish the Environment Foundation Limited
Hayden Centre, 37 South Street, Ipswich Qld 4305
PO Box 191, Ipswich Qld 4305
ABN 41 154 545 589

1. Contents

2. Introduction and Background

2.1. Introduction

This report outlines progress in management and conformity with the approved Offset Management Plan (EPBC 2014/7306) for 2019.

Property Details

The property is located at 40-100 Harrison Road, Calvert and described as Lot 230 CH311971

2.2. Management Objectives

The overarching management intent for the offset area is the removal of weeds, reduction of threats and protection of native vegetation to prevent the loss of biodiversity, maintain ecological processes and improve koala habitat quality. The successful implementation of proposed management mechanisms will assist with the creation of a self-sustaining, continuous area of high quality koala habitat supporting their population within the local landscape. This will help to achieve ICC's vision to create a locally significant conservation area within the Little Liverpool Range Corridor.

Natural regeneration and regrowth will be encouraged in open/sparse areas and areas of remnant vegetation will be managed to enhance and sustain their ecological condition and local environmental values to reduce their exposure to threatening processes including weed invasion, pests, pollution, clearing and disturbance.

2.3. Management Outcomes

The management strategies aim to protect and improve the value of the offset area as koala habitat. This will be primarily achieved through rehabilitation of the offset area (weed control) and implementation of other strategies such as restricting human and livestock access and fire management within the offset area. Management of the site will be undertaken for a minimum of ten years with ultimate weed control to achieve less than 5% total weed coverage. The intensity of management will be driven by the results of condition assessments completed on a regular basis. These assessments will be used to inform future determinations of koala habitat quality and are anticipated to show an improvement within five years across 50% of the offset area.

The dominant feature regarding ecological benefit within the offset area will be achieved through rehabilitation of the vegetation communities, thereby improving the quality of the habitats provided. It is expected that the greatest ecological benefit/improvement of the offset site may be attained within a year. This result is possible because as soon as the area is gazetted as an offset, it will be subject to a targeted management regime including ongoing management of weeds and grazing livestock as well as protection from self-assessable vegetation clearing.

The management outcome for the declared area is that the vegetation within meets the criteria, thresholds and descriptions outlined in the definition of remnant vegetation in the VMA. Additionally, that the entire declaration area is controlled and managed for the removal and suppression of declared weed species. Management outcomes are consistent with the requirements EPBC Act *Environmental Offsets Policy* and generally in accordance with management outcomes of the *Queensland Environmental Offsets Policy 2014.*

3. Offset Management Actions 2020

The management actions listed in the Offset Management plan to deliver improved koala habitat quality are detailed below along with progress and actions to June 2020.

The core objective of the Offset Management Plan is to maintain and enhance the koala habitat values throughout the declaration area. This will be primarily achieved through weed management works. Other management actions will also contribute however these are viewed as secondary to weed management. As such, monitoring and reporting will be undertaken to confirm if this primary objective has been or is going to be achieved. This includes both short term and long term criteria to measure success. The area, which is already functioning as koala habitat, is to be managed through weed removal and cooperative fire management and predator exclusion.

3.1. Summary Actions

A summary of planned actions and progress is attached in Table 1.

Table 1 Planned Actions And Progress to June 2020

Management action	Monitoring action	Timeframe	
		Trigger-based	Progress to 2020
Erosion mitigation	• inspect completed mitigation measures	• approximately one month post completion; and • approximately two weeks post first minor rainfall event; and • approximately two weeks post first major rainfall event	• Assessment and mitigation actions complete. Inspections post severe rain events completed.
Access infrastructure	• inspect existing and new access infrastructure	Existing access infrastructure: • approximately two weeks post major rainfall event New access infrastructure: • approximately one month post completion; and • approximately two weeks post first minor rainfall event; and • approximately two weeks post first major rainfall event	• Maintenance tracks and cross drainage maintained x 2. • Inspections post severe rain events completed.
Weed management	• assess weed infestations and success of weed reduction measures	Weed reduction measures: • approximately six months post completion	• Comprehensive weed control across the entire site completed. June 2019 - October 2019. • Inspections to assess regrowth conducted.
Fire management	• assess suitability of fire breaks	• approximately one month post fire event	• Boundary firebreaks slashed x 2 along with access tracks and inter-

	and access tracks		rows in the in-fill plantings.
Infill planting	• assess success of infill planting	• approximately six months post completion	• Completed and maintained weed free.
Pest and animal management	• assess presence of pests and suitability of boundary fencing • undertake pest management	• ad hoc as part of property management	• Boundary fencing erected so the entire site excludes stock. • Wildlife cameras at strategic locations to monitor for species richness. No feral species, eg. wild dogs or pigs, captured on camera.

3.2. Erosion Mitigation

Significant active erosion points must be repaired where possible and feasible (i.e. likely to succeed or be effective). Repair work involves re-profiling (where appropriate) and re-directing overland water flow away from the erosion path using cross-drainage. Cross-drainage should be located along all permanent access tracks at appropriate intervals. Allowance should be made for future maintenance of cross-drainage throughout the site.

Progress to May 2019

Cut-off diversion drains to prevent ongoing erosion were constructed at several locations on old and unused access tracks.

Progress to June 2020

No major storm events received and overall rainfall only 64% of long term average (Amberley BoM).

Previously constructed erosion control diversion drains on abandoned tracks and washouts were inspected and are in serviceable condition.

3.3. Access Infrastructure

The construction and/or re-opening of tracks will be necessary to facilitate weed management, infill planting establishment and maintenance, fence line construction and maintenance, pest management and fire protection activities.

Progress to May 2019

A track network was carefully designed and constructed across the property that meets management requirements. All tracks have cross drainage to prevent erosion as required. The tracks are to a standard

that is accessible by standard high clearance vehicles and are maintained and slashed regularly for fire management.

Inspections immediately following severe rain events were conducted to assess and ensure any erosion could be repaired.

Progress to June 2020

Tracks were slashed and maintained twice through the period. This involved repair to the cut-off drains due largely to settlement.

Inspections immediately following severe rain events were conducted to assess and ensure any erosion could be repaired. Appendix A Photo 1 shows a recently maintained cross drain on a track.

3.4. Weed Management

The weed management actions aim to improve the flora and fauna values of the area through weed removal and promoting native species growth and will provide the greatest positive impact on koala habitat.

An intensive, 5-year weed management program is proposed for the remnant and regrowth parts of the offset area. The primary weed treatment process will begin as soon as practical, with follow-up weed treatment undertaken annually. After the first three years, the required management intensity should reduce significantly.

Weed management will occur in two phases throughout the approval period

1. Intensive weed management until year 6; and
2. Ad-hoc weed management from year 6 until the end of the approval period.

Progress to May 2019

Comprehensive primary weed treatment process commenced across the entire site with emphasis on lantana and prickly pear in June 2019 and completed in October 2019. The main areas for more intensive assessment are the drainage lines where the lantana was dense and is now open. The methodology involved setting out transects and predominantly hand pulling/ digging of weeds. This labour intensive process achieved excellent results with little chemical use.

Progress to June 2020

Follow up weed treatment commenced in June 2020 with an ongoing focus on lantana, climbing asparagus and prickly pear. Appendix A Photo 2 shows an area of lantana that was treated in October 2019.

3.5. Fire Management

At this stage in the project, fire management activities have been limited to fire exclusion and asset protection. Prescribed burning (for fuel reduction or regeneration initiation) is restricted within the V-Dec

area until a Fire Management Plan is developed. This plan will need to be reviewed/endorsed or similar by the rural fire brigade or other relevant stakeholder prior to implementation.

Progress to May 2019

Strategic fire access tracks were established in consultation with neighbours where possible along the property boundary and at other strategic locations. Neighbours are resistant to any prescribed burning and are vigilant in fire management.

Tracks are well maintained for rapid deployment and gates have been installed at strategic locations on boundary fencing to allow for movement across boundaries.

Slashing of all boundary and maintenance tracks as well as inter-rows of the in-fill plantings is maintained to reduce fuel loads.

Progress to June 2020

Slashing of all boundary and maintenance tracks as well as inter-rows of the in-fill plantings is maintained to reduce fuel loads.

3.6. Infill Planting

A small, one hectare patch of open, grassy area in the south-east corner of Lot 230 CH311971 will require infill planting. Approximately 400 trees typical of regional ecosystems 12.9-10.2 and 12.9-10.3 will be planted in the area.

Progress to May 2019

The infill area was planted in March 2018 with some being replaced in October 2018 following severe frost damage. The area is maintained weed free in the rows and slashed between the rows to reduce both competition and fire risk.

Progress to June 2020

The infill area is established but growth is slow due to the continuing dry conditions and competition from established trees. The area is maintained weed free in the rows and slashed between the rows to reduce both competition and fire risk.

Post-plant weed control conducted in January 2020 and April 2020. Post-plant spray has been effective (weeds and grass along the tree rows is dead or dying). Planted trees are healthy and show no signs of spray damage.

Perimeter and inter-rows were slashed in April 2020. Appendix B Photo Point 2 shows the infill site condition in June 2020.

3.7. Pest and Animal Management

There is no internal fencing on the property. Boundary fencing will be constructed, repaired and maintained to exclude domestic stock and pests. Pest animals such as wild dogs will be addressed via a control program that will be implemented at the discretion of the landholder.

This fencing is scheduled to be established/constructed within 12 months of the V-Dec being certified and must be in place for the duration of the approval.

A wild dog control program will occur ad hoc during the approval period.

Progress to May 2019

Fencing has been repaired/ replaced along the entire eastern boundary, and new fencing erected on the northern and north western boundaries.

Wildlife cameras have been deployed and are regularly monitored. Animals captured include kangaroos, wallabies, bandicoots, echidnas, and possums. There has been no evidence or wild dogs or pigs presence across the site.

Progress to June 2020

Fencing has been inspected regularly and repaired as required, mainly due to limbs falling across the fence.

Wildlife cameras have been deployed and are regularly monitored. Due to the drought and lack of water on site, a small water station was deployed to attract wildlife to the camera. The water station was popular with a range of birds. Images captured include kangaroos, wallabies, echidna, lace monitors and possums. There has been no evidence or wild dogs or pigs presence across the site.

See Appendix A Photos 3 and 4

3.8. Habitat Improvement Monitoring

In accordance with Condition 3 of the approval, to compensate for the impacts to koala habitat, detailed outcomes and milestone must be achieved. Success will be measured by comparing baseline values for koala habitat quality and extent to future data.

Progress to May 2019

A comprehensive site condition assessment was carried out in July and August of 2018, to benchmark current vegetation condition and thus provide a point of reference for future verification of management intervention.

Regional ecosystem vegetation was mapped and reference plots established.

Progress to June 2020

Five Photo Reference Points were established using the condition assessment transects as a base for ongoing monitoring. A map of the reference sites and the geo-referenced photo points is contained in Appendix B .

4. Conclusion

As outlined, the activities are consistent with the management objectives and the annual management plan.

Dry weather conditions have continued with only 64% of the long term average rainfall received.

There have been no outstanding events or issues and the site continues to be on track to meet the offset objectives.

5. Appendices

5.1. Appendix A: Site Photos

5.2. Appendix B: Monitoring Photo Reference Site Photos

4.1 Appendix A: Site photos

Photo 1: Access Track with Cross Drainage June 2020

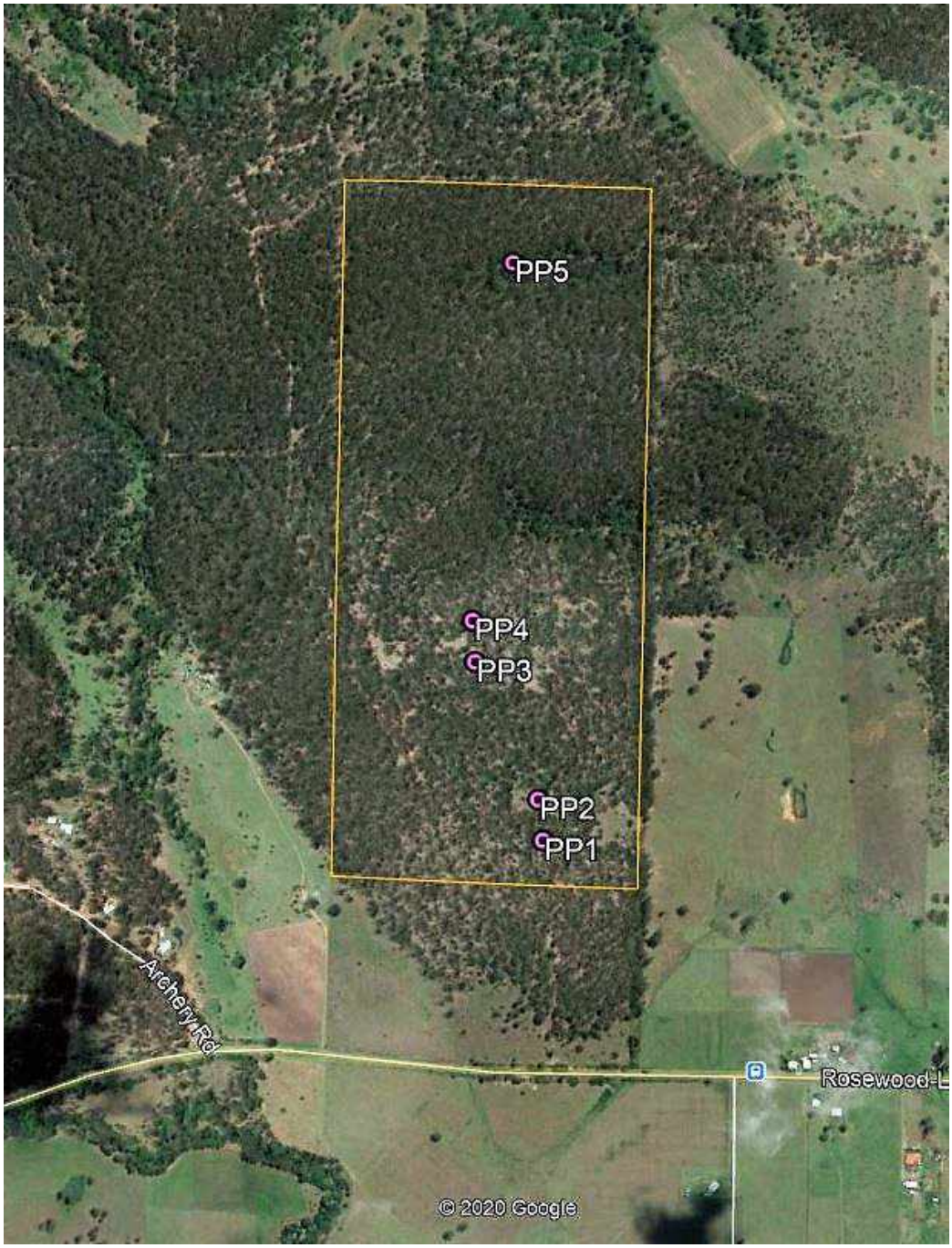
Photo 2: Lantana Weed Control June 2020

Photo 3: Echidna

Photo 4: Lace Monitor

4.2 Appendix B: Photo Points

1. Photo Points Locations



2. Photo Point 1

RE 12.9-10.2 Remnant
Dry conditions, weed free.

3. Photo Point 2

RE 12.9-10.2 Regrowth.
Dry conditions, infill area

4. Photo Point 3

RE 12.9-10.7 Regrowth
Dry conditions, weed free.

5. Photo Point 4

RE 12.9-10.7 Regrowth
Dry conditions, weed free.

6. Photo Point 5

RE 12.9-10.7 Remnant
Dry conditions, weed free.